Scott

MONTENAY BAY LLC

ONYX

MBLLC/DEP-01-038

RECEIVED
FEB 20 2001
BUREAU OF AIR REGULATION

February 19, 2001

Mr. Clair Fancy
Florida DEP, Bureau of Air Regulation
Twin Towers Office Building
Mail Station 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: Waste Tire Approval Consideration
Title V FINAL Permit No.: 0050031-002-AV

Dear Mr. Fancy:

This letter seeks approval to burn waste tires. Any waste tires received will be mixed with MSW in accordance with condition A.5.1.4. Total quantity of waste tires received will not exceed 3% of the facilities total fuel per condition A.5.1.7.

If I may be of any further assistance, please feel free to contact me at (850) 785-7933, x206.

Sincerely,

Chalmous Beechem
Operations Manager

6510 Bayline drive - Panama City, Florida 32404 - **Tel.: (850) 785-7933 - Fax: (850) 784-1779**

MONTENAY BAY LLC

ONYX

MBLLC/DEP-01-040

February 19, 2001

RECEIVED
FEB 20 2001
BUREAU OF AIR REGULATION

Mr. Clair Fancy
Florida DEP, Bureau of Air Regulation
Twin Towers Office Building
Mail Station 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: Waste Approval Consideration
Title V FINAL Permit No.: 0050031-002-AV

Dear Mr. Fancy:

Recently Jerry Gross, Facility Manager, and I talked with Mr. Scott Sheplak concerning the proper method for seeking approval for various waste streams. Mr. Sheplak recommended routing requests through your office.

Enclosed, please find one packet of material describing one waste stream, the Clorox roach bait material. We feel that this material meets condition A.5.1.8. (d). Approximate thru-put, if approved, would be 100 tons per year.

If I may be of any further assistance, please feel free to contact me at (850) 785-7933, x206.

Sincerely,

Chalmous Beechem
Operations Manager

6510 Bayline drive - Panama City, Florida 32404 - **Tel.: (850) 785-7933 - Fax: (850) 784-1779**

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF).

Material Profile Form # [illegible] (Shaded areas are for OSWS use only.) Initiation Date: / /

Customer Code: Generator Code: Billing Code: Approval Code(s):

Monterey Initiator: Monterey Location(s): Waste Processing Code(s):

1.0 GENERATOR INFORMATION:

1. Generator Company Name: CLOROX PRODUCTS MANUFACTURING COMPANY
2. Address: 550 GULF LINE ROAD 3. City: PEARL 4. State: MISS. 5. Zip: 39208
6. Contact Name: ROBERT BAYMAN
7. Tel #: 601 939 8355 8. Fax #: 601 939 4250 9. E-Mail ID #: ROBBAYMAN@CLOROX.COM
10. Generator EPA ID #: (If multiple locations exist please attach relevant information)

2.0 CUSTOMER BILLING INFORMATION:

1. Company Name: STRONG ENVIRONMENTAL
2. Address: 6264 CROOKED CREEK ROAD
City: NORCROSS
3. State: GEORGIA 4. Zip 30092
5. Billing Contact Name: KEVIN COX
6. Billing Contact Title:
7. Tel #(s) (770) 409-1500
8. Fax #(s) (770) 409-1449
9. E-Mail ID #: KEVIN @ STRONGENVIRONMENTAL .COM
10. Federal Tax ID # for Billing Purposes:

3.0 PICK UP LOCATIONS:

☒ If same as in Section 1.0 please check here

1. Company Name:
2. Shipping Address:
3. City: 4. State: 5. Zip:
6. Shipping Contact(s)
7. Tel # (s) ( )
8. Fax # (s) ( )
9. E-Mail ID #: @
10. If multiple locations please attach a list

4.0: THIRD PARTY AUTHORIZATION: (If appropriate please complete below)

I ROBERT BAYMAN as an authorized representative of CLOROX (Generator Company)
authorize KEVIN COX of STRONG ENVIRONMENTAL (Service Company / Broker) to act as a third party or agent of the Generator. This is an authorization to complete all required paperwork and to supply all necessary backup Documentation to accurately profile the generator waste for disposal at the appropriate Monterey facility.

5.0 MATERIAL PROFILE FORM CHANGE AUTHORIZATION: (If appropriate please complete below)

I, as the generator, authorize Monterey Specialty Waste Services, Inc. to make corrections to this Material Profile Form. I understand that a fully corrected copy of the Material Profile Form will be returned to me for my records.
If authorization is or is not granted please check the appropriate box and initial. ☒ Yes ☐ No RH Initials X

6.0 REGULATORY WASTE INFORMATION:

A. ☒ Yes ☐ No This waste is R.C.R.A. Non Hazardous
B. ☐ Yes ☒ No Regulated or Licensed Radioactive Waste
C. ☐ Yes ☒ No Medical / Infectious or Chemotherapeutic Waste
D. ☐ Yes ☒ No OSHA Carcinogens (outline in waste constituents)
E. ☐ Yes ☒ No Regulated Benzene NESHAP Waste
F. ☐ Yes ☒ No Asbestos Containing Waste
G. ☐ Yes ☒ No Dioxin or Furan bearing Waste
H. ☐ Yes ☒ No Any type of PCB Waste
I. ☐ Yes ☒ No Explosives / Shock Sensitive
J. ☐ Yes ☒ No Polymerizable Material
K. ☐ Yes ☒ No Air / Water Reactive
L. ☐ Yes ☒ No Oxidizer / Reducer
M. ☐ Yes ☒ No Total Cyanide ppm
N. ☐ Yes ☒ No Total Sulfide ppm
O. Other applicable

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # B 10020

7.0 Material or Waste Specific Information: (Attach additional pages and MSDS)

1. Material or Waste Name: OFF-SPEC, UNUSED, OUT OF DATED PRODUCT
2. Process of Material or Waste generation: SEE ATTACHMENT A
3. Total Quantity of Material / Waste: 100 (Circle) Tons / pallets / drums / other: Explain DURING WINTER DISTRIBUTION MONTHS
4. Frequency of shipment: Daily ☐ Weekly ☐ Monthly ☒ Yearly ☐ One time ☐

8.0 COMPOSITION & PROPERTIES OF MATERIAL / WASTE

	Chemical Name / Component / Formula	Material / Waste Analysis (Wt. %)	Material / Waste Ranges (Wt. %)
1.	CARDBOARD	40 - 60	-
2.	PLASTIC	40 - 60	-
3.	HYDRAMETHYLON (CAS#67485-29-4)	< 1	-
4.	FIPRONIL (CAS# 120068-37-3)	< 1	-
5.			-
6.			-
7.			-
8.			-
9.			-
10.			-

(Total must be greater than or equal to 100 %)

☒ See attached sheets and MSDS for chemical description, chemical constituents, alternate names / synonyms and chemical formulae.

9.0 MATERIAL / WASTE PROPERTIES AT ROOM TEMPERATURE:

1. Physical State and % of each state ☐ Liquid ___% ☐ Sludge / Semi-solid ___% ☐ Solid 100 % ☐ Powder ___% ☐ Gas ___%
2. Odor MILD (Describe) 3. Color VARIES (Describe) 4. No. of Phases: N/A Viscosity ☐ High ☐ Med ☐ Low
6. Flash Point (Liquids & Non-Liquids) ☐ < 100°F ☐ 100° - 139°F ☐ 140° - 199°F ☒ ≥ 200°F. Check if material is solid ☒
7. ☐ pH (Aqueous Liquids) or ☐ pH (Non-aqueous) ☐ ≤ 2.0 ☐ > 2.0 ≤ 5.0 ☐ >5.0 ≤ 9.0 ☐ >9.0 ≤ 12.49 ☐ ≥ 12.5
8. Corrosivity ☐ ≤ 6.35 mm/yr or ☐ > 6.35 mm/yr 9. Melting Point of Solids < 130°F. Compared to ___
10. Boiling Point of Liquids ☐ < 130°F. ___°F. 11. Ignition Temp. ___°F. 12. TOC (Total Organic Carbon) ☐ < 1% ☐ 1-20% ☐ > 20%
13. BROMINE ☒ None or ___% 14. IODINE ☒ None or ___%. 15. FLUORINE ☒ None or ___%. 16. CHLORINE ☒ None or ___%.
17. VOC (Volatile Organic Compounds) ___% 18. Higher Heating Value (BTUs/LB) >5000 ☒ Estimated ☐ Exact 19. Ash: <1 %
20. SULFUR 0 %. 21. NITROGEN 0 %. 22. Specific Gravity ___ or Bulk Density ___ Lb./Gal.
23. Free liquids present ☐ Yes ☒ No. 24. Free liquids are fully absorbed ☐ Yes ☐ No. Absorbent type ___ and ___%
25. Analytical is attached ☐ Yes ☒ No. TCLP ☐ Total Metals ☐ Flash Pt ☐ BTU/lb ☐ Wt % Halogen / Sulfur ☐

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # B10 0072

10.0 Packaging and Shipping Information (outline the average container weights if applicable by the check-box)

☐ Consumer Packaged Returns		☐ Finished product bulk		☐ Fiber drums		☐ Roll-offs	
☒ Consumer packaged > 500 lbs		☐ Intermediate waste		☐ Poly drums		☐ Dump-trailers	
☒ Consumer packaged truckload		☒ Production Debris		☐ Steel drums		☐ Vac truck	
☐ Raw material inert or active (100%)		☐ Mixed Powders		☒ Gaylords		☐ Walking trailer	
☐ Plant Trash		☐ Paper waste		☐ Other	VAN TRUCK		

11.0 ELEMENTAL ANALYSIS OF MATERIAL / WASTE (TCLP and TOTAL METALS)

11.1 Permit Compliance Metals: (both Ash and Air permits) Units ☐ mg/Kg (parts per million or PPM – AND- Units ☐ mg/l TCLP for the RCRA 8 metals.

Aluminum	mg/kg	Chromium	mg/kg	mg/l	Nickel	mg/kg		
Antimony	mg/kg	Chromium VI	mg/kg		Selenium	mg/kg		mg/l
Arsenic	mg/kg	mg/l	Copper	mg/kg		Silver	mg/kg	mg/l
Barium	mg/kg	mg/l	Lead	mg/kg	mg/l	Zinc	mg/kg	
Beryllium	mg/kg		Mercury	mg/kg	mg/l	Cadmium	mg/kg	mg/l
Molybdenum	mg/kg							

If none are present please check here. None ☒

11.2 Additional Materials of concern to MSWS: Please verify if present and if so, give quantity and unit of measure.
Titanium ____%, Silicon ____%, Aluminum & Zirconium Salts ____%, Free Cyanides ____ppm, Free Sulfides ____ppm, Free Ammonia ____ppm, Cresols ____ Total, Formaldehyde ____, Phenol ____.
If none are present please check here. None ☒

11.3 Please check the appropriate box (☐) if the waste contains any of the following:

Aerosols ☐	Oil Contamination ☐	Teflon / PTFE ☐	FIFRA Regulated Pesticides ☐	Isocyanates ☐	Sharps ☐	
Organic Solvent Contamination ☐		DEA Materials ☐	DOT Regulated Material ☐	Acrylates ☐		
Nicotine or salts ☐	Contaminated Empty Containers ☐		Fiberglass Waste ☐	Carbon and Carbon Filtration waste ☐		
Saccharin or salts ☐	Un-contaminated Empty Containers ☐		Leather Waste ☐	Paint / Varnish Contaminated waste ☐		

If none are present please check here. None ☒

12.0 GENERATOR CERTIFICATION (This section must be signed prior to the completion of any review)

I certify, as the generator, or, authorized representative of the generator, that the Material or Waste described in this Material Profile Form is NON-HAZARDOUS by all Federal, State and Local regulations. Furthermore, this information is complete and accurate to the best of my knowledge, no information about the Material or Waste composition or the known or potential hazards have been willfully omitted.

X Generator Signature: Robert Haymon

X Name & Title (Printed or Typed): Robert Haymon - Materials Manager

X Date: January 10, 2001

Part 6: Material / Waste Processing Form/ Handling Requirements (Cont)

Additional Requirements that need to be followed in blending waste.

☐ Initial ✓ Date: 1-15 Pit feed with no additional blending or mixing requirements.

☒ Initial AM Date: 1-15-01 Mix on tipping floor with front end loader prior to feeding to ~~pit, spread through multiple bays~~ Cross Vent

☐ Initial — Date: — Feed the waste over 1 shift ☐ Feed the waste over 2 shifts ☐ Feed the waste over 2 days

☐ Initial — Date: — Pass instruction and location of waste to the control room/crane operator on the next shift / day

☐ Initial — Date: — Contains viscous liquid blend extremely well with MSW to eliminate slipping hazards

☐ Initial — Date: — Contains liquid(low BTU) blend extremely well with MSW.

☐ Initial — Date: — Contains a material that is waxy in nature(under-fire melting concern) blend well with MSW

☒ Initial AM Date: 1-15-01 Store on tipping floor for further instruction if material is noticeably different from profile

☐ Quality Control Confirmed Initial: ____ Date: ____

Additional Quality Control Steps based upon Recommendations and Requirements as suggested by MSWS , Quality Control needs to confirm these steps were followed:

Initial AM Date 1-15-01 ☒ No Industrial Hygiene Sampling Required.

Initial: ____ ☐ Industrial Hygiene Testing was performed based on of the following identifiable odor ____

The Specific Draeger Tubes required are : ____ ____ # of tubes required is ____

Circle the appropriate additional blending recommendation.

Initial: — Date: — ☐ Increased lime feed is Recommended ☐ Required ☐

Initial: — Date: — ☐ Additional Blending is required due to High BTU ☐ Low BTU ☐

Initial: — Date: — ☐ Additional Blending is required due to liquid content

Initial: — Date: — ☐ Additional Blending is required due to the inert content of the waste

Initial: — Date: — ☐ Additional Blending is required due to the melting potential of the waste

Initial: — Date: — ☐ Additional care is required in feeding due to the dusting potential of the waste

☐ Quality Control Confirmed Initial: ____ Date: ____

Quality Control Verification Section:

Unloading Equipment was as outlined on WPF	☐ YES	☐ NO	____Initial	____Date
Processing Tools as on WPF available and utilized	☐ YES	☐ NO	____Initial	____Date
Sampling Equipment as on WPF available and utilized	☐ YES	☐ NO	____Initial	____Date
Blending and Mixing Requirements followed explicitly	☐ YES	☐ NO	____Initial	____Date
Safety Equipment was available and utilized as required	☐ YES	☐ NO	____Initial	____Date
All MSWS Recommendations were followed as required	☐ YES	☐ NO	____Initial	____Date

Alternate Blending Followed(Explain): ____

Authorized by MSWS Representative : ____

Comments: ____

☐ Quality Control Confirmed Initial: ____ Date: ____

Part 6 : Material / Waste Processing Form / Handling Requirements

Unloading Requirements: (Check all applicable- discuss with facility Operations prior to arrival of shipment)

☒ Forklift ☒ Pallet Jack ☐ Pallet Chains ☐ Drum Clamp ☐ Loader ☐ Drum Cart ☐ Pallet Clamps ☐ Ropes and Cable
☐ Drum Over-packs ☐ Drum Transfer Pump ☐ Non - Sparking Spill Cleanup Tools ☐ Absorbent Pads ☐ Speedy Dry
☐ No un-loading requirements. If additional add here _____

Initial: [illegible] Date: 1-15-01 Required JSA# _____

Initial: _____ Date: _____ The above equipment was utilized in the Off Loading Procedures. ☐ No equipment requir

Processing Tools :(Check all applicable- discuss with facility Operations prior to arrival of shipment)

☐ Hammer ☐ Chisels ☐ Bung Wrench ☐ Pliers ☐ Drum Spike ☐ Wire Snips ☐ Hatchet ☐ Screwdrivers ☐ Scrapers
☐ Pry Bar ☐ Bolt Cutter ☐ Pipe Wrench ☐ Hacksaw ☐ Saw ☐ Speedy Wrench ☒ Utility Knife
☐ Pail Opener ☐ Sawzall ☐ Cutting Tools ☐ No Equipment Required. If additional add here _____

Initial: [illegible] Date: 1-15-01 Required JSA# _____

Initial: _____ Date: _____ The above equipment was utilized in the Processing of Specialty Waste.

Sampling Equipment:(Check all applicable discuss with facility Operations prior to arrival of shipment)

☐ Draeger ☐ Sampling Rods (plastic) ☐ Sampling rods (glass) ☐ Auger sampler ☐ Plastic Sample jars
☐ Glass Sample jars ☐ Sample bags ☒ No Equipment Required

Initial: [illegible] Date: 1-15-01 Required JSA# _____

Initial: _____ Date: _____ The above equipment was utilized in the Quality Control Process.

Health and Safety Equipment : For QA / QC inspection use X , for processing circle each appropriate box.
(Check all applicable- discuss with facility Operations prior to arrival of shipment)

☐ Tyvek ☐ Rubber Apron ☐ Latex Gloves(inner) ☐ PVC Outer Gloves ☐ Rain Suit
☐ Over-boots ☐ Splash shield ☐ Goggles ☐ Half face respirator ☐ Full face respirator
☐ Organic Vapor/ HEPA filters ☐ Ammonia Filters ☐ Acid gas cartridge ☐ HEPA Filter
☐ Dust-mask ☒ No additional PPE Required ☐ PPE Upgraded(see report)

Initial: [illegible] Date: 1-15-01 PPE required during QA/QC(Inspection) and subsequent processing of the waste.

Initial: _____ Date: _____ The above Personal Protective Clothing , Eye Protection and Respiratory Protection was used

Blending and Mixing Requirments: ☐ Quality Control Confirmed Initial: _____ Date: _____

(Check all applicable- discuss with facility Operations prior to arrival of shipment)

Initial: [illegible] Date: 1-15-01 NO SLUG FEEDING ☐ Quality Control Confirmed Initial: _____ Date: _____

Quality Control is to check the method of mixing completed and waste processing employed for this material or waste. All the instructions outlined on Waste Processing Form were followed.

☐ Quality Control Confirmed Initial: _____ Date: _____

Only one feed type method can be completed per each Part 6 of the QA/QC Form.

Initial: [illegible] Date: 1-15-01 ☒ ~~Pit Feed(PF)~~ Front Mix * Initial: ___ Date: ___ ☐ Cherry Picking(CP)Initial: ___ Date: ___ ☐ Hopper Feeding

☐ **Follow instructions in attached material listing matrix**

☐	No added mixing required(PF)	☐	No added mixing required	☐	Feed in 50 lb charges
☐	Spread over 2 bays(PF-2)	☐	Feed to one unit if possible	☐	Feed in 100 lb charges
☐	Spread over 3 bays(PF-3)	☐	Feed to two units	☐	Feed in 200 lb charges
☐	Spread over 4 bays(PF-4)	☐	Feed to back stack	☐	Feed in 300 lb charges
☐	Spread over 5 bays(PF-5)	☐	Feed onto charging deck	☐	Feed in 400 lb charges
☐	Spread over half the pit(PF-1/2)	☐	Flag location in pit	☐	Feed in >400 lb charges
☐	Spread over the full pit(PF- Full)	☐	Split grapple at hopper lip		

Boxes can be checked from any column for the particular waste being QA/QC Checked.

* FRONT MIX WITH MSW AT A RATIO OF 50% MSW TO 50% PRODUCTS

☐ Quality Control Confirmed Initial: _____ Date: _____

COMBAT

Combat Insect Control Systems
c/o The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMBAT® QUICK KILL FORMULA 2

Description: FIPRONIL BASED ROACH FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION (FOR LARGE ROACHES)

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. Number 64240-34	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

Combat® Quick Kill Formula 2 may be minimally irritating to skin following prolonged direct contact. It is not acutely toxic upon oral or dermal exposure.

Untoward effects resulting from over-exposure are not anticipated to occur. The formulation is packaged in a child resistant container.

No known health conditions are aggravated by exposure to this product.

Bait wt per station: 1.75 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Fipronil CAS #120068-37-3	0.03% (w/w)	[a]0.1 mg/m³ [b]0.032 mg/m³

None of the ingredients in this product is on the IARC, OSHA or NTP carcinogen lists.

Rhone-Poulenc TWA for: [a]3 month "on", 9 month "off" exposure
[b]12 month daily exposure

IV Special Protection and Precautions

None.

Keep Out of Reach of Children and Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

USDA: Not authorized for USDA use.

EPA CERCLA/SARA TITLE III: This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Non-hazardous waste.

Sweep up spilled material.

Place in a container for disposal.

Dispose in accordance with Local, State, and Federal regulations.

VII Reactivity Data

Stable under normal use and storage conditions

VIII Fire and Explosion Data

Not flammable or Explosive.

Flash Point > 200° F (TCC)

Fire Extinguishing Media: Water, Foam CO_2 or dry chemical

IX Physical Data

Specific gravity ..... 1.27 g/cc

Melting Point ..... 60° C

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH DATE PREPARED 2/11/2000

MAXFORCE

Maxforce Insect Control Systems
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product:	MAXFORCE® FC PROFESSIONAL INSECT CONTROL ANT BAIT STATION
Description:	FIPRONIL BASED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION

Other Designations	Manufacturer	Emergency Telephone Nos.
EPA Reg. Number: 64248-10	Maxforce Insect Control Systems 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

Maxforce® FC Professional Insect Control® Ant Bait Stations may be minimally irritating to skin following prolonged direct contact. It is not acutely toxic upon oral or dermal exposure.

Untoward effects resulting from over-exposure are not anticipated to occur. The formulation is packaged in a child resistant container.

No known health conditions are aggravated by exposure to this product.

Bait wt per station: 1.5 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Fipronil CAS #120068-37-3	0.01% (w/w)	a0.1 mg/m3 b0.032 mg/m3

None of the ingredients in this product is on the IARC, OSHA or NTP carcinogen lists.

Rhone-Poulenc TWA for: a3 month "on", 9 month "off" exposure
b12 month daily exposure

IV Special Protection and Precautions

None.

Keep Out of Reach of Children and Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

USDA: Not authorized for USDA use.

EPA CERCLA/SARA TITLE III: This product contans no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Non-hazardous waste.

Sweep up spilled material.

Place in a container for disposal.

Dispose in accordance with Local, State, and Federal regulations.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.
Flash Point > 200°F (TCC)
Fire Extinguishing Media: Water, Foam CO_2 or dry chemical

IX Physical Data

Specific gravity ..... 1.27 g/cc
Melting Point ..... 6°C

COMBAT

Combat Insect Control Systems
% The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMBAT® ANT CONTROL

Description: HYDRAMETHYLNON BASED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. Number 64248-2-64240 COMBAT® SuperBait Advanced Formula Ant Control.	Combat Insect Control Systems % The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

COMBAT® Ant Control is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: ~ 1.50 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	1.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

- American Cyanamid PEL

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act:

This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material,
Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.
Flash Point > 200° F (TCC)
Fire Extinguishing Media: Water, Foam
CO_2 or dry chemical

IX Physical Data

Specific gravity 1.4g/ml

Melting Point ..... 60° C

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH DATE PREPARED 3/97

COMBAT

Combat Insect Control Systems
% The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMBAT® ROACH CONTROL 1

Description: HYDRAMETHYLNON BASED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. Number 64240-2 Combat SuperBait Brand Insecticide Patented Action Roach Control for Small Roaches Combat SuperBait Brand Insecticide Patented Action Roach Control for Large Roaches Combat SuperBait Advanced Formula Roach Control	Combat Insect Control Systems % The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

COMBAT® Roach Control 1 is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: 1.5 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	2.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product is on the IARC, OSHA or NTP carcinogen lists.

* American Cyanamid Permissible Exposure Limit

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III: This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not Flammable or Explosive.

Flash Point >200°F (TCC)
Fire Extinguishing Media: Water, Foam
CO_2 or dry chemical

IX Physical Data

Specific gravity 1.4g/ml

Melting Point ..... 60°C

DATE PREPARED 3/97

The Clorox Company
7200 Johnson Drive
Pleasanton, California 94588
Tel. (510) 847-6100

Material Safety Data Sheet

I Product:	COMBAT® ANT KILLING SYSTEM - EPA REGISTRATION NO. 64240-3	
Description:	HYDRAMETHYLNON BAITED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION	
Other Designations	**Manufacturer**	**Emergency Telephone No.**
EPA Reg. Number: 64240-3	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	Notify your Supervisor Rocky Mountain Poison Center (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300

II Health Hazard Data

COMBAT® Ant Killing bait is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Bait wt per station: Small 1.50 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	0.9%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

*American Cyanamid PEL

IV Special Protection and Precautions

None

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid-Not restricted

USDA Approved F.: Residual Pesticides.

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act

This product contains no CERCLA/SARA Title III materials.

VI Spill or Leak Procedures

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.

Fire Extinguishing Media: Water, Foam
CO^2 or dry chemical

IX Physical Data

Specific gravity	1.4g/ml
Melting Point	60°C

DATE PREPARED 10/92

Material Safety Data Sheet

The Clorox Company
7200 Johnson Drive
Pleasanton, California 94588
Phone: 510-847-6100

I Product: COMBAT® SuperBait™ Brand Insecticide Patented Action Roach Control - EPA Reg. No. 64240-2

Description: Hydramethylnon based food bait in a child resistant plastic station

Other Designations	Manufacturer	Emergency Telephone Nos.
EPA Reg. Number 64240-2 Combat SuperBait Brand Insecticide Patented Action Roach Control for Small Roaches Combat SuperBait Brand Insecticide Patented Action Roach Control for Large Roaches Combat SuperBait Advanced Formula Roach Control	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call Rocky Mountain Poison Center: 1-800-445-1014 For Transportation Emergencies, call Chemtrec: 1-800-424-9300

II Health Hazard Data

COMBAT® SuperBait™ Brand Insecticide Patented Action Roach Control is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: Small 1.65 grams
Large 8.25 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	2.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

* American Cyanamid PEL

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act:

This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.

Flash Point > 200° F (TCC)
Fire Extinguishing Media: Water, Foam
CO^2 or dry chemical

IX Physical Data

Specific gravity	1.4g/ml
Melting Point	60° C

Date Prepared 4/93

Material Safety Data Sheet

The Clorox Company
7200 Johnson Drive
Pleasanton, California 94588
Phone: 510-847-6100

I Product: COMBAT® SuperBait™ Brand Insecticide Patented Action Ant Control - EPA Reg. No. 64248-2-64240

Description: Hydramethylnon based food bait in a child resistant plastic station

Other Designations	Manufacturer	Emergency Telephone Nos.
EPA Reg. Number 64248-2-64240 COMBAT® SuperBait Advanced Formula Ant Control	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call Rocky Mountain Poison Center: 1-800-446-1014 For Transportation Emergencies, call Chemtrec: 1-800-424-9300

II Health Hazard Data

COMBAT® SuperBait™ Brand Insecticide Patented Action Ant Control is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: 1.50 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	1.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

* American Cyanamid PEL

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act:

This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.

Flash Point > 200° F (TCC)
Fire Extinguishing Media: Water, Foam
CO^2 or dry chemical

IX Physical Data

Specific gravity 1.4g/ml

Melting Point 80° C

Date Prepared 4/93

Best Available Copy

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF).

Material Profile Form # [illegible] (Shaded areas are for OSWS use only.) Initiation Date: / / Page 1 of 3.

Customer Code: Generator Code: Billing Code: Approval Code(s):

Monterrey Initiator: Monterrey Location(s): Waste Processing Code(s):

1.0 GENERATOR INFORAMTION:

1. Generator Company Name: CLOROX PRODUCTS MANUFACTURING COMPANY
2. Address: 550 GULF LINE ROAD 3. City: PEARL 4. State: MISS. 5. Zip: 39208
5. Contact Name: ROBERT BAYMAN
7. Tel #: 601 939 8355 8. Fax #: 601 939 4250 9. E-Mail ID #: ROBBYBAYMAN@CLOROX.COM
10. Generator EPA ID #: (If multiple locations exist please attach relevant information)

2.0 CUSTOMER BILLING INFORAMTION:

1. Company Name: STRONG ENVIRONMENTAL
2. Address: 6264 CROOKED CREEK ROAD
City: NORCROSS
3. State: GEORGIA 4. Zip 30092
5. Billing Contact Name: KEVIN COX
6. Billing Contact Title:
7. Tel #(s) (770) 409-1500
8. Fax #(s) (770) 409-1449
9. E-Mail ID # KEVIN @ STRONGENVIRONMENTAL.COM
10. Federal Tax ID # for Billing Purposes.

3.0 PICK UP LOCATIONS:

☒ If same as in Section 1.0 please check here

1. Company Name:
2. Shipping Address:
3. City: 4. State: 5. Zip:
6. Shipping Contact(s)
7. Tel # (s) ( )
8. Fax # (s) ( )
9. E-Mail ID #: @
10. If multiple locations please attach a list

4.0 THIRD PARTY AUTHORIZATION: (If appropriate please complete below)

I ROBERT BAYMAN as an authorized representative of CLOROX (Generator Company)
authorize KEVIN COX of STRONG ENVIRONMENTAL (Service Company / Broker) to act as a third party or agent of the Generator. This is an authorization to complete all required paperwork and to supply all necessary backup Documentation to accurately profile the generator waste for disposal at the appropriate Monterrey facility.

5.0 MATERIAL PROFILE FORM CHANGE AUTHORIZATION: (If appropriate please complete below)

I, as the generator, authorize Monterrey Specialty Waste Services, Inc. to make corrections to this Material Profile Form. I understand that a fully corrected copy of the Material Profile Form will be returned to me for my records.
If authorization is or is not granted please check the appropriate box and initial. ☒ Yes ☐ No RH Initials X

6.0 REGULATORY WASTE INFORMATION:

A. ☒ Yes ☐ No This waste is R.C.R.A. Non Hazardous
B. ☐ Yes ☒ No Regulated or Licensed Radioactive Waste
C. ☐ Yes ☒ No Medical / Infectious or Chemotherapeutic Waste
D. ☐ Yes ☒ No OSHA Carcinogens (outline in waste constituents)
E. ☐ Yes ☒ No Regulated Benzene NESHAP Waste
F. ☐ Yes ☒ No Asbestos Containing Waste
G. ☐ Yes ☒ No Dioxin or Furan bearing Waste
H. ☐ Yes ☒ No Any type of PCB Waste
I. ☐ Yes ☒ No Explosives / Shock Sensitive
J. ☐ Yes ☒ No Polymerizable Material
K. ☐ Yes ☒ No Air / Water Reactive
L. ☐ Yes ☒ No Oxidizer / Reducer
M. ☐ Yes ☒ No Total Cyanide ppm
N. ☐ Yes ☒ No Total Sulfide ppm
O. Other applicable

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # B10020

7.0 Material or Waste Specific Information: (Attach additional pages and MSDS)

1. Material or Waste Name: OFF-SPEC, UNUSED, OUT OF DATED PRODUCT
2. Process of Material or Waste generation: SEE ATTACHMENT A
3. Total Quantity of Material / Waste: 100 (Circle) Tons / pallets / drums / other: Explain [illegible]
4. Frequency of shipment: Daily ☐ Weekly ☐ Monthly ☒ Yearly ☐ One time ☐

8.0 COMPOSITION & PROPERTIES OF MATERIAL / WASTE

	Chemical Name / Component / Formula	Material / Waste Analysis (Wt. %)	Material / Waste Ranges (Wt. %)
1.	CARDBOARD	40 - 100	-
2.	PLASTIC	40 - 60	-
3.	HYDRAMETHYLON (CAS# 67485-29-4)	< 1	-
4.	FIPRONIL (CAS# 120068-37-3)	< 1	-
5.			-
6.			-
7.			-
8.			-
9.			-
10.			-

(Total must be greater than or equal to 100 %)

☒ See attached sheets and MSDS for chemical description, chemical constituents, alternate names / synonyms and chemical formulae.

9.0 MATERIAL / WASTE PROPERTIES AT ROOM TEMPERATURE:

1. Physical State and % of each state ☐ Liquid ___% ☐ Sludge / Semi-solid ___% ☐ Solid 100 % ☐ Powder ___% ☐ Gas ___%
2. Color MILD (Describe) 3. Color VARIES (Describe) 4. No. of Phases: N/A Viscosity ☐ High ☐ Med ☐ Low
5. Flash Point (Liquid & Non-Liquids) ☐ < 100°F ☐ 100° - 139°F ☐ 140° - 199°F ☒ ≥ 200°F. Check if material is solid ☒
7. ☐ pH (Aqueous Liquids) or ☐ pH (Non-aqueous) ☐ ≤ 2.0 ☐ > 2.0 ≤ 5.0 ☐ >5.0 ≤ 8.9 ☐ >9.0 ≤ 12.49 ☐ ≥ 12.5
8. Corrosivity ☐ ≤ 6.35 mm/yr or ☐ > 6.35 mm/yr 9. Melting Point of Solids < 130°F. Compared to ___
10. Boiling Point of Liquids ☐ < 130°F. ___°F. 11. Ignition Temp. ___°F. 12. TOC (Total Organic Carbon) ☐ < 1% ☐ 1-20% ☐ > 20%
13. BROMINE ☒ None or ___% 14. IODINE ☒ None or ___%. 15. FLUORINE ☒ None or ___%. 16. CHLORINE ☒ None or ___%.
17. VOC (Volatile Organic Compounds) ___% 18. Higher Heating Value (BTUs/LB) >5000 ☒ Estimated ☐ Exact 19. Ash: <1 %
20. SULFUR 0 %. 21. NITROGEN 0 %. 22. Specific Gravity ___ or Bulk Density ___ Lb./Gal.
23. Free liquids present ☐ Yes ☒ No. 24. Free liquids are fully absorbed ☐ Yes ☐ No. Absorbent type ___ and ___%
25. Analytical is attached ☐ Yes ☒ No. TCLP ☐ Total Metals ☐ Flash Pt. ☐ BTU/lb ☐ Wt % Halogen / Sulfur ☐

Best Available Copy

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # BIO 002

10.0 Packaging and Shipping Information (outline the average container weights if applicable by the check-box)

☐ Consumer Packaged Returns		☐ Finished product bulk		☐ Fiber drums		☐ Roll-offs	
☒ Consumer packaged > 500 lbs		☐ Intermediate waste		☐ Poly drums		☐ Dump-trailers	
☒ Consumer packaged truckload		☒ Production Debris		☐ Steel drums		☐ Vac truck	
☐ Raw material inert or active (100%)		☐ Mixed Powders		☒ Gaylords		☐ Walking trailer	
☐ Plant Trash		☐ Paper waste		☐ Other	VAN TRUCK		

11.0 ELEMENTAL ANALYSIS OF MATERIAL / WASTE (TCLP and TOTAL METALS)

11.1 Permit Compliance Metals: (both Ash and Air permits) Units ☐ mg/Kg (parts per million or PPM – AND-
Units ☐ mg/l TCLP for the RCRA 8 metals.

Aluminum	mg/kg		Chromium	mg/kg	mg/l	Nickel	mg/kg	
Antimony	mg/kg		Chromium VI	mg/kg		Selenium	mg/kg	mg/l
Arsenic	mg/kg	mg/l	Copper	mg/kg		Silver	mg/kg	mg/l
Barium	mg/kg	mg/l	Lead	mg/kg	mg/l	Zinc	mg/kg	
Beryllium	mg/kg		Mercury	mg/kg	mg/l	Cadmium	mg/kg	mg/l
Molybdenum	mg/kg							

If none are present please check here. None ☒

11.2 Additional Materials of concern to MSWS: Please verify if present and if so, give quantity and unit of measure.
Titanium ____ %, Silicon ____ %, Aluminum & Zirconium Salts ____ %, Free Cyanides ____ ppm, Free Sulfides ____ ppm,
Free Ammonia ____ ppm, Cresols ____ Total, Formaldehyde ____, Phenol ____.
If none are present please check here. None ☒

11.3 Please check the appropriate box (☐) if the waste contains any of the following:

Aerosols ☐	Oil Contamination ☐	Teflon / PTFE ☐	FIFRA Regulated Pesticides ☐	Isocyanates ☐	Sharps ☐	
Organic Solvent Contamination ☐	DEA Materials ☐	DOT Regulated Material ☐	Acrylates ☐			
Nicotine or salts ☐	Contaminated Empty Containers ☐	Fiberglass Waste ☐	Carbon and Carbon Filtration waste ☐			
Saccharin or salts ☐	Un-contaminated Empty Containers ☐	Leather Waste ☐	Paint / Varnish Contaminated waste ☐			

If none are present please check here. None ☒

12.0 GENERATOR CERTIFICATION (This section must be signed prior to the completion of any review)

I certify, as the generator, or, authorized representative of the generator, that the Material or Waste described in this Material Profile Form is NON-HAZARDOUS by all Federal, State and Local regulations. Furthermore, this information is complete and accurate to the best of my knowledge, no information about the Material or Waste composition or the known or potential hazards have been willfully omitted.

X Generator Signature: Robert Haymon

X Name & Title (Printed or Typed): Robert Haymon - Materials Manager

X Date: January 10, 2001

Part 6: Material / Waste Processing Form/ Handling Requirements (Cont)

Additional Requirements that need to be followed in blending waste.

☐ Initial ___ Date: ___ Pit feed with no additional blending or mixing requirements.

☒ Initial AM Date: 1-15-01 Mix on tipping floor with front end loader prior to feeding to ~~pit, spread through multiple bays~~ Conveyor.

☐ Initial ___ Date: ___ Feed the waste over 1 shift ☐ Feed the waste over 2 shifts ☐ Feed the waste over 2 days

☐ Initial ___ Date: ___ Pass instruction and location of waste to the control room/crane operator on the next shift / day

☐ Initial ___ Date: ___ Contains viscous liquid blend extremely well with MSW to eliminate slipping hazards

☐ Initial ___ Date: ___ Contains liquid(low BTU) blend extremely well with MSW.

☐ Initial ___ Date: ___ Contains a material that is waxy in nature(under-fire melting concern) blend well with MSW

☒ Initial AM Date: 1-15-01 Store on tipping floor for further instruction if material is noticeably different from profile

☐ Quality Control Confirmed Initial: ___ Date: ___

Additional Quality Control Steps based upon Recommendations and Requirements as suggested by MSWS , Quality Control needs to confirm these steps were followed:

Initial AM Date 1-15-01 ☒ No Industrial Hygiene Sampling Required.

Initial: ___ ☐ Industrial Hygiene Testing was performed based on of the following identifiable odor ___

The Specific Draeger Tubes required are : ___ ___ # of tubes required is ___

Circle the appropriate additional blending recommendation.

Initial: ___ Date: ___ ☐ Increased lime feed is Recommended ☐ Required ☐

Initial: ___ Date: ___ ☐ Additional Blending is required due to High BTU ☐ Low BTU ☐

Initial: ___ Date: ___ ☐ Additional Blending is required due to liquid content

Initial: ___ Date: ___ ☐ Additional Blending is required due to the inert content of the waste

Initial: ___ Date: ___ ☐ Additional Blending is required due to the melting potential of the waste

Initial: ___ Date: ___ ☐ Additional care is required in feeding due to the dusting potential of the waste

☐ Quality Control Confirmed Initial: ___ Date: ___

Quality Control Verification Section:

Unloading Equipment was as outlined on WPF	☐ YES	☐ NO	___Initial	___Date
Processing Tools as on WPF available and utilized	☐ YES	☐ NO	___Initial	___Date
Sampling Equipment as on WPF available and utilized	☐ YES	☐ NO	___Initial	___Date
Blending and Mixing Requirements followed explicitly	☐ YES	☐ NO	___Initial	___Date
Safety Equipment was available and utilized as required	☐ YES	☐ NO	___Initial	___Date
All MSWS Recommendations were followed as required	☐ YES	☐ NO	___Initial	___Date

Alternate Blending Followed(Explain): ___

Authorized by MSWS Representative : ___

Comments: ___

☐ Quality Control Confirmed Initial: ___ Date: ___

Part 6 : Material / Waste Processing Form / Handling Requirements

Unloading Requirements: (Check all applicable- discuss with facility Operations prior to arrival of shipment)

☒ Forklift ☒ Pallet Jack ☐ Pallet Chains ☐ Drum Clamp ☐ Loader ☐ Drum Cart ☐ Pallet Clamps ☐ Ropes and Cable
☐ Drum Over-packs ☐ Drum Transfer Pump ☐ Non - Sparking Spill Cleanup Tools ☐ Absorbent Pads ☐ Speedy Dry
☐ No un-loading requirements. If additional add here _____

Initial: KRM Date: 1-15-01 Required JSA# _____

Initial: _____ Date: _____ The above equipment was utilized in the Off Loading Procedures. ☐ No equipment requir

Processing Tools :(Check all applicable- discuss with facility Operations prior to arrival of shipment)

☐ Hammer ☐ Chisels ☐ Bung Wrench ☐ Pliers ☐ Drum Spike ☐ Wire Snips ☐ Hatchet ☐ Screwdrivers ☐ Scrapers
☐ Pry Bar ☐ Bolt Cutter ☐ Pipe Wrench ☐ Hacksaw ☐ Saw ☐ Speedy Wrench ☒ Utility Knife
☐ Pail Opener ☐ Sawzall ☐ Cutting Tools ☐ No Equipment Required. If additional add here _____

Initial: KRM Date: 1-15-01 Required JSA# _____

Initial: _____ Date: _____ The above equipment was utilized in the Processing of Specialty Waste.

Sampling Equipment:(Check all applicable- discuss with facility Operations prior to arrival of shipment)

☐ Draeger ☐ Sampling Rods (plastic) ☐ Sampling rods (glass) ☐ Auger sampler ☐ Plastic Sample jars
☐ Glass Sample jars ☐ Sample bags ☒ No Equipment Required

Initial: KRM Date: 1-15-01 Required JSA# _____

Initial: _____ Date: _____ The above equipment was utilized in the Quality Control Process.

Health and Safety Equipment : For QA / QC Inspection use X , for processing circle each appropriate box.
(Check all applicable- discuss with facility Operations prior to arrival of shipment)

☐ Tyvek ☐ Rubber Apron ☐ Latex Gloves(inner) ☐ PVC Outer Gloves ☐ Rain Suit
☐ Over-boots ☐ Splash shield ☐ Goggles ☐ Half face respirator ☐ Full face respirator
☐ Organic Vapor/ HEPA filters ☐ Ammonia Filters ☐ Acid gas cartridge ☐ HEPA Filter
☐ Dust-mask ☒ No additional PPE Required ☐ PPE Upgraded(see report)

Initial: KRM Date: 1-15-01 PPE required during QA/QC(Inspection) and subsequent processing of the waste.

Initial: _____ Date: _____ The above Personal Protective Clothing , Eye Protection and Respiratory Protection was used

Blending and Mixing Requirments: ☐ Quality Control Confirmed Initial: _____ Date: _____

(Check all applicable- discuss with facility Operations prior to arrival of shipment)

Initial: KRM Date: 1-15-01 NO SLUG FEEDING ☐ Quality Control Confirmed Initial: _____ Date: _____

Quality Control is to check the method of mixing completed and waste processing employed for this material or waste. All the instructions outlined on Waste Processing Form were followed.

☐ Quality Control Confirmed Initial: _____ Date: _____

Only one feed type method can be completed per each Part 6 of the QA/QC Form.

Initial: KRM Date: 1-15-01 ☒ ~~Pit Feed(PF)~~ Flour Mix* Initial: _____ Date: _____ ☐ Cherry Picking(CP) Initial: _____ Date: _____ ☐ Hopper Feeding

☐ Follow instructions in attached material listing matrix

☐	No added mixing required(PF)	☐	No added mixing required	☐	Feed in 50 lb charges
☐	Spread over 2 bays(PF-2)	☐	Feed to one unit if possible	☐	Feed in 100 lb charges
☐	Spread over 3 bays(PF-3)	☐	Feed to two units	☐	Feed in 200 lb charges
☐	Spread over 4 bays(PF-4)	☐	Feed to back stack	☐	Feed in 300 lb charges
☐	Spread over 5 bays(PF-5)	☐	Feed onto charging deck	☐	Feed in 400 lb charges
☐	Spread over half the pit(PF-1/2)	☐	Flag location in pit	☐	Feed in >400 lb charges
☐	Spread over the full pit(PF- Full)	☐	Split grapple at hopper lip		

Boxes can be checked from any column for the particular waste being QA/QC Checked.

* FLOUR MIX WITH MSW AT A RATIO OF 50% MSW TO 50% PRODUCTS

☐ Quality Control Confirmed Initial: _____ Date: _____

COMBAT

Combat Insect Control Systems
c/o The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMBAT® QUICK KILL FORMULA 2

Description: FIPRONIL BASED ROACH FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION (FOR LARGE ROACHES)

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. Number 64240-34	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

Combat® Quick Kill Formula 2 may be minimally irritating to skin following prolonged direct contact. It is not acutely toxic upon oral or dermal exposure.

Untoward effects resulting from over-exposure are not anticipated to occur. The formulation is packaged in a child resistant container.

No known health conditions are aggravated by exposure to this product.

Bait wt per station: 1.75 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Fipronil CAS #120068-37-3	0.03% (w/w)	[a]0.1 mg/m³ [b]0.032 mg/m³

None of the ingredients in this product is on the IARC, OSHA or NTP carcinogen lists.

Rhone-Poulenc TWA for: [a]3 month "on", 9 month "off" exposure
[b]12 month daily exposure

IV Special Protection and Precautions

None.

Keep Out of Reach of Children and Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

USDA: Not authorized for USDA use.

EPA CERCLA/SARA TITLE III: This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Non-hazardous waste.

Sweep up spilled material.

Place in a container for disposal.

Dispose in accordance with Local, State, and Federal regulations.

VII Reactivity Data

Stable under normal use and storage conditions

VIII Fire and Explosion Data

Not flammable or Explosive.

Flash Point > 200° F (TCC)

Fire Extinguishing Media: Water, Foam CO_2 or dry chemical

IX Physical Data

Specific gravity ..... 1.27 g/cc

Melting Point ..... 60° C

DATE PREPARED 2/11/2000

MAXFORCE

Maxforce Insect Control Systems
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: MAXFORCE® FC PROFESSIONAL INSECT CONTROL ANT BAIT STATION

Description: FIPRONIL BASED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION

Other Designations	Manufacturer	Emergency Telephone Nos.
EPA Reg. Number: 64248-10	Maxforce Insect Control Systems 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

Maxforce® FC Professional Insect Control® Ant Bait Stations may be minimally irritating to skin following prolonged direct contact. It is not acutely toxic upon oral or dermal exposure.

Untoward effects resulting from over-exposure are not anticipated to occur. The formulation is packaged in a child resistant container.

No known health conditions are aggravated by exposure to this product.

Bait wt per station: 1.5 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Fipronil CAS #120068-37-3	0.01% (w/w)	a0.1 mg/m3 b0.032 mg/m3

None of the ingredients in this product is on the IARC, OSHA or NTP carcinogen lists.

Rhone-Poulenc TWA for: a3 month "on", 9 month "off" exposure
b12 month daily exposure

IV Special Protection and Precautions

None.

Keep Out of Reach of Children and Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

USDA: Not authorized for USDA use.

EPA CERCLA/SARA TITLE III: This product contans no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Non-hazardous waste.

Sweep up spilled material.

Place in a container for disposal.

Dispose in accordance with Local, State, and Federal regulations.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.
Flash Point > 200°F (TCC)
Fire Extinguishing Media: Water, Foam CO_2 or dry chemical

IX Physical Data

Specific gravity ..... 1.27 g/cc
Melting Point ..... 6°C

DATE PREPARED 3/97

COMBAT

Combat Insect Control Systems
% The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMBAT® ANT CONTROL

Description: HYDRAMETHYLNON BASED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. Number 64248-2-64240 COMBAT® SuperBait Advanced Formula Ant Control.	Combat Insect Control Systems % The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

COMBAT® Ant Control is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: - 1.50 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	1.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

- American Cyanamid PEL

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act:

This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material,
Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.
Flash Point > 200° F (TCC)
Fire Extinguishing Media: Water, Foam
CO_2 or dry chemical

IX Physical Data

Specific gravity 1.4g/ml

Melting Point ..... 60° C

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH DATE PREPARED 3/97

COMBAT

Combat Insect Control Systems
% The Clorox Company
1221 Broadway
Oakland, CA 94612
Tel. (510) 271-7000

Material Safety Data Sheet

I Product: COMBAT® ROACH CONTROL 1

Description: HYDRAMETHYLNON BASED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION

Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. Number 64240-2 Combat SuperBait Brand Insecticide Patented Action Roach Control for Small Roaches Combat SuperBait Brand Insecticide Patented Action Roach Control for Large Roaches Combat SuperBait Advanced Formula Roach Control	Combat Insect Control Systems % The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrac (800) 424-9300

II Health Hazard Data

COMBAT® Roach Control 1 is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: 1.5 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	2.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product is on the IARC, OSHA or NTP carcinogen lists.

* American Cyanamid Permissible Exposure Limit

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III: This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not Flammable or Explosive.

Flash Point >200°F (TCC)
Fire Extinguishing Media: Water, Foam
CO_2 or dry chemical

IX Physical Data

Specific gravity 1.4g/ml

Melting Point ..... 60°C

DATE PREPARED 3/97

The Clorox Company
7200 Johnson Drive
Pleasanton, California 94588
Tel. (510) 847-6100

Material Safety Data Sheet

I Product:	COMBAT® ANT KILLING SYSTEM - EPA REGISTRATION NO. 64240-3
Description:	HYDRAMETHYLNON BASED FOOD BAIT IN A CHILD RESISTANT PLASTIC STATION

Other Designations	Manufacturer	Emergency Telephone No.
EPA Reg. Number: 64240-3	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	Notify your Supervisor Rocky Mountain Poison Center (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300

II Health Hazard Data

COMBAT® Ant Killing bait is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Bait wt per station: Small 1.50 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	0.9%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

*American Cyanamid PEL

IV Special Protection and Precautions

None

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid-Not restricted

USDA Approved F_2: Residual Pesticides.

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act:

This product contains no CERCLA/SARA Title III materials.

VI Spill or Leak Procedures

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.

Fire Extinguishing Media: Water, Foam
CO^2 or dry chemical

IX Physical Data

Specific gravity	1.4g/ml
Melting Point	60°C

DATE PREPARED 10/92

Material Safety Data Sheet

The Clorox Company
7200 Johnson Drive
Pleasanton, California 94588
Phone: 510-847-6100

I Product: COMBAT® SuperBait™ Brand Insecticide Patented Action Roach Control - EPA Reg. No. 64240-2

Description: Hydramethylnon based food bait in a child resistant plastic station

Other Designations	Manufacturer	Emergency Telephone Nos.
EPA Reg. Number 64240-2 Combat SuperBait Brand Insecticide Patented Action Roach Control for Small Roaches Combat SuperBait Brand Insecticide Patented Action Roach Control for Large Roaches Combat SuperBait Advanced Formula Roach Control	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call Rocky Mountain Poison Center: 1-800-445-1014 For Transportation Emergencies, call Chemtrec: 1-800-424-9300

II Health Hazard Data

COMBAT® SuperBait™ Brand Insecticide Patented Action Roach Control is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: Small 1.65 grams
Large 8.25 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	2.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

* American Cyanamid PEL

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act:

This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.

Flash Point > 200° F (TCC)
Fire Extinguishing Media: Water, Foam
CO^2 or dry chemical

IX Physical Data

Specific gravity 1.4g/ml

Melting Point 80° C

Date Prepared 4/93

Material Safety Data Sheet

The Clorox Company
7200 Johnson Drive
Pleasanton, California 94588
Phone: 510-847-6100

I Product: COMBAT® SuperBait™ Brand Insecticide Patented Action Ant Control - EPA Reg. No. 64248-2-64240

Description: Hydramethylnon based food bait in a child resistant plastic station

Other Designations	Manufacturer	Emergency Telephone Nos.
EPA Reg. Number 64248-2-64240 COMBAT® SuperBait Advanced Formula Ant Control	Combat Insect Control Systems c/o The Clorox Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies, call Rocky Mountain Poison Center: 1-800-446-1014 For Transportation Emergencies, call Chemtrec: 1-800-424-9300

II Health Hazard Data

COMBAT® SuperBait™ Brand Insecticide Patented Action Ant Control is practically non-toxic upon ingestion. It is a minimal eye irritant.

Untoward effects resulting from over exposure are not anticipated to occur because this formulation is packaged in a child resistant container.

Health conditions aggravated by exposure: None known

Bait wt per station: 1.50 grams

III Hazardous Ingredients

Ingredient	Concentration	Worker Exposure Limit
Hydramethylnon CAS #67485-29-4	1.0%	1.4 mg/M³ (TWA)*

None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists.

* American Cyanamid PEL

IV Special Protection and Precautions

None.

Keep Out of Reach of Children or Pets.

V Transportation and Regulatory Data

U.S. DOT Hazard Class: Not restricted

U.S. DOT Proper Shipping Name: Insecticide, non-toxic, solid - Not restricted

EPA CERCLA/SARA TITLE III Superfund Amendment and Reauthorization Act:

This product contains no CERCLA/SARA Title III materials

VI Spill Procedures/Waste Disposal

Sweep up spilled material.

Place in a container for disposal.

VII Reactivity Data

Stable under normal use and storage conditions.

VIII Fire and Explosion Data

Not flammable or Explosive.

Flash Point > 200° F (TCC)
Fire Extinguishing Media: Water, Foam
CO^2 or dry chemical

IX Physical Data

Specific gravity 1.4g/ml

Melting Point 90° C

Date Prepared 4/93

March 2, 2001

Ms. Sandra Veazey, District Director
Florida Department of Environmental Protection
Northwest District Office
160 Government Place
Pensacola Florida 32501

Re: Request of Montenay Bay to burn certain segregated wastes: Four letters to Clair Fancy, February 15 and February 19, 2001

Dear Ms Veazey:

We have received the four attached requests from Montenay Bay LCC to burn certain segregated wastes including:

(February 15, 2001)

Shurtape label waste (Avery, Dennison) 17 to 20 tons per week summer, 34 to 40 tons per week winter.
Kimberly Clark diaper manufacturing waste, 17 to 20 tons per week/ winter none in summer.
International food waste from Tyndall Air Force Base (segregated overseas garbage) 2 to 3 tons per year.

(February 19, 2001)

Clorox Roach Bait, 100 tons per year.

(February 19, 2001)

Waste tires, not to exceed 3% of the facility's total fuel.

(February 19, 2001)

Bausch and Lomb eye drops (off spec and out dated pharmaceuticals) 15 To 20 tons per month.
Hawaiian Tropic tanning products (off spec, recalled and outdated cosmetics and pharmaceuticals)
Aaron Oil Co. (used oil filters and cleanup booms and swabs) 15 to 20 tons per month
Eastman Kodak (plastic resins) 15 to 20 tons per week

Of these waste streams I have some preliminary concerns about the Clorox Roach Bait which contains a pesticide Fiprinol or possibly Hydramethylone, and some of the plastics from Eastman.

The roach bait products are represented to be out of date consumer products that are exempt from RCRA collection, transportation. and handling under the "Universal Waste Rule" 40 CFR 273. While the Universal Waste Rule allows simplified handling and recordkeeping, I do not consider it broad enough to allow disposal at a municipal waste combustor.

Likeswise, the Eastman plastic resins contain glass fibers, mica, brominated fire retardants, and antimony fire retardants. The glass fibers and mica are possible carcinogenic materials and their combustion fate and removal by the facility's electrostatic precipitator is not yet evaluated. The brominated plastics may release haloginated hydrocarbons, an ozone precursor and the antimony is a listed hazardous air pollutant, although no MACT standards for antimony are yet formulated for emissions from MSW's.

I have briefly discussed these materials with Jack McNulty of your staff. I would welcome Jack's assistance as well as Bill Kellenberger before formulating a final position with respect to the incineration of any of these materials.

If I can provide any further information, please call me at (850) 921 9522, sc 291-9522, or email me at william.leffler@dep.state.fl..us.

Sincerely.

William Leffler, P.E.

Enc 4 letters w/ attachments

Scott

MONTENAY BAY LLC

ONYX

MBLLC/DEP-01-032

February 15, 2001

RECEIVED

FEB 19 2001

BUREAU OF AIR REGULATION

Mr. Clair Fancy
Florida DEP, Bureau of Air Regulation
Twin Towers Office Building
Mail Station 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: Waste Approval Consideration
Title V FINAL Permit No.: 0050031-002-AV

Dear Mr. Fancy:

Recently Jerry Gross, Facility Manager, and I talked with Mr. Scott Sheplak concerning the proper method for seeking approval for various waste streams. Mr. Sheplak recommended routing requests through your office.

Enclosed, please find four packets of material describing four waste streams. Attached to the front of each packet is a post it note with a general name for the material, brief description of the material, and approximate thru-put if approved.

For tracking purposes, this approval request is for Shurtape, Label Waste, Diaper Material, and International Food Waste.

We feel that the Shurtape, Label Waste, and Diaper Material meet conditions A.5.1.8 (e) (i) and (ii). We feel that the International Food Waste is MSW, but due to its overseas origin we feel it needs approval also.

If I may be of any further assistance, please feel free to contact me at (850) 785-7933, x206.

Sincerely,

Chalmous Beechem
Operations Manager

6510 Bayline drive - Panama City, Florida 32404 - **Tel.: (850) 785-7933 - Fax: (850) 784-1779**

USDA, APHIS, PPQ
5323 West Hwy 98
Suite 118
Panama, City, Fl 32401

Phone:(850) 763-9401

Facsimile

To: Aztec Environmental, Inc.
ATTN:Mitch Kidd

@Fax:

From: Sherwood Gibbs

Date: Re: Pages 6 , including this

Dear Mr. Kidd,

I am faxing you a copy of the completed compliance agreement between USDA and Aztec Environmental, Inc., as well as, mailing you the original. If you are in agreement with the provisions please sign and return the original back to this office. Once all signatures are in place then your company will then be able to transport foreign garbage to the incinerator for destruction. If you have any questions please call.

Sherwood Gibbs
PPQ Officer

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS

COMPLIANCE AGREEMENT

1. NAME AND MAILING ADDRESS OF PERSON OR FIRM	2. LOCATION
AZTEC ENVIRONMENTAL, INC 2060 N. Sherman Ave. Panama City, Fl 32405 MITCH KIDD (850) 747-0078	

3. REGULATED ARTICLE(S)

FOREIGN GARBAGE

4. APPLICABLE FEDERAL QUARANTINE(S) OR REGULATIONS

9 CFR 94.6 / 7 CFR 330.400

6. *I/We agree to the following:*

Stipulations in this agreement do not preclude compliance with other sections of a quarantine or regulation.

I. DEFINITIONS

A. **Garbage.** All waste material derived in whole or in part from fruits, vegetables, meats, or other plant or animal (including poultry) material, and other refuse of any character whatsoever that has been associated with any such material onboard or unloaded from any means of conveyance, and including food scraps, table refuse, galley refuse, food wrappers or packaging materials, and other waste material from stores, food preparation areas, passengers' or crews' quarters, dining rooms, or other areas on vessels, aircraft, or other means of conveyance. Garbage referred to in this agreement refers only to overseas garbage.

B. **Foreign** and/or **Overseas.** Puerto Rico, Virgin Islands, Hawaii, America Samoa, Guam, the Northern Mariana Islands, and any foreign country (except Canada).

C. **USDA regulated garbage, foreign garbage, international garbage, and/or overseas garbage.** Garbage which is on or unloaded from any means of conveyance which has returned to the continental United States from overseas, including any vessel arriving during the past two years from a foreign country (one years from other overseas locations) unless specifically exempted by the USDA.

D. **USDA, APHIS, PPQ.** United States Department of Agriculture, Animal Plant & Health Inspection Service, Plant Protection & Quarantine.

E. **PPQ Officer.** A Plant Protection & Quarantine Officer employed by USDA.

II. HANDLING PROCEDURES:

A. The cartage firm transports regulated garbage directly from a regulated vessel or regulated aircraft to the USDA approved disposal facility in closed leakproof containers without diversion.

B. USDA in Panama City, Florida will be notified by the cartage firm at (850) 763-9401/ Fax (850) 763-9528 each time a container is to be delivered to a vessel for removal of USDA regulated garbage. The following information will be provided:

1. Estimated time of container arrival (updated as circumstances change).
2. Whether the cartage firm will conduct or supervise the garbage transfer or leave the container unattended for latter pickup.
3. If left unattended , whether the vessel has agreed to place the container on the vessel, or will leave it on the pier.

C. Before removing USDA regulated garbage from the vessel, garbage will be placed in individual small leakproof containers and securely closed. These "immediate" containers will then be placed in shipping/handling containers that are also leakproof. If there will be no transportation through rural areas, required identifying features for shipping/handling containers is not required.

D. For transportation through rural areas, shipping/handling containers will be placed into a tightly covered, rigid, leakproof carrier/storage container that is to be secured by seal, lock, or similar devise. Be advised that canvas or tarp covering is not acceptable. (See III. Equipment)

E. Storage containers/carriers will either be placed on the vessel for receipt of the shipping/handling containers or in unique situations when a large amount of garbage is being produced, unattended storage containers, (unattended by the cartage firm), which are not on a vessel will be secured by seal, lock, or similar devices will be controlled by USDA authorized personnel only. Vessels personnel are not authorized to use unattended storage containers without supervision. Authorized personnel will be under separate compliance agreement call USDA for the latest approved list.

F. All USDA regulated garbage will be kept completely separate from domestic garbage. Any material that has contact with untreated regulated garbage will be processed as USDA regulated garbage.

G. The cartage firm must provide personnel and disinfectant to control the regulated materials in the event of a spill or other emergency. There must be an adequate supply of approved disinfectant (See III Equipment) on each vehicle in order to clean up and disinfect spills.If spillage occurs during the cartage process, USDA must be notified immediately! The firm must contact USDA at:
Panama City, Fl (850) 763-9401 or Jacksonville, Fl (904) 396-2363

H. The cartage firm will be responsible for all USDA regulated garbage in it's possession and will not permit misappropriation of any items from the firms premises. Items will not be removed from containers except to apply the approved treatments.

I. The cartage firm will transport the shipping/handling containers to Montenay Bay Incinerator located at 6510 Bay Line Dr., Panama City, Fl to be placed directly in the incinerator hopper to be incinerated to ash.

J. Approved steam sterilizer or cooker : _____N/A_____ .

K. To facilitate monitoring, the cartage firm must provide the following:
* A record of the date, time, number, type and weight of containers transported and garbage disposed of. This record must be kept for 1 year from the end of the month the movement was made.
* This record will be made available to USDA upon requests.

L. The truck/container to be used for a purpose other than hauling garbage must have markings obliterated and the disinfected under USDA supervision prior to such use.

M. Storage: USDA regulated garbage, properly containerized and identified, may be stored so long as it dose not begin to have an offensive small. Refrigeration may be necessary if stored more than a few days in warm weather. Storage must be in an enclosed, covered, leak proof, rodent and bird proof container, room or confined area capable of being locked.

III. EQUIPMENT

A. Immediate container will be individual small leakproof containers which can be securely closed.

B. Shipping/Handling (second) containers will be such that they are easily identified as USDA regulated garbage, E.G., red/yellow - colored bags, conspicuous printing in contrasting color with letters 2-4 inches in height, or prominently tagged using as least a 3 X 5 inch tag with 1 inch minimum height printing. Printing will at least include "USDA REGULATED GARBAGE", "FOREIGN GARBAGE", OR "INTERNATIONAL GARBAGE", OR " OVERSEAS GARBAGE". Plastic bags must be a minimum of 4 mils or 0.004 inch thickness each.

C. Containers used for USDA regulated garbage or biohazardous (medical) waste shall not be used for any other purpose. If they are to be used for another purpose they must have all required markings obliterated and be cleaned and disinfected under USDA supervision prior to such use. (Supervision is not required if this is done to all containers after each batch of garbage emptied).

D. Approved disinfectants:

1. "1 Stroke Environ"

½ ounce/gallon of water as stated on the label

"1 Stroke Environ" is produced by Calgon-Vestal Laboratories St. Louis, MO 63110 (800) 243-5799 0r (314) 862-2000)

2. Sodium hypochlorite (* Chlorine Bleach)

5 tablespoons/gallon of water or

1 gallon of chlorine bleach/50 gallons of water

* Label must show 5.25 percent available chlorine

E. If an incinerator is used, it must reduce incinerated materials to an ash. Glass and metal shall be the only residue in the ash.

IV. TRAINING

A. A training program will be presented to all cartage firm employees before they are permitted to handle or supervise the handling of USDA regulated garbage.

B. The training must be approved by the local USDA, APHIS, PPQ Port Director.

C. The training program must include:

1. Definition of USDA regulated garbage.
2. Explain the garbage regulations and their purpose.
3. Include film, slides, or other training aids on foreign animal and plant pests and diseases.
4. Specifically outline step by step handling procedures for USDA regulated garbage.
5. Include procedures for reporting and handling emergency spills, maintaining control of regulated materials, and proper cleaning and disinfecting of affected equipment and areas.

V. NOTICES:

This compliance agreement may be immediately canceled or revoked for noncompliance. Violations can result in criminal fines in accordance with title 18, United States Code and Imprisonment for up to one year, or both, or civil penalties of up to $250,000 per Violation.

By signing this agreement, certify that this facility has met, or will meet prior to handling regulated garbage, the requirements of all other applicable environmental authorities.

7. SIGNATURE	8. TITLE	9. DATE SIGNED
Johnnie K. Langston	President	2/15/01

The affixing of the signatures below will validate this agreement which shall remain in effect until cancelled, but may be revised as necessary or revoked for noncompliance.

10. AGREEMENT NO. FG-COM-PAN-02-01

11. DATE OF AGREEMENT

12. PPQ OFFICIAL (Name and Title)	13. ADDRESS
Sherwood W. Gibbs AQI Director	USDA, APHIS, PPQ 5323 West Hwy 98, Suite 118 Panama City, Fl 32401
14. SIGNATURE	
15. STATE AGENCY OFFICIAL (Name and Title)	16. ADDRESS
17. SIGNATURE	

PPQ FORM 519
AUG. 1977

REPLACES PPQ 274, 519, 560, AND AQI 83, WHICH ARE OBSOLETE

SHUFORD MILLS, INC.
CORPORATE
704 328-2131 • PO BOX 2228 • HICKORY NC 28603-2228

April 1, 1995

To: Whom It May Concern

The OSHA Hazard Communications Standard (29CFR 1910.1200), which has been in effect since 11/25/85 for manufacturers of certain hazardous chemicals, required that all chemically related materials be carefully examined for hazard potential.

Shuford Mills, Inc. has examined the impact of this standard on all of our finished products, i.e. yarns, twines, sewing thread, plastic products, woven fabrics, and pressure sensitive tapes, and has concluded after comprehensive review, including consultation with independent consultants, that all of our product lines are exempt from this standard and are considered "articles" under 29CFR 1910.1200 (b)(6)(v). An "Article" as defined in the standard means a manufactured item, other than a fluid or particle:

1) Which is formed to a specific shape or design during manufacture

2) Which has end use function(s) dependent in whole or in part upon its shape or design during end use

3) Which under normal conditions of use does not release more than very small quantities e.g. minute or trace amounts of a hazardous chemical (as determined under paragraph (d) - Hazard Determination), and does not pose a physical hazard or health risk to employees.

Based on the above determinations, Material Safety Data Sheets (MSDS) are not required for any products manufactured and sold by Shuford Mills, Inc.

Generally speaking, our raw material formulations and processes are considered proprietary. This standard provides for a balance between the need to protect against potential exposure and the need to maintain the confidentiality of proprietary information. Essentially the standard provides for the limited disclosure of certain proprietary information upon official request, either in a medical emergency or non-emergency situation under specified conditions of need and confidentiality to qualified health professionals, i.e., physician, industrial hygienist, toxicologist, epidemiologist, or occupational health nurse, who are furnishing medical or other occupational health service in cases involving potential exposure.

Since our products do not release or otherwise result in exposure to a hazardous chemical under normal recommended conditions of use, disclosure of proprietary materials or processes is available only as prescribed in the trade secrets section of this standard.

While Shuford Mills, Inc. believes the information contained herein is accurate, it is not to be taken as a warranty or representation for which Shuford Mills, Inc. assumes any legal responsibility or product liability. This information is offered solely for our customers' consideration, investigation, and any necessary verification. Any use of this information or of the products provided by Shuford Mills, Inc. must be determined by the user to be acceptable for their intended purpose(s) and in accordance with appropriate federal, state, or local laws and regulations including 29CFR in its entirety.

Sincerely,

Shuford Mills, Inc.

W. H. Little, Jr.
Vice President
Environment/Safety

MATERIAL SAFETY DATA SHEET

MANUFACTURER: SHUFORD MILLS, INC., TAPE DIVISION
ADDRESS: Highland Ave. & 16th Street NE
Hickory, NC 28601
PHONE: (704) 322-2700
EMERGENCY NO. (704) 322-2700 TELEX 5109341991

NO. 1

SECTION I. MATERIAL IDENTIFICATION

Reviewed: W. H. Lettrup

MATERIAL NAME: PRESSURE SENSITIVE TAPE
OTHER DESIGNATIONS

CP-83

CHEMICAL FAMILY N/A TRADE NAME SHURTAPE

SECTION II. INGREDIENTS AND HAZARDS	%	HAZARD DATA
No reportable quantities of hazardous materials are present in this product		Toxicity (mg/M^3)

SECTION III. PHYSICAL DATA

Boiling point at 1 atm, deg C	N/A	Specific gravity, 20/4°C	N/A
Vapor pressure at 15°C, mm Hg	N/A	Evap. Rate (BuAc = 1)	N/A
Vapor density (Air = 1)	N/A	Volatiles, %	< 1.0
Water solubility at 20°C	N/A	Molecular weight	N/A

Appearance & Odor:

Light tan paper coated on one side with rubber based adhesive. Normally found in rolls 60 yds in length and of variable widths.

SECTION IV. FIRE AND EXPLOSION DATA			LOWER	UPPER
Flash Point and Method	Autoignition Temp.	Flammability Limits in Air		
N/A	approx. 451°F	N/A	N/A	N/A

Extinguishing media:

Water

Special fire fighting procedures:

None

SECTION V. REACTIVITY DATA

Stability: N/A	Stable N/A / Unstable	Conditions to avoid: None
Incompatible with: N/A		
Hazardous decomposition products: CO , CO_2 if burned		
Hazardous polymerization: N/A	May occur N/A / Will not occur	Conditions to avoid: None

NO. _____

SECTION VI. HEALTH HAZARD INFORMATION	TLV N/A

Effects of overexposure: None

FIRST AID:

Eye contact: N/A

Skin contact: N/A

Inhalation: N/A

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

SPILLS, LEAKS: N/A

DISPOSAL: Normal trash disposal

SECTION VIII. SPECIAL PROTECTION INFORMATION

Respiratory protection: Not necessary

Ventilation: Not necessary

Protective gloves: Not necessary

Other protective equipment:	Eye protection:
None required	Not necessary

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Storage & Handling Information

No special storage or handling procedures are required. This product is considered to be an "article", not a hazardous substance, according to the definitions in the OSHA Hazard Communication Regulations.

DOT Class

APPROVALS: C. N. Huggins

Industrial Hygiene and Safety Pete Miller

Kitty Benfield, RN
Corporate Medical Staff

Judgements as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, _____ extends no warranties, makes no representations and assumes no responsibility as to accuracy or suitability of such information for application to purchaser's intended purposes of for consequences of its use.

Material Safety Data Sheet May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.	AVERY DENNISON
IDENTITY P-60 Hot Melt Adhesive	Avery Code No. 96-919

SECTION I	
Manufacturer's Name Avery Dennison	Emergency Telephone Number 404-967-3371
Address 4350 Avery Drive,	Telephone Number for Information 404-967-5832
City, State and Zip Code Flowery Branch, GA 30542	Date Prepared 5-Mar-93 Revision Date 25-Mar-95
	Signature of Preparer (Optional) David Kandel

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION			
Hazardous Components (Chemical & Common Name(s))	OSHA PEL	ACGIH TLV	CAS#
Amorphous Propylene - Hexene Copolymer	NA	NA	25895-44-7
Hydrocarbon Resin	NA	NA	68441-35-0
Styrene-Type Polymer Resin	NA	NA	NA

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS			
Boiling Point NA		Specific Gravity (H2O = 1) NA	
Vapor Pressure (mm Hg.) NA		Melting Point > 250°F	
Vapor Density (AIR = 1) NA		Evaporation Rate (Butyl Acetate = 1) NA	
Solubility in Water NA			
Appearance and Odor Clear with little odor			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method) > 400°F	Flammable Limits NA	LEL NA	UEL NA
Extinguishing Media Carbon dioxide, dry chemical, foam, water or fog			
Special Fire Fighting Procedures Wear self-contained breathing apparatus			
Unusual Fire and Explosion Hazards None Unknown			

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

AVERY DENNISON

IDENTITY	Avery Code No.
P-39 Hot Melt Adhesive	96-909

SECTION I

Manufacturer's Name Avery Dennison	Emergency Telephone Number 404-967-3371
Address 4350 Avery Drive.	Telephone Number for Information 404-967-5832
City, State and Zip Code Flowery Branch, GA 30542	Date Prepared 28-Aug-95
	Signature of Preparer (Optional) Daniel Franklin

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (Chemical & Common Name(s))	OSHA PEL	ACGIH TLV	CAS#
Hydrocarbon Resin	NA	NA	68441-35-0
Mineral oil	5mg/m3	5mg/m3	8012-95-1
	NA	NA	NA

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point NA		Specific Gravity (H2O = 1) NA	
Vapor Pressure (mm Hg.) NA		Melting Point > 250°F	
Vapor Density (AIR = 1) NA		Evaporation Rate (Butyl Acetate = 1) NA	

Solubility in Water
NA

Appearance and Odor
Very Light amber with little odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method)	Flammable Limits	LEL	UEL
> 400°F	NA	NA	NA

Extinguishing Media
Carbon dioxide, dry chemical, foam, water or fog

Special Fire Fighting Procedures
Wear self-contained breathing apparatus

Unusual Fire and Explosion Hazards
None Unknown

(1)

Co-form

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: Kimberly-Clark Corporation	REGULAR TELEPHONE NO. (404)587-8000 EMERGENCY TELEPHONE NO. (404)587-8324
ADDRESS: 1400 Holcomb Bridge Road, Roswell, Georgia 30076	
CHEMICAL NAME AND SYNONYMS: Pulp Coform	CAS NO. UN NO.
TRADE NAME AND SYNONYMS: Polypropylene/Wood Pulp Fiber Blend, Fluidsorb	
CHEMICAL FAMILY: Polyolefin/Cellulose	FORMULA: $(C_3H_5)n \cdot C_6H_{10}O_5$
SHIPPING NAME: DOT:	IATA:

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	CAS NO. UN NO.	%	HAZARD DATA
Non-hazardous, Consists of:			
Polypropylene		70	
Wood Pulp		29	
Wetting Agent		1	

III PHYSICAL DATA

BOILING POINT, 760 mm Hg	n/a	MELTING POINT	300 - 340°F
SPECIFIC GRAVITY (H_2O=1)	n/a	VAPOR PRESSURE (mm Hg at °C)	n/a
VAPOR DENSITY (AIR=1)	n/a	SOLUBILITY IN H_2O, % BY WT.	Insoluble
% VOLATILES BY VOL.	n/a	EVAPORATION RATE (n/a =1)	
APPEARANCE AND ODOR	White fibrous material, no apparent odor	pH (AS IS) pH AT DILUTION	n/a

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	n/a	AUTO IGNITION TEMPERATURE	450°F	FLAMMABLE LIMITS IN AIR, % BY VOL.: n/a	LOWER: n/a UPPER: n/a
EXTINGUISHING MEDIA	Water				
SPECIAL FIRE FIGHTING PROCEDURES	Use water spray to cool fire-exposed surfaces and to protect personnel; use self-contained air masks to enter smokey area.				
UNUSUAL FIRE AND EXPLOSION HAZARD	Carbon monoxide formation is possible under oxygen-lean conditions.				

(5)

V HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA	HAZARD CLASSIFICATION	BASIS FOR CLASSIFICATION	SOURCE
ROUTES OF EXPOSURE INHALATION	n/a		
SKIN CONTACT	Non irritating	Human and animal studies	K-C data
SKIN ABSORPTION	n/a		
EYE CONTACT	See below		
INGESTION	n/a		

EFFECTS OF OVEREXPOSURE

ACUTE OVEREXPOSURE: Eye contact may cause slight irritation.

CHRONIC OVEREXPOSURE:

EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush eyes with water until irritation subsides.

SKIN:

INHALATION:

INGESTION:

NOTES TO PHYSICIAN

(3)

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Heat (melting) Ignition sources

INCOMPATIBILITY (MATERIALS TO AVOID)

Oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

* Carbon monoxide

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

n/a

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

No special requirements

NEUTRALIZING CHEMICALS

n/a

WASTE DISPOSAL METHOD OF SPILL OR LEAK

Normal incineration or landfill for uncontaminated wipers.

Contaminated wipers should be handled as appropriate for contaminant.

VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

n/a

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL)

EYE n/a

GLOVES

OTHER CLOTHING AND EQUIPMENT

n/a

(4)

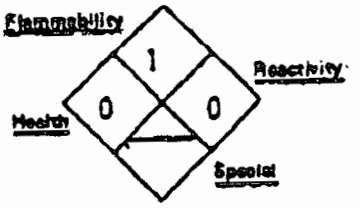
IX SPECIAL PRECAUTIONS

LABELING INFORMATION AND WARNINGS

None

DATA FOR HAZARDS INFORMATION LABEL

Hazard Code
4 = Extreme
3 = High
2 = Moderate
1 = Slight
0 = Insignificant



OTHER HANDLING AND STORAGE REQUIREMENTS

Store away from excessive heat. Do not allow contact with strong oxidizers.

X DISPOSAL

WASTE DISPOSAL METHOD

Normal incineration or landfill in accordance with local regulations. If contaminated, dispose of as appropriate for contaminant.

AQUATIC TOXICITY (eg. 96 hr TLM):

XI GOVERNMENT REGULATIONS

REFERENCE TO APPLICABLE GOVERNMENT REGULATIONS	REGULATION HIGHLIGHTS
FEDERAL	
STATE	
OTHER	

PARED BY: R. E. Hansen COMPANY: Kimberly-Clark Corporation

ADDRESS: 1400 Holcomb Bridge Road, Roswell, Georgia 30076 TEL. NO.: (404) 587-7124

DATE PREPARED: 6/4/87 LATEST REVISION DATE:

(1)

PULP

RAW MATERIAL SPECIFICATION

Weyerhaeuser Paper Co./Pulp Division
100 First Stamford Place
Stamford, CT 06902-6732

I. RAW MATERIAL NAME, USE AND DESCRIPTION

Name:	Roll fluff pulp
Use:	Feminine Care/Adult Care products (for picker roll and hammermill processes)
Description:	Environmentally friendly, chlorine dioxide bleached, highly absorbent softwood sulphate wood pulp; treated with a medically approved debonding agent (Berocell 509) and an approved antistatic agent (Betz MS160) to improve suitability for mechanical disintegration.

II. GENERAL INSTRUCTIONS

A. Product Safety Assurance

The raw materials and additive agents used to produce this material as disclosed to the K-C Director of Product Safety in confidential communication have been given safety clearance under the specific name shown in Section I. There shall be no change in the composition, raw materials, additives and/or method of manufacture, without prior notification to and approval of Kimberly-Clark Corporation.

This material is a component part of a product which must comply with the code of Federal Regulation (CFR Title 21, Part 176 Indirect Food Contact). Suppliers are required to comply to the appropriate provisions of this regulation. In the manufacture of this material, the supplier shall work with Kimberly-Clark to ensure conformance to Good Manufacturing Practices.

B. Odor and Sanitary Precautions

During the development, commercialization, and modification of the composition, all ingredients used in the manufacture of materials for Kimberly-Clark shall be screened for potential malodorous components.

Number RM-3840
Date 1-4-94
Date Prepared 9-21-93
Replaces 6-5-90

CONFIDENTIAL

RAW MATERIAL SPECIFICATION

Poly in Co-form

TO: Himont U.S.A., Inc.
Two Little Falls Centre
2751 Centerville Road
Wilmington, Delaware 19850-5439

FROM: Kimberly-Clark Corporation
Nonwovens Sector
Director, Quality Assurance
1400 Holcomb Bridge Road
Roswell, Georgia 30076-2199

I. RAW MATERIAL NAME, USE AND DESCRIPTION:

Himont PF 015 polypropylene reactor granules are used in the meltblown process for nonwoven meltblown products. The polymer is in the form of opaque white granules that are solid at room temperature. They are delivered in 4-compartment hopper cars.

II. GENERAL INSTRUCTIONS:

A. Product Safety Assurance Reference: N89-609, N90-547, N92-0972

The raw materials and additive agents used in the manufacture of this product as disclosed in confidential communication to Product Safety, Kimberly-Clark Corporation, have been given safety clearance under the specific name shown in Section I. There shall be no change in the composition or significant change in the process without prior notification of, and approval by, Kimberly-Clark Product Safety. It is incumbent upon the manufacturer to comply with all state and federal laws and regulations concerning the product and to notify Kimberly-Clark Product Safety of any changes in the regulatory status of the product or its components.

This product shall comply with the provisions of 21CFR 177.1520 describing polypropylene for food contact applications.

LB1

1. Physical Properties

Target values are for averages; minimum and maximum limits are for individual test results. No material that has actual values outside the limits may be shipped.

1.1 Melt Flow Rate at 230°C (grams in 10 min)

Minimum:	385
Target:	440
Maximum:	495

Test Method:	ASTM D-1238
Temperature:	230°C
Weight:	2160 grams
Orifice:	0.0413" I.D. X 0.157" long
Calculation Factor:	6408

NOTE: This test is performed on polymer without peroxide (HH 441). 1.0% BHT stabilizer is added.

1.2 Irganox 1076 (ppm)

Minimum:	800
Target:	1100
Maximum:	1400
Test Method:	*LCSTP - Section VI-24

1.3 Calcium Stearate (ppm)

Minimum:	240
Target:	330
Maximum:	420
Test Method:	Calculated from Irganox 1076 data

1.4 Xylene Solubles (%)

Minimum:	2
Target:	3
Maximum:	4
Test Method:	*LC-VI-20

NOTE: This test is performed on polymer without peroxide (HH 441).

LBI

1.5 Gel Count (Gels per foot)

Target:	0
Maximum:	50

Test Method: *LCSTP - Section VIII-6

1.6 Peroxide (ppm)

Minimum:	480
Target:	500
Maximum:	520

Test Method: Added by mass balance

2. Tracking Items (for data collection and information purposes only, not product acceptance)

2.1 Melt Flow Rate at 230° C (grams in 10 min)

Minimum:	700
Target:	900
Maximum:	1100

Test Method:	ASTM D-1238
Temperature:	230°C
Weight:	2160 grams
Orifice:	0.0413" I.D. X 0.157" long
Calculation Factor:	6406

NOTE: Melt flow rate will be reported on all four compartments of each railcar. The composite reading is the average of the automatic in-line sampler.

2.2 Fines (%)

Through 60 mesh (retained on 200)	In the Pan (thru 200)
Report	Report

Test Method: *LCSTP - Section VI-2

NOTE: This test is performed on polymer without peroxide (HH 441).

3365551412

J.A.M.

(5)

Stockhausen, Inc.
Material Safety Data Sheet

U.S. Department of Labor

Best Available Copy

FAVOR SAB 836

FAVOR SAB 836

Section I

Stockhausen Inc.	(910) 373-8323	(336) to 333 3500
2401 Doyle Street	(910) 373-1800	
Greensboro, NC 27406	March 6, 1992	
	Walter K. Cobb	

Section II - Hazardous Ingredients/Identity Information - Serial Number 0371

1) Polyacrylate/Polyalcohol Copolymer	NE	NE	0.05 mg/m³ *
CAS Number 27599-56-0 - TSCA Approved December 11, 1989			(Small, less than 10 microns
2) Polyalcohol polymer	NE	NE	respirable polyacrylate).
CAS Number 9002-89-5			

H 0
F 0
R C
PERSONAL PROTECTION Dust mask

* Stockhausen recommended inhalation exposure limit (interim guideline pending completion completion of ongoing inhalation studies). See also Section VI of MSDS.

SARA Section 313 Reportable Toxic Chemicals - NONE

Section III - Physical/Chemical Characteristics

Solid	NE		Bulk Density	0.6-0.7
Less than	10		Greater than	392 degrees F
Nil	NE		Less than	1

Insoluble

White granular powder, no odor

Section IV - Fire and Explosion Hazard Data

NONE		0.0025	NE

Water, CO₂, dry chemical

NONE

Extremely slippery conditions are created if spilled product comes in contact with water.

REQ'R:
KC #: 763853
USE: Superabsorbent Polymer
APPR'D: APPROVED

OSHA 174, September 1985

11

MONTENAY BAY LLC

ONYX

MBLLC/DEP-01-039

February 19, 2001

Mr. Clair Fancy
Florida DEP, Bureau of Air Regulation
Twin Towers Office Building
Mail Station 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: Waste Approval Consideration
Title V FINAL Permit No.: 0050031-002-AV

Dear Mr. Fancy:

Recently Jerry Gross, Facility Manager, and I talked with Mr. Scott Sheplak concerning the proper method for seeking approval for various waste streams. Mr. Sheplak recommended routing requests through your office.

Enclosed, please find four packets of material describing four waste streams and an approval letter for waste tires. Attached to the front of each packet is a post it note with a general name for the material, brief description of the material, and approximate thru-put if approved.

For tracking purposes, this approval request is for Baush&Lomb Eye Drops, Tanning Products, Aaron Oil, Eastman Kodak Plastic, and Waste Tires.

We feel that the Baush&Lomb Eye Drops and Tanning Products meet condition A.5.1.8. (d), Aaron Oil meets condition A.5.1.8. (f), and that the Eastman Kodak Plastic meets condition A.5.1.8. (h).

If I may be of any further assistance, please feel free to contact me at (850) 785-7933, x206.

Sincerely,

Chalmous Beechem
Operations Manager

6510 Bayline drive - Panama City, Florida 32404 - **Tel.: (850) 785-7933 - Fax: (850) 784-1779**

Specialty Waste

Approval and / or Rejection Signature Sheet

Extension pages

Facility: Bay County

Date Originated: 04/28/2000

Customer: Bausch & Lomb / Onyx Environmental Svcs., Inc.

Waste Stream: Consumer Packaged Opthalmic Solution / (No Thimerosol)

Approval: B-10,001 Addition 04/28/2000

Approval / Rejection Comments:(to be added to the approval/ rejection letter to customer)

Jimmy Culipher @ Onyx Environmental Svcs., Inc.

(2) See attached updated Listing of materials for processing

(3) See attached Material Profile Form (MPF)

(4) See attached M.S.D.S.'s for Active Ingredients in the Opthalmic Solution "Recipe".

GENERATOR:	BAUSCH & LOMB, TAMPA
SERVICE COMPANY	OES , MELBOURNE, FL
APPROVAL #:	B-10,001
INITIATION DATE:	12/23/99
UPDATED AS OF :	04/28/2000

	BAUSCH AND LOMB				
REF #	CONSUMER PACKAGED RETURNS	SYNONYM	PHASE	APPROVED	REJECTED
1	DIAMOX ACETAZOLAMIDE SEQUELS 500 MG	SULFONAMIDE, DIURETIC	SOLID	FLOOR MIX	
2	OCUCOAT LUBRICATING EYE DROPS 15.0 ML	STERILE OPTHALMIC SOLUTION	LIQUID	FLOOR MIX	
3	OCUCOAT PF LUBRICATING EYE DROPS 0.5 ML	STERILE OPTHALMIC SOLUTION	LIQUID	FLOOR MIX	
4	OCUVITE / TABLET CORES & FILM COATED TABLETS	VITAMIN MINERAL SUPPLEMENT	SOLID	FLOOR MIX - FULL	
5	REV-EYES EYE DROPS	DAPIPRAZOLE TOPICAL EYE DROPS	LIQUID	FLOOR MIX	
	ADDITIONAL MATERIAL ADDED 04/28/2000				
6	TOBRAMYCIN / DEXAMETHASONE / TYLOXAPOL OPTHALMIC SUSPENSION	SEE"RECIPE" FAX COVER PAGE	LIQUID	FLOOR MIX - FULL	

PROCESSING GUIDELINES:

1.ONLY THE LISTED MATERIALS ARE APPROVED FOR PROCESSING.

2. IN GENERAL OPTHALMIC SOLUTIONS WITH THIMEROSOL PRESERVATIVE ARE REJECTED - MERCURY CONTENT - POSSIBLY D009.

3. ALL MATERIALS SUITABLE FOR FLOOR MIXING AS OUTLINED ABOVE.

4. MIX THE "OCUVITE" MATERIAL WELL WITH MSW , ONYX SUGGESTS 25:75 RATIO OF SW TO MSW .
THIS IS DUE TO TRACE QUANTITIES OF Zn, Cu AND Se.

5. MIX "DIAMOX" WELL WITH MSW SUGGEST 25:75 RATIO OF SW TO MSW DUE TO NITROGEN AND SULFUR CONTENT

6. THE FOLLOWING PERSONAL PROTECTIVE CLOTHING IS TO BE WORN DURING QA/ QC INSPECTION:
GLOVES , HARD HAT , SAFETY GLASSES AND SAFETY SHOES.

7. IN THE EVENT OF A SPILL , DUSTING , MISTING OR BREAKAGE OF ANY OF THESE CONTAINERS THE PERSONAL PROTECTIVE CLOTHING AND RESPIRATO

GOGGLES, GLOVES AND TYVEK

8. PLEASE PROVIDE A PROCESSING REPORT FOR THE INITIAL SHIPMENT FOR DATABASE PURPOSES.

				GENERATOR:	BAUSCH & LOMB, TAMPA	
				SERVICE COMPANY	OES , MELBOURNE, FL	
				APPROVAL #:	B-10,001	
				INITIATION DATE:	12/23/99	
				UPDATED AS OF :	04/28/2000	
	BAUSCH AND LOMB					
REF #	CONSUMER PACKAGED RETURNS	SYNONYM	PHASE	APPROVED	REJECTED	PROCESSING NOTES
1	DIAMOX ACETAZOLAMIDE SEQUELS 500 MG	SULFONAMIDE, DIURETIC	SOLID	FLOOR MIX		FLOOR MIX WITH MSW, 25:75(S/N) BEFORE FEEDING TO UNIT, NO DUSTING, IF DUSTING GOGGLES, GLO
2	OCUCOAT LUBRICATING EYE DROPS 15.0 ML	STERILE OPTHALMIC SOLUTION	LIQUID	FLOOR MIX		FLOOR MIX WITH MSW, 50:50 BEFORE FEEDING TO UNIT, IF SPILLED OR MISTING GOGGLES GLOVES TY
3	OCUCOAT PF LUBRICATING EYE DROPS 0.5 ML	STERILE OPTHALMIC SOLUTION	LIQUID	FLOOR MIX		FLOOR MIX WITH MSW, 50:50 BEFORE FEEDING TO UNIT, IF SPILLED OR MISTING GOGGLES GLOVES TY
4	OCUVITE / TABLET CORES & FILM COATED TABLETS	VITAMIN MINERAL SUPPLEMENT	SOLID	FLOOR MIX - FULL		FLOOR MIX WITH MSW, 25:75(METALS) BEFORE FEEDING TO UNIT, IF DUSTING WEAR GOGGLES GLOVES
5	REV-EYES EYE DROPS	DAPIPRAZOLE TOPICAL EYE DROPS	LIQUID	FLOOR MIX		FLOOR MIX WITH MSW, 25:75(N) BEFORE FEEDING TO UNIT, IF SPILLED OR MISTING GOGGLES GLOVES
	ADDITIONAL MATERIAL ADDED 04/28/2000					
6	TOBRAMYCIN / DEXAMETHASONE / TYLOXAPOL OPTHALMIC SUSPENSION	SEE "RECIPE" FAX COVER PAGE	LIQUID	FLOOR MIX - FULL		FLOOR MIX WITH MSW, 25:75 (LIQUID CONTENT) BEFORE FEEDING TO UNIT, IF MISTING OCCURS WEAR

PROCESSING GUIDELINES:

1.ONLY THE LISTED MATERIALS ARE APPROVED FOR PROCESSING.

2. IN GENERAL OPTHALMIC SOLUTIONS WITH THIMEROSOL PRESERVATIVE ARE REJECTED - MERCURY CONTENT - POSSIBLY D009.

3. ALL MATERIALS SUITABLE FOR FLOOR MIXING AS OUTLINED ABOVE.

4. MIX THE "OCUVITE" MATERIAL WELL WITH MSW , ONYX SUGGESTS 25:75 RATIO OF SW TO MSW .
THIS IS DUE TO TRACE QUANTITIES OF Zn, Cu AND Se.

5. MIX "DIAMOX" WELL WITH MSW SUGGEST 25:75 RATIO OF SW TO MSW DUE TO NITROGEN AND SULFUR CONTENT

6. THE FOLLOWING PERSONAL PROTECTIVE CLOTHING IS TO BE WORN DURING QA/ QC INSPECTION:
GLOVES , HARD HAT , SAFETY GLASSES AND SAFETY SHOES.

7. IN THE EVENT OF A SPILL , DUSTING , MISTING OR BREAKAGE OF ANY OF THESE CONTAINERS THE PERSONAL PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION IS TO BE UPGRADED AS FOLLOWS:
GOGGLES, GLOVES AND TYVEK

8. PLEASE PROVIDE A PROCESSING REPORT FOR THE INITIAL SHIPMENT FOR DATABASE PURPOSES.

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF).

Material Profile Form # B-10,001 (Shaded areas are for MSWS use only.) Initiation Date: 04/28/2000 Page 1 of 3.

Customer Code: Generator Code: Billing Code: Approval Code(s):

Montenay Initiator: Montenay Location(s): Waste Processing Code(s):

1.0 GENERATOR INFORAMTION:

1. Generator Company Name: BAUSCH & LOMB
2. Address: 8500 Hidden River Pkwy 3. City: Tampa 4. State: FL 5. Zip: 33637
6. Contact Name: Gary Wong
7. Tel #: 813 975-7733 8. Fax #: 9. E-Mail ID #: @
10. Generator EPA ID #: FLD982145506 (If multiple locations exist please attach relevant information)

2.0 CUSTOMER BILLING INFORAMTION:

1. Company Name: Onyx Env Svcs
2. Address: 4317 L Fortune Pl
City: W. Melbourne
3. State: FL 4. Zip 32904
5. Billing Contact Name: Theresa Wechsler
6. Billing Contact Title: TSR
7. Tel #(s) (321) 722-2455
8. Fax #(s) (321) 728-3012
9. E-Mail ID #: twechsler @onyxes.com
10. Federal Tax ID # for Billing Purposes:

3.0 PICK UP LOCATIONS:

☒ If same as in Section 1.0 please check here

1. Company Name:
2. Shipping Address:
3. City: 4. State: 5. Zip:
6. Shipping Contact(s):
7. Tel # (s) ( )
8. Fax # (s) ( )
9. E-Mail ID #: @
10. If multiple locations please attach a list

4.0: THIRD PARTY AUTHORIZATION: (If appropriate please complete below)

I Gary Wong as an authorized representative of Bausch & Lomb (Generator Company) authorize Jimmy Cullipher of Onyx Env Svcs. (Service Company / Broker) to act as a third party or agent of the Generator. This is an authorization to complete all required paperwork and to supply all necessary backup Documentation to accurately profile the generator waste for disposal at the appropriate Montenay facility.

5.0 MATERIAL PROFILE FORM CHANGE AUTHORIZATION: (If appropriate please complete below)

I, as the generator, authorize Onyx Specialty Waste Services, Inc. to make corrections to this Material Profile Form. I understand that a fully corrected copy of the Material Profile Form will be returned to me for my records.
If authorization is or is not granted please check the appropriate box and initial. ☒ Yes ☐ No GW Initials

6.0 REGULATORY WASTE INFORMATION:

A.	☒ Yes ☐ No	This waste is R.C.R.A. Non Hazardous	I.	☐ Yes ☒ No	Explosives / Shock Sensitive
B.	☐ Yes ☒ No	Regulated or Licensed Radioactive Waste	J.	☐ Yes ☒ No	Polymerizable Material
C.	☐ Yes ☒ No	Medical / Infectious or Chemotherapeutic Waste	K.	☐ Yes ☒ No	Air / Water Reactive
D.	☐ Yes ☒ No	OSHA Carcinogens (outline in waste constituents)	L.	☐ Yes ☒ No	Oxidizer / Reducer
E.	☐ Yes ☒ No	Regulated Benzene NESHAP Waste	M.	☐ Yes ☒ No	Total Cyanide ppm
F.	☐ Yes ☒ No	Asbestos Containing Waste	N.	☐ Yes ☒ No	Total Sulfide ppm
G.	☐ Yes ☒ No	Dioxin or Furan bearing Waste	O.	Other applicable	
I.	☐ Yes ☒ No	Any type of PCB Waste			

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # B-10001

7.0 Material or Waste Specific Information: (Attach additional pages and MSDS)

1. Material or Waste Name: ophthalmic Suspension
2. Process of Material or Waste generation: API Spec. Material
3. Total Quantity of Material / Waste: 23-50 (Circle) Tons / pallets / drums / other: Explain
4. Frequency of shipment: Daily ☐ Weekly ☐ Monthly ☐ Yearly ☒ One time ☐

8.0 COMPOSITION & PROPERTIES OF MATERIAL / WASTE

Chemical Name / Component / Formula	Material / Waste Analysis (Wt. %)	Material / Waste Ranges (Wt. %)
1.		-
2.		-
3.		-
4.		-
5.		-
6.		-
		-
8.		-
9.		-
10.		-

(Total must be greater than or equal to 100 %)

☒ See attached sheets and MSDS for chemical description, chemical constituents, alternate names / synonyms and chemical formulae.

9.0 *MATERIAL / WASTE PROPERTIES AT ROOM TEMPERATURE:*

1. Physical State and % of each state ☒ Liquid 10 % ☐ Sludge / Semi-solid ___ % ☒ Solid 90 % ☐ Powder ___ % ☐ Gas ___ %
2. Odor ___ (Describe) 3. Color CLR (Describe) 4. No. of Phases: 1 Viscosity ☐ High ☐ Med ☒ Low
6. Flash Point (Liquid & Non-Liquids) ☐ < 100°F ☐ 100° - 139°F ☐ 140° - 199°F ☒ ≥ 200°F. Check if material is solid ☐
7. ☒ pH (Aqueous Liquids) or ☐ pH (Non aqueous) ☐ ≤ 2.0 ☐ > 2.0 ≤ 5.0 ☒ >5.0 ≤ 8.9 ☐ >9.0 ≤ 12.49 ☐ ≥ 12.5
8. Corrosivity ☒ ≤ 6.35 mm/yr or ☐ > 6.35 mm/yr 9. Melting Point of Solids < 130°F. Compared to ___
10. Boiling Point of Liquids ☐ < 130°F. ___ °F. 11. Ignition Temp. ___ °F. 12. TOC (Total Organic Carbon) ☐ < 1% ☐ 1-20% ☐ > 20%
13. BROMINE ☐ (None) or ___ % 14. IODINE ☐ (None) or ___ %. 15. FLUORINE ☐ (None) or ___ %. 16. CHLORINE ☐ (None) or ___ %.
17. VOC (Volatile Organic Compounds) ___ % 18. Higher Heating Value (BTUs/LB) ___ ☐ Estimated ☐ Exact 19. Ash: ___ %
20. SULFUR 0 %. 21. NITROGEN 0 %. 22. Specific Gravity 1.0 or Bulk Density ___ Lb./Gal.
23. Free liquids present ☐ Yes ☒ No. 24. Free liquids are fully absorbed ☒ Yes ☐ No. Absorbent type ___ and ___ %
25. Analytical is attached ☐ Yes ☒ No. TCLP ☐ Total Metals ☐ Flash Pt. ☐ BTU/lb ☐ Wt % Halogen / Sulfur ☐

Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # B-10001

10.0 Packaging and Shipping Information (outline the average container weights if applicable by the check-box)

☒ Consumer Packaged Returns		☐ Finished product bulk		☒ Fiber drums.		☐ Roll-offs.	
☒ Consumer packaged > 500 lbs		☐ Intermediate waste		☐ Poly drums		☐ Dump-trailers	
☐ Consumer packaged truckload.		☐ Production Debris		☐ Steel drums		☐ Vac truck	
☐ Raw material inert or active (100%)		☐ Mixed Powders		☒ Gaylords		☐ Walking trailer	
☐ Plant Trash		☐ Paper waste		✓ Palletized Cardboard Cases			

11.0 ELEMENTAL ANALYSIS OF MATERIAL / WASTE (TCLP and TOTAL METALS)

11.1 Permit Compliance Metals: (both Ash and Air permits) Units ☐ mg/Kg (parts per million or PPM – AND-
Units ☐ mg/ l TCLP for the RCRA 8 metals.

Aluminum	mg/kg		Chromium	mg/kg	mg/l	Nickel	mg/kg	
Antimony	mg/kg		Chromium VI	mg/kg		Selenium	mg/kg	mg/l
Arsenic	mg/kg	mg/l	Copper	mg/kg		Silver	mg/kg	mg/l
Barium	mg/kg	mg/l	Lead	mg/kg	mg/l	Zinc	mg/kg	
Beryllium	mg/kg		Mercury	mg/kg	mg/l	Cadmium	mg/kg	mg/l
Molybdenum	mg/kg							

If none are present please check here. None ☐

11.2 Additional Materials of concern to MSWS: Please verify if present and if so, give quantity and unti of measure.
Thanium_____%, Silicon_____%, Aluminum & Zirconium Salts_____%, Free Cyanides_____ppm, Free Sulfides_____ppm, Free Ammonia_____ppm, Cresols_____Total, Formaldehyde_____, Phenol_____.

If none are present please check here. None ☐

11.3 Please check the appropriate box (☐) if the waste contains any of the following:

Aerosols ☐	Oil Contamination ☐	Teflon / PTFE ☐	FIFRA Regulated Pesticides ☐	Isocyanates ☐	Sharps ☐	
Organic Solvent Contamination ☐	DEA Materials ☐	DOT Regulated Material ☐	Acrylates ☐			
Nicotine or salts ☐	Contaminated Empty Containers ☐	Fiberglass Waste ☐	Carbon and Carbon Filtration waste ☐			
Saccharin or salts ☐	Un-contaminated Empty Containers ☐	Leather Waste ☐	Paint / Varnish Contaminated waste ☐			

If none are present please check here. None ☐

12.0 GENERATOR CERTIFICATION (This section must be signed prior to the completion of any review)

I certify, as the generator, or, authorized representative of the generator, that the Material or Waste described in this Material Profile Form is NON-HAZARDOUS by all Federal, State and Local regulations. Furthermore, this information is complete and accurate to the best of my knowledge, no information about the Material or Waste composition or the known or potential hazards have been willfully omitted.

Generator Signature: [signature] for BJC

Name & Title (Printed or Typed): Jimmy Culpepper Proj. Mgr.

Date: 4-27-00

Pharmaceuticals Division 8500 Hidden River Parkway Tampa FL 33637 813 975 7700 Fax 813 975 7770

BAUSCH & LOMB
Healthcare and Optics Worldwide

FAX COVER SHEET

TO: JIMMY CULIPHER **FAX: (407) 728-3012**

FROM: GARY WONG **FAX: (813) 975-7767**
PHONE: (813) 975-7733

DATE: 04-25-00 **RE: TOBRADEX WASTE**

CONFIDENTIAL

Number of pages including cover sheet: 1

Message:

Jimmy,

Per your request. If you need additional information see me tomorrow.

Gary

"Recipe"

Tobramycin, USP	0.3 %
Dexamethasone, USP, Sterile (Micronized) Vanigas No.	0.1 %
Benzalkonium Chloride 50% Solution, NF	
Tyloxapol, USP	0.1 %
Edetate Disodium Dihydrate, USP	
Sodium Chloride, USP	
Hydroxyethyl Cellulose, NF (Natrosol 250 HR CS)	
Sodium Sulfate (Anhydrous), USP	
Purified Water, USP	

MSDS attached

John/Mike:
For amendment to current B&L profile

SAFETY DATA SHEET

2 0431 1

DISTRIBUTED BY:
ROUSSEL CORPORATION
95 CHESTNUT RIDGE RD. MONTVALE, NJ 07645
PHONE: (201) 307-1113
FAX: (201) 307-3382

Date of issue : 12/10/1989
Date of modification : 13/11/1997

Version : 2

Nota : The latest pertinent modifications introduced in the safety data sheet are signalized by the number of the version placed in front of the concerned heading.
Industrial Hygiene Delegation Tel : 01-49-91-44-31 Fax : 01-49-91-48-80

1 PRODUCT NAME AND COMPANY IDENTIFICATION

♦ **PRODUCT IDENTIFICATION**

PRODUCT NAME : DEXAMETHASONE phosphate disodium

CHEMICAL FAMILY : *Corticosteroid*

KIND OF USE : Active ingredient for medical use. (anti-inflammatory)

♦ **COMPANY IDENTIFICATION**

SUPPLIER : HOECHST MARION ROUSSEL

ADDRESS : 102, route de Noisy 93235 Romainville Cedex - FRANCE.

TELEPHONE NUMBER : Tel: +33-1-49-91-49-91

TELEX NUMBER/TELEFAX NUMBER : Fax:+33-1-49-91-49-49

2 COMPOSITION / INFORMATION ON INGREDIENTS

♦ **SUBSTANCE**

COMMON CHEMICAL NAME / GENERIC NAME : 9alpha-fluoro-11beta,17alpha,21-trihydroxy-16alpha-methylpregna-1,4-diene-3,20-dione, 21-phosphate sodium.

MOLECULAR MASS : 516.4

FORMULA : C22 H28 F Na2 O8 P

CAS NUMBER : 2392-39-4

EINECS NUMBER : 219-243-0

INGREDIENTS CONTRIBUTING TO THE HAZARD

	CONTENT	CAS	EC LABELLING
Dexamethasone disodium phosphate	≥100%	2392-39-4	Xn R48/20/21/22

3 HAZARDS IDENTIFICATION

♦ **MOST IMPORTANT HAZARDS**

SPECIFIC HAZARDS	: White powder Substance pharmacologically very active (anti-inflammatory corticoid). Harmful : danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

4 FIRST-AID MEASURES

◆ **INFORMATIONS ON DIFFERENT EXPOSURE ROUTES**

INHALATION	: Make the victim blow his nose. Seek medical advice.
SKIN CONTACT	: Wash with water and soap.
EYE CONTACT	: Rinse immediately with plenty of water for at least 15 minutes. Seek medical advice.
INGESTION	: Do not make the victim vomit. Seek medical advice.

5 FIRE-FIGHTING MEASURES

◆ **EXTINGUISHING MEDIA**

SUITABLE	: All means.
NOT SUITABLE	: Jet of water from a fire hose.
SPECIFIC HAZARDS	: In case of fire, the product emits toxic fumes
PROTECTION OF FIREFIGHTERS	: Wear a self-contained respiratory apparatus.

6 ACCIDENTAL RELEASE MEASURES

◆ **PRECAUTIONS**

PERSONAL PRECAUTIONS	: Before intervention see item protection.

◆ **METHODS FOR CLEANING UP**

RECOVERY	: Collect thoroughly into a plastic bag.
NEUTRALIZATION	: Rinse the polluted area with plenty of water.

7 HANDLING AND STORAGE

◆ **HANDLING**

TECHNICAL MEASURES	: Mechanical removal ventilation at source of formation of dust. Containment category B : re-inforced (HMR).
PRECAUTIONS	: Handle in closed circuit. (whenever possible)

◆ **STORAGE**

TECHNICAL MEASURES : Sensitivity to damp	: Very hygroscopic.
: Sensitivity to light	: Not observed
: Sensitivity to oxidation	: Not observed.
STORAGE CONDITIONS (SUITABLE)	: Refrigerator or cold place 36° to 46° F (+2°C to +8°C).
INCOMPATIBLE PRODUCTS	: Unknown.
PACKAGING MATERIALS RECOMMENDED	: Glass, polythene.
SUPPLIER PACKAGING	: Double polythene bag (in aluminium box).
PACKAGING MATERIALS NOT SUITABLE	: Unknown.
STORAGE CONDITIONS	: Keep container tightly closed and dry. Keep at temperature not exceeding +8°C
SHELF LIFE	: 3 years.

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8 EXPOSURE CONTROLS / PERSONAL PROTECTION

◆ **ENGINEERING MEASURES**

CONTROL PARAMETERS : STEL	: Not determined.
: TWA	: Not determined.

◆ **PERSONAL PROTECTIVE EQUIPMENT-WORKSHOP**

RESPIRATORY PROTECTION	: Ventilated skullcap. or Handle in dust-tight glove-box for small quantities, whenever possible.
HAND PROTECTION	: Suitable gloves.
SPECIFIC HYGIENE MEASURES	: Personal hygiene after handling.

◆ **PERSONAL PROTECTIVE EQUIPMENT-LABORATORY**

RESPIRATORY PROTECTION	: Handle in a fume cupboard.
HAND PROTECTION	: Suitable gloves.
EYE PROTECTION	: Safety glasses.
SPECIFIC HYGIENE MEASURES	: After any handling, wash hands with soap.

9 PHYSICAL AND CHEMICAL PROPERTIES

◆ **APPEARANCE**

PHYSICAL STATE	: Powder
COLOUR	: White to yellow
ODOUR	: Odourless
PH	: Solution at 1% in water : 7.5 - 10.5
FLASHPOINT	: Not applicable.
AUTOIGNITION TEMPERATURE	: Not determined.
VAPOUR PRESSURE	: Not determined.
DENSITY	: Not determined.
SOLUBILITY	: Soluble in water , dioxane. Insoluble in chloroform, ether.
OTHER DATA	: Alpha D25 : +74° +/- 4 (10%, water). Melting point: 233-235 °C.

10 STABILITY AND REACTIVITY

POSSIBLE HAZARDOUS REACTIONS	: None to our knowledge.
HAZARDOUS DECOMPOSITION PRODUCTS	: Unknown.

11 TOXICOLOGICAL INFORMATION

◆ **ACUTE TOXICITY**

INGESTION	: LD 50 oral route/mouse: 1800 mg/kg.
ACUTE TOXICITY	: LD 50 intraperitoneal route / rat : 550 mg/kg.

◆ **SPECIFIC EFFECTS**

2 0431 4

REPRODUCTION TOXICITY	: In animals, experiments have shown teratogenic effects, various with species. In humans, retrospective studies haven't shown abnormal effects due to administration of corticoids during the first trimester.
PHARMACOLOGICAL ACTIVITY	: Substance pharmacologically very active (anti-inflammatory corticoid) Activity : 0.75 mg dexamethasone = 5 mg prednisone. Dexamethasone (injectable) (0.5 to 20 mg/d). Used by local route.
COMMENTS AND SYMPTOMS	: HARMFUL: DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE THROUGH INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED. Possible adverses effects : those of corticoids in general (bodyweight gain, acne, purpura and stretch marks, excitation and sleep disorders, metabolic and endocrinal disorders). Aggravation by contact of pre-existing ocular and/or cutaneous lesions.
RECOMMENDATIONS	: Pregnant women or women likely to become pregnant, seek medical advice before handling. In case of pre-existing ocular and/or cutaneous lesions, seek medical advice before handling.

12 ECOLOGICAL INFORMATION

COMMENTS	: Ecological data not available. Do not release material and undiluted cleaning waters into the environment.

13 DISPOSAL CONSIDERATIONS

◆ **WASTE FROM RESIDUES**

NEUTRALIZATION OF THE PRODUCT / WASTE	: Incineration in accordance with laws.

◆ **CONTAMINATED PACKAGING**

DESTRUCTION SOILED PACKAGING	: Incineration in accordance with laws.

14 TRANSPORT INFORMATION

◆ **INTERNATIONAL REGULATIONS**

LAND (RID/ADR)	: Not regulated
SEA (IMDG)	: Not regulated
AIR (IATA)	: Not regulated

◆ **ADDITIONNAL REGULATIONS**

LAND FRANCE (RID/ADR)	: Not regulated

15 REGULATORY INFORMATION

◆ **REGULATIONS**

LABELLING EC NUMBER	: Labelling according to EC regulations of dangerous substances (67/548/EC)
SYMBOLS	: Xn
(2)PHRASES	: R48/20/21/22 S7/8-37/39-46-47,+8°C
SPECIAL RISKS	: HARMFUL : DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE THROUGH INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.

SAFETY ADVICES	: Keep container tightly closed and dry. Wear suitable gloves and eye/face protection. If swallowed, seek medical advice immediately and show this container or label. Keep at temperature not exceeding 46°F (+8°C).
ADDITIONAL LABELLING	: Hygroscopic. Storage : 36° F to 46° F (+2° C to +8° C).

16 OTHER INFORMATION

All the regulatory instructions mentioned are intended to help the addressee in comply whith his obligations when using the product. This list cannot be considered as exhaustive and does not discharge the addressee from his duty to enquire about all other regulatory provisions which may apply to the possession and handling of the product for which he bears sole liability.

The information given in this sheet has been introduced in accordance with the guidelines established by directives 91/155 EEC and 92/32 EEC, in compliance with international standard ISO 11014-1.
This data sheet complements the user's instructions, but does not replace them.
The information it contains is based on the knowledge available about the product at the time it was compiled.
Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended.
The required informations complies with current EC legislation. Addressees are requested to applied any additional national requirement.

Material Safety Data Sheet

2 1620 1

2/4/99

Producer: Chongqing Daxin Pharmaceutical
Distributor: ChemWerth, Inc.

TOBRAMYCIN USP (Micronized)

EMERGENCY OVERVIEW - Reproductive Hazard.

SECTION 1 - IDENTIFICATION

Common Name: Tobramycin **Formula:** C18H37N5O9

Synonym: n/f

Chemical Name: D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl- (1 to 6)-O-[2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1 to 4)]-2-deoxy-

CAS Number: 32986-56-4 **RTECS Number:** WK2100000

Chemical Family: A Glycoside antibiotic

Therapeutic Category: Antibacterial

SECTION 2 - INGREDIENT INFORMATION

Principle Components	Percent	Exposure Limits
Tobramycin	Pure Material	n/f

SECTION 3 - HEALTH HAZARD INFORMATION

Usual Adult Dose: The usual adult dose of tobramycin (by intramuscular or intravenous infusion) is 1 to 1.7 mg per Kg of body weight every eight hours.

Adverse Effects: Adverse effects include change in frequency or amount of urination, increased thirst, loss of appetite, nausea or vomiting, muscle twitching, numbness or tingling, seizures, hearing loss or ringing/buzzing in ears, dizziness, clumsiness, red, itching or swollen skin, and rarely, a difficulty in breathing with drowsiness or weakness. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: n/f

'OBRAMYCIN USP (Micronized) 2 1620 2

Acute: Possible eye, skin, gastrointestinal and/or respiratory tract irritation.

Chronic: Possible hypersensitization, kidney damage and irreversible hearing damage.

Inhalation: May cause irritation. Remove to fresh air.

Eye: May cause irritation. Flush with copious quantities of water.

Skin: May cause irritation and is skin absorbable. Flush with copious quantities of soap and water.

Ingestion: May cause irritation. Flush out mouth with water. This material is very poorly absorbed from the gastrointestinal tract. Ingestion is not expected to cause toxicity.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material, myasthenia gravis, Parkinsonism, dehydration or impaired kidney function, and eight-cranial-nerve impairment.

Cross Sensitivity: Persons hypersensitive to one of the aminoglycosides may by hypersensitive to this material also.

Pregnancy Comments: Tobramycin concentrates in the fetal kidneys and has been shown to cause total irreversible bilateral congenital deafness in the human fetus; therefore, its use during pregnancy should be avoided.

Pregnancy Category: D

SECTION 4 - FIRST AID MEASURES

General: Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Overdose Treatment: Since there is no specific antidote, treatment of tobramycin overdose should be symptomatic and supportive.

SECTION 5 - TOXICOLOGICAL INFORMATION

Oral Rat: LD50: >7500 mg/Kg

Oral Mouse: LD50: >11500 mg/Kg

Irritancy Data: n/f

Target Organ(s): Kidneys.

Listed as a Carcinogen? **NTP:** No **IARC:** No **OSHA:** No

Other: No

SECTION 6 - FIREFIGHTING MEASURES

Flash Point: n/f **Upper Flammable Limit:** n/f

Auto-Ignition Temperature: n/f **Lower Flammable Limit:** n/f

Extinguisher Media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

Fire and Explosion Hazards: This material is assumed to be combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

Firefighting Procedures: As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

SECTION 7 - PHYSICAL HAZARDS

TOBRAMYCIN USP (Micronized) 2 1620 3

Conditions to Avoid: Avoid exposure to light and moisture.

Incompatibilities: Strong oxidizing agents.

Decomposition Products: When heated to decomposition material emits toxic fumes of NOx. Emits toxic fumes under fire conditions.

Stable? Yes **Hazardous Polymerization?** No

SECTION 8 - HANDLING / SPILL / DISPOSAL MEASURES

Handling: As a general rule, when handling USP Reference Standards avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Storage: Store in tight, light-resistant container, below 25° C, as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity. Store in a cold place. Allow to attain room temperature before opening.

Spill Response: Wear approved respirator, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner Avoid breathing dust. Place spillage in appropriately labelled container for disposal. Wash spill site.

Disposal: Dispose of waste in accordance with all applicable Federal, State and local laws.

SECTION 9 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Use a NIOSH approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring. In the event that a respirator is not required, an approved dust mask should be used.

Ventilation: Recommended.

Gloves: Rubber

Eye Protection: Safety Goggles

Protective Clothing: Protect exposed skin.

SECTION 10 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White or almost white powder; odorless.

Melting Point: Approximately 287° C (decomposes)

Solubility in Water: Freely soluble

Vapor Density: n/f

Boiling Point: n/f

Evaporation Rate: n/f

Specific Gravity: n/f

Reactivity in Water: n/f

Vapor Pressure: n/f

% Volatile by Volume: n/f

2 1682 1

Material Safety Data Sheet

Tyloxapol

1182

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

NYCOMED INC.
33 Riverside Ave.
Rensselaer, NY 12144

TELEPHONE NUMBER: (518)445-8834

EMERGENCY TELEPHONE NUMBER
CHEMTREC (800)424-9300

X850150

RUGER CHEMICAL CO. INC.
83 CORDIER ST.
IRVINGTON, N.J. 07111
1-800-274-RUGER (201)-926-0331

PRODUCT NAME: Tyloxapol
PRODUCT CODE: INV. 21286000
CHEMICAL NAME: Oxyethylated tertiary octyl phenol formaldehyde polymer
CHEMICAL FORMULA: $(C_{14}H_{22}O\ C_2H_4O\ CH_2O)_x$
RTECS NUMBER: SM97500000

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY WEIGHT
Tyloxapol CAS NUMBER: 25301-02-4		100.0

Tyloxapol is a non-ionic detergent with surface tension reducing properties. Solutions have been used for hydrating & liquifying tenacious bronchopulmonary secretions.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTE(S) OF ENTRY
Inhalation (clinically)

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE
Clinical dosages have reported side effects (by inhalation) of pharyngitis or pharyngeal burning, bronchospasm, increased congestion in the chest. No effects of overexposure have been experienced during manufacturing operations when material is handled in accordance with safety procedures specified below.

To avoid accidental exposure, always wash hands and face thoroughly prior to eating or smoking.

Internal Hazard Codes: (See last page for guide to codes)

R1 S1

4. FIRST AID MEASURES

EYES
Wash with water 15 min. and get prompt medical attention.

SKIN
Wash well with water.

INGESTION
Not likely to occur in manufacturing operations. Determine amount and call a poison control center or a physician at once. Dilute with a glass of water.

INHALATION
Keep at rest and warm and if discomfort occurs, consult a physician promptly.

2 1682 2

Material Safety Data Sheet

Tyloxapol

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASH POINT: 300°F

FIRE AND EXPLOSION HAZARDS
Will emit usual toxic oxides of carbon in a fire.

EXTINGUISHING MEDIA
Water spray, dry chemical powder, foam, CO2. Wear SCBA operated in the positive pressure or pressure demand mode.

6. ACCIDENTAL RELEASE MEASURES

Contain spill with suitable material such as "PIGS", "Speedi-dry", sand. Transfer to a polylined steel drum such as 37M & 25L liner (Del Pak). Scrub traces with warm water. Seal & label container.

7. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS
As with any bulk drug form, observe the usual cautions and handle in accordance with good industrial hygiene and safety practices such as avoiding unnecessary exposure and removing from skin and clothing promptly.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

SKIN PROTECTION
Long-sleeved workshirt, PVC gloves or equivalent.

RESPIRATORY PROTECTION
Full face respirator with organic vapor cartridge and dust pads.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Viscous amber liquid sometimes slightly turbid.

ODOR
Slight aromatic odor.

BASIC PHYSICAL PROPERTIES
BOILING POINT: ND°F
MELTING POINT: N/A°F
VAPOR PRESSURE: ND
VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY: 1.107
SOLUBILITY (H2O): Slowly but freely miscible

pH: 5% water solution has pH of 4-7.

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBLE MATERIALS
Powerful oxidizers, brass or copper.

2 1682 3

Material Safety Data Sheet

Tyloxapol

11. TOXICOLOGICAL INFORMATION

IV rat LD50 1800 mg/kg RTECS 1981-82
ipr rat TDLo 1200 mg/kg

12. ECOLOGICAL INFORMATION

NO DATA GIVEN

13. DISPOSAL CONSIDERATIONS

If material is not suitable for reclaiming or recycle, dispose of by incineration at an approved TSDF in accordance with all local, state and federal regulations.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not Regulated

HAZARD CLASS: Not Regulated

15. REGULATORY INFORMATION

NO DATA GIVEN

16. OTHER INFORMATION

OTHER INFORMATION
This is a concentrated bulk drug form intended for further manufacturing, processing or repackaging use only and should not be confused with the finished dosage form.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

NYCOMED INC.

HAWAIIAN Tropic

TANNING RESEARCH LABORATORIES, INC.

MATERIAL SAFETY DATA SHEET

PRODUCT: 30 PLUS SUNBLOCK
ITEM:

CHEMICAL FAMILY: EMULSION
APPEARANCE & ODOR: WHITE LOTION/Characteristic
WARNING STATEMENT: NONE REQUIRED

PHYSICAL CHARACTERISTICS:

Boiling Point:	N/A	pH:	N/A
Vapor Density @25C:	N/A	Percent Volatiles:	55.70
Specific Gravity:	.956	Evaporation Rate:	Will not evaporate.

FIRE AND EXPLOSION INFORMATION:

Flashpoint:	Non-combustible
Hazardous Combustion Products:	None
General Hazard:	None
Fire Fighting:	None

HEALTH HAZARD DATA:

Eye:	No significant irritation expected. Flush eyes with plenty of water. If irritation persists, see a physician.
Skin:	No significant irritation expected. If irritation occurs, discontinue use and wash with soap and water. If irritation persists, see a physician.
Inhalation:	No effect expected under normal conditions of use.
Ingestion:	Expected to be relatively non-toxic. No first aid generally required, but see a physician if large amounts are ingested.

SPILL OR LEAK PROCEDURES:

Small Spill:	Absorb liquid on paper or floor absorbant.
Large Spill:	Dike area of spill to prevent spreading. Pump or mop liquid into disposal tank or drum. Remainder on floor should be covered with floor absorbant and absorbant shoveled into drums. Dispose of according to local regulations.

HAZARD CLASSIFICATION: NONE

101-78-1
101-200-1

BOX 5111, DAYTONA BEACH, FLORIDA 32118 • PHONE 904-677-9559

HAWAIIAN Tropic

TANNING RESEARCH LABORATORIES, INC.

MATERIAL SAFETY DATA SHEET

PRODUCT: BABY FACES 50 SPF
ITEM:

CHEMICAL FAMILY: EMULSION
APPEARANCE & ODOR: WHITE LOTION/Characteristic
WARNING STATEMENT: NONE REQUIRED

PHYSICAL CHARACTERISTICS:

Boiling Point:	N/A	pH:	N/A
Vapor Density @25C:	N/A	Percent Volatiles:	57.05
Specific Gravity:	.973	Evaporation Rate:	Will not evaporate.

FIRE AND EXPLOSION INFORMATION:

Flashpoint:	Non-combustible
Hazardous Combustion Products:	None
General Hazard:	None
Fire Fighting:	None

HEALTH HAZARD DATA:

Eye:	No significant irritation expected. Flush eyes with plenty of water. If irritation persists, see a physician.
Skin:	No significant irritation expected. If irritation occurs, discontinue use and wash with soap and water. If irritation persists, see a physician.
Inhalation:	No effect expected under normal conditions of use.
Ingestion:	Expected to be relatively non-toxic. No first aid generally required, but see a physician if large amounts are ingested.

SPILL OR LEAK PROCEDURES:

Small Spill:	Absorb liquid on paper or floor absorbant.
Large Spill:	Dike area of spill to prevent spreading. Pump or mop liquid into disposal tank or drum. Remainder on floor should be covered with floor absorbant and absorbant shoveled into drums. Dispose of according to local regulations.

HAZARD CLASSIFICATION: NONE

BOX 5111, DAYTONA BEACH, FLORIDA 32118 • PHONE 904-677-9559

TANNING RESEARCH LABORATORIES, INC.

MATERIAL SAFETY DATA SHEET

PRODUCT: ALOE AFTER SUN
ITEM#: 2062, 2064, 2066, 2068

CHEMICAL FAMILY: EMULSION
APPEARANCE AND ODOR: YELLOW LOTION/Characteristic
WARNING STATEMENT: None Required

PHYSICAL CHARACTERISTICS:

Boiling Point: N/A
VAPOR DENSITY @25C: N/A
Specific Gravity: .985

pH: 7.5
Percent Volatiles: 74.48
Evaporation Rate: Will not evaporate

FIRE AND EXPLOSION INFORMATION:

Flashpoint: Non-combustible
Hazardous Combustion Products: None
General Hazard: None
Fire Fighting: None

HEALTH HAZARD DATA:

Eye: No significant irritation expected. Flush eyes with plenty of water. If irritation persists, see a physician.

Skin: No significant irritation expected. If irritation occurs, discontinue use and wash with soap and water. If irritation persists, see a physician.

Inhalation: No effect expected under normal conditions of use.

Ingestion: Expected to be relatively non toxic. No first aid generally required, but see a physician if large amounts ingested.

SPILL OR LEAK PROCEDURES:

Small Spill: Absorb liquid on paper or floor absorbant.

Large Spill: Dike area of spill to prevent spreading. Pump or mop liquid into disposal tank or drum. Remainder on floor should be covered with floor absorbant and absorbant shoveled into drums. Dispose of according to local regulations.

HAZARD CLASSIFICATION:

NONE

BOX 5111, DAYTONA BEACH, FLORIDA 32118 • PHONE 904-677-9559

TANNING RESEARCH LABORATORIES, INC.

MATERIAL SAFETY DATA SHEET

PRODUCT: DARK TANNING OIL
ITEM#: 2034 & 2038

CHEMICAL FAMILY: ~~EMULSION~~
APPEARANCE AND ODOR: OIL/Characteristic
WARNING STATEMENT: None Required

PHYSICAL CHARACTERISTICS:

Boiling Point: N/A — N/A
VAPOR DENSITY @25C: N/A — **Percent Volatiles:** N/A
Specific Gravity: .862 — **Evaporation Rate:** Will not evaporate

FIRE AND EXPLOSION INFORMATION:

Flashpoint Non-combustible
Hazardous Combustion Products: None
General Hazard: None
Fire Fighting: None

HEALTH HAZARD DATA:

Eye: No significant irritation expected. Flush eyes with plenty of water. If irritation persists, see a physician.

Skin: No significant irritation expected. If irritation occurs, discontinue use and wash with soap and water. If irritation persists, see a physician.

Inhalation: No effect expected under normal conditions of use.

Ingestion: Expected to be relatively non toxic. No first aid generally required, but see a physician if large amounts ingested.

SPILL OR LEAK PROCEDURES:

Small Spill: Absorb liquid on paper or floor absorbant.

Large Spill: Dike area of spill to prevent spreading. Pump or mop liquid into disposal tank or drum. Remainder on floor should be covered with floor absorbant and absorbant shoveled into drums. Dispose of according to local regulations.

HAZARD CLASSIFICATION:

NONE

BOX 5111, DAYTONA BEACH, FLORIDA 32118 • PHONE 904-677-9559

HAWAIIAN Tropic

TANNING RESEARCH LABORATORIES, INC.

MATERIAL SAFETY DATA SHEET

PRODUCT: DARK TANNING GEL 2 SPF
ITEM#: 3338

CHEMICAL FAMILY: MACRO EMULSION
APPEARANCE AND ODOR: GEL/Characteristic
WARNING STATEMENT: None Required

PHYSICAL CHARACTERISTICS:

Boiling Point: N/A
VAPOR DENSITY @25C: N/A
Specific Gravity: .994
pH: 7.0
Percent Volatiles: 93.4084
Evaporation Rate: Will not evaporate

FIRE AND EXPLOSION INFORMATION:

Flashpoint: Non-combustible
Hazardous Combustion Products: None
General Hazard: None
Fire Fighting: None

HEALTH HAZARD DATA:

Eye: No significant irritation expected. Flush eyes with plenty of water. If irritation persists, see a physician.
Skin: No significant irritation expected. If irritation occurs, discontinue use and wash with soap and water. If irritation persists, see a physician.
Inhalation: No effect expected under normal conditions of use.
Ingestion: Expected to be relatively non toxic. No first aid generally required, but see a physician if large amounts ingested.

SPILL OR LEAK PROCEDURES:

Small Spill: Absorb liquid on paper or floor absorbant.
Large Spill: Dike area of spill to prevent spreading. Pump or mop liquid into disposal tank or drum. Remainder on floor should be covered with floor absorbant and absorbant shoveled into drums. Dispose of according to local regulations.

HAZARD CLASSIFICATION:

NONE

BOX 5111, DAYTONA BEACH, FLORIDA 32118 • PHONE 904-677-9559

HAWAIIAN Tropic

TANNING RESEARCH LABORATORIES, INC.

MATERIAL SAFETY DATA SHEET

PRODUCT:	***HERBAL 4 SPF LOTION***
ITEM:	4148

CHEMICAL FAMILY:	**EMULSION**
APPEARANCE & ODOR:	**PALE GREEN LOTION/Characteristic**
WARNING STATEMENT:	**NONE REQUIRED**

PHYSICAL CHARACTERISTICS:

Boiling Point:	N/A	*pH:*	6.3
Vapor Density @25C:	N/A	*Percent Volatiles:*	75.0692
Specific Gravity:	.963	*Evaporation Rate:*	*Will not evaporate.*

FIRE AND EXPLOSION INFORMATION:

Flashpoint:	Non-combustible
Hazardous Combustion Products:	None
General Hazard:	None
Fire Fighting:	None

HEALTH HAZARD DATA:

Eye:	No significant irritation expected. Flush eyes with plenty of water. If irritation persists, see a physician.
Skin:	No significant irritation expected. If irritation occurs, discontinue use and wash with soap and water. If irritation persists, see a physician.
Inhalation:	No effect expected under normal conditions of use.
Ingestion:	Expected to be relatively non-toxic. No first aid generally required, but see a physician if large amounts are ingested.

SPILL OR LEAK PROCEDURES:

Small Spill:	Absorb liquid on paper or floor absorbant.
Large Spill:	Dike area of spill to prevent spreading, Pump or mop liquid into disposal tank or drum. Remainder on floor should be covered with floor absorbant and absorbant shoveled into drums. Dispose of according to local regulations.

HAZARD CLASSIFICATION: *NONE*

ANALYTICAL CHEMICAL TESTING
LABORATORY, INC.
Consulting Chemists, Scientists & Engineers

January 13, 2000

REPORT TO: Aaron Oil Company
713 Bill Myles Drive
Saraland, AL 36571

REPORT OF: Chemical Analysis-Filter Bin #45

JOB NUMBER: 99-026

ATTENTION: Mr. Ben Welborn

Analytical Chemical Testing Laboratory, Inc. has completed the analysis of a sample submitted by Aaron Oil Company. The sample was analyzed, as directed, and results of our testing are listed as follows:

SAMPLE/DATE/INFO	TESTS	RESULTS	DATE/TIME TESTED	TECH	METHOD
ACT ID# 00-026-0105-1 Compactor Trailer #26 Sampled: 12/29/99 1300 by Z. Cowart	Arsenic, As	0.10 p.p.m.	01/07 1500	MGB	2-206.2
	Cadmium, Cd	0.90 p.p.m.	01/07 1420	MGB	3500-Cd
	Chromium, Cr	6.60 p.p.m.	01/07 1440	MGB	3500-Cr
	Lead, Pb	15.6 p.p.m.	01/07 1410	MGB	3500-Pb
	Ignitability	> 140°F	01/05 1330	MGB	2-1010M
	Extracted TOX	33.3 ug/Kg	01/11 1503	AH	2-9020M
	P.C.B.'s	N.D.	01/13 0006	MR	2-8081

ug/g = micrograms per gram = p.p.m. = parts per million
N.D. = None Detected

P.O. Box 161198 • Mobile, Alabama 36616 • (334) 479-9205 • Fax (334) 478-8181

METHODS:

1- Standard Methods for the Examination of Water and Wastewater, 20th Ed.

2-E.P.A. 600-04/79-020

We appreciate this opportunity to be of service. If there are any questions concerning this report, please feel free to call.

Very truly yours,

ANALYTICAL CHEMICAL TESTING LAB, INC.

Robert M. Naman
Analytical Chemist
President

RMN/lac
attachment: Chain of Custody

PAGE 04 AARON OIL COMPANY CO 3344333168 04/19/2000 13:48

P.O. # 1339

Attn.:
Client:
Address:

ANALYTICAL CHEMICAL TESTING LABORATORY, INC.
Consulting Chemists & Scientists

Remit Results To:

CHAIN OF CUSTODY

Project Name:	Project Location:	Sample Type						Required Analysis						Page	Of
AARON OIL Co.	#26 COMPACTOR TRAILER													1	1

Job No.:	Project Contact:	Project Tel. No.:
	ZACK COWART	675-4666

Sampler(s) Name(s): ZACK COWART

Sampling Date	Sampling Time	Sample Identification	Water	Soil	Other	No. of Containers	Container Type (P)lastic (G)lass (O)ther	Preservative (S)odium Hydroxide (O)ther (I)ce (N)itric (H)ydrochloric	T.O.X	PCB'S	AS CD METALS - CR PB	FLASH POINT			Field Parameters pH	Cond.	Temp.
12 29 99	1:00	COMPACTOR TRAILER #26			✓	1	G	O	✓	✓	✓	✓					

Relinquished By:	Date:	Time:	Received By:	Relinquished By:	Date:	Time:	Received By:	Remarks
	12 29 99	1:00						

Analytical Chemical Testing Laboratory, Inc. 2960 [illegible]

ENVIRONMENTAL
SCIENCE CORP.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
FAX (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

March 28,2000

Mr. Zack Cowart
Aaron Oil Company
PO Box 2304
Mobile, AL 36652

BSC Sample # : L12993-01

Date Received : March 23, 2000

ESC Key : AARONOIL-ANN. PROF

Description : Soil - Annual Prof Used Oil Absorbents

Site ID :

Sample ID : [redacted]/SOFT FILTERS

Project : Annual Profile

Collected By : Zack Cowart
Collection Date : 03/17/00 12:00

Parameter	Result	Det. Limit	Units	Limit	Method	Date
TCLP Extraction					1311	03/26/00
Mercury	BDL	0.00020	mg/l	0.20	7470	03/22/00
Arsenic	BDL	0.0050	mg/l	5.0	6010	03/22/00
Barium	2.34	0.0030	mg/l	100	6010	03/22/00
Cadmium	0.017	0.0020	mg/l	1.0	6010	03/22/00
Chromium	0.051	0.0020	mg/l	5.0	6010	03/22/00
Lead	BDL	0.0050	mg/l	5.0	6010	03/22/00
Selenium	0.031	0.0050	mg/l	1.0	6010	03/22/00
Silver	BDL	0.0020	mg/l	5.0	6010	03/22/00
TCLP ZHE Extraction					1311	03/20/00
TCLP Volatiles						
Benzene	BDL	0.050	mg/l	0.50	8260	03/21/00
Carbon tetrachloride	BDL	0.050	mg/l	0.50	8260	03/21/00
Chlorobenzene	BDL	0.050	mg/l	100	8260	03/21/00
Chloroform	BDL	0.050	mg/l	6.0	8260	03/21/00
1,2-Dichloroethane	BDL	0.050	mg/l	0.50	8260	03/21/00
1,1-Dichloroethene	BDL	0.050	mg/l	0.70	8260	03/21/00
2-Butanone (MEK)	BDL	0.25	mg/l	200	8260	03/21/00
Tetrachloroethene	BDL	0.050	mg/l	0.70	8260	03/21/00
Trichloroethene	BDL	0.050	mg/l	0.50	8260	03/21/00
Vinyl chloride	BDL	0.050	mg/l	0.20	8260	03/21/00
Surrogate Recovery						
Dibromofluoromethane	99.		% Rec.		8260	03/21/00
Toluene-d8	100		% Rec.		8260	03/21/00
4-Bromofluorobenzene	100		% Rec.		8260	03/21/00
TCLP Pesticides						
Chlordane	BDL	0.030	mg/l	0.030	8081	03/24/00
Endrin	BDL	0.0050	mg/l	0.020	8081	03/24/00
Heptachlor	BDL	0.0050	mg/l	0.008	8081	03/24/00
Lindane	BDL	0.0050	mg/l	0.40	8081	03/24/00
Methoxychlor	BDL	0.0050	mg/l	10.	8081	03/24/00
Toxaphene	BDL	0.10	mg/l	0.50	8081	03/24/00
Surrogate Recovery						
Decachlorobiphenyl	34.		% Rec.		8081	03/24/00

Laboratory Certification Numbers:
A2LA - 1461.01, AIHA - 100789, AL - 40660, CA - 1-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-T
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00164, WV -

TANNING PRODUCTS

OFF SPEC OR EXPIRED TANNING PRODUCTS

15 to 20 tons / MONTH

Very Vague

What's PABA

What oil is emulsified or lotion

Is disposal of Bulk or Consumer Packages?

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
Product Name: "EKTAR" DN001 Copolyester
Product Identification Number(s): PLS DN001
Manufacturer/Supplier: Eastman Chemical Company, A Division of Eastman Kodak Company, Kingsport, Tennessee 37662
MSDS Prepared by: Material Safety Program, Eastman Chemical Company, A Divisi of Eastman Kodak Company, Kingsport, TN 37662
For Emergency Health, Safety & Environmental Information, call: 800-EASTMAN
For Emergency Transportation Information, call CHEMTREC: 800-424-9300 or call 800-EASTMAN
For Other Information, call your Eastman representative or the Eastman operat 615-229-2000 (USA)
Chemical Name: not applicable
Synonym(s): none
Molecular Formula: not applicable
Molecular Weight: not applicable
Product Use: plastic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component - (CAS Registry No.)
97-100	copolyester (025640-14-6)
0-3	additives (not applicable)

3. HAZARDS IDENTIFICATION
CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
HMIS Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0
NFPA Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0

MATERIAL SAFETY DATA SHEET
100000037/F/USA
Approval Date: 11/16/1992
Print Date: 12/10/1992
Page 2

NOTE: HMIS and NFPA ratings involve data and interpretations that may vary fr company to company. They are intended only for rapid, general identificatior the magnitude of the specific hazard. To deal adequately with the safe handlir of this material, all the information contained in this MSDS must be considere

4. FIRST-AID MEASURES
Inhalation: If symptomatic, move to fresh air. Get medical attention if symptc persist.
Eyes: Any material that contacts the eye should be washed out immediately wit water. Get medical attention if symptoms persist.
Skin: If burned by contact with molten material, cool as quickly as possible. not peel material from skin.
Note to Physicians: Burns should be treated as thermal burns. The material wil come off as healing occurs; therefore, immediate removal from the skin is not necessary.
Ingestion: Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary.

5. FIRE FIGHTING MEASURES
Extinguishing Media: water spray, dry chemical
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.
Hazardous Combustion Products: carbon dioxide, carbon monoxide
Unusual Fire and Explosion Hazards: Powdered material may form explosive

EASTMAN KODAK PLASTIC

LEFTOVER MATERIAL FROM MANUFACTURING PROCESS. POLYESTER, POLYOLEFIN, POLYSTYRENE, POLYCARBONATE, AND CELLULOSIC PLASTICS.

1 TO 20 TONS/WEEK

Is this suitable for basket tube accumulation?

Feed Stock is Good Fuel
- pelletized -
- No indication of Solder or Toxic Pigments
No cumulation w/ so date

Sweep or scoop it into containers.
For Large Spill: Dike ahead of spill to prevent entering drains, sewers or streams.

7. HANDLING AND STORAGE

Personal Precautionary Measures: No special precautionary measures should be needed under anticipated conditions of use.
Prevention of Fire and Explosion: Keep from contact with oxidizing materials. Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."
Storage: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:
ACGIH Threshold Limit Value (TLV): not established
OSHA (USA) Permissible Exposure Limit (PEL): not established
Ventilation: Good general ventilation (typically 10 air changes per hour) shc be used. Ventilation rates should be matched to conditions. Supplementary loc exhaust ventilation, closed systems, or respiratory protection may be needed special circumstances such as poorly ventilated spaces, mechanical generation dusts, heating, drying, etc.
Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: dust. If respirators are used, a program should be institute to assure compliance with OSHA Standard 29 CFR 1910.134.
Eye Protection: It is a good industrial hygiene practice to minimize eye contact.
Skin Protection: It is a good industrial hygiene practice to minimize skin contact. When material is heated, wear gloves to protect against thermal burn Recommended Decontamination Facilities: eye bath, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical Form: solid (pellet)
- Color: colorless
- Odor: slight
- Odor Threshold: not applicable
- Specific Gravity (water = 1): >1
- Vapor Pressure: negligible
- Vapor Density (Air = 1): not applicable
- Evaporation Rate: not applicable
- Volatile Fraction by Weight: not applicable

- Boiling Point: not available
- Melting Point: >100 C (>212 F)
- Viscosity: not available
- Solubility in Water: negligible
- pH: not applicable
- Octanol/Water Partition Coefficient: not applicable
- Flash Point: not applicable, combustible solid
- Lower Explosive Limit: not available
- Upper Explosive Limit: not available

Explosion Power [illegible]
Sensitivity to Static Discharge: [illegible]

10. STABILITY AND REACTIVITY
Stability: stable
Incompatibility: Material can react with strong oxidizing agents.
Hazardous Polymerization: will not occur

11. TOXICOLOGICAL INFORMATION
Effects of Exposure:
Inhalation: Expected to be a low hazard for usual industrial or commercial handling by trained personnel.
Eyes: Expected to be a low hazard for usual industrial or commercial handli by trained personnel.
Skin: Molten material will produce thermal burns.
Ingestion: Expected to be a low ingestion hazard.
Acute Toxicity Data: Data for a very similar material.
Oral LD-50 (rat): >3200 mg/kg
Oral LD-50 (mouse): >3200 mg/kg
Inhalation LC-50: not available
Dermal LD-50 (guinea pig): >1000 mg/kg
Skin irritation (guinea pig): slight
Repeated skin application (guinea pig): no irritation
Skin sensitization (guinea pig): none
Eye irritation (rabbit): slight

Definitions for the following section(s): LOEL = lowest-observed-effect level NOAEL = no observed-adverse-effect level, NOEL = no-observed-effect level.
Subchronic Toxicity Data: Data for a very similar material.
Oral study (11 days, male rat): NOEL = 700 mg/kg/day (highest dose tested)

12. ECOLOGICAL INFORMATION
Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur durin the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.
This material has not been tested for environmental effects. It is made from high molecular weight polymer which also has not been tested for environmenta effects and which has a very low water solubility. As such, it is expected to have a low biochemical oxygen demand and to cause essentially no oxygen depletion in aquatic systems. It is expected to have a low potential to affec aquatic organisms, secondary waste treatment microorganisms, and the germinat and early growth of plants. It is expected to be nonbiodegradable and unlikel to bioconcentrate. In a spill situation this material may be visually unpleasant; however, it is not expected to cause any adverse environmental effects.

13. DISPOSAL CONSIDERATIONS
Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

14. TRANSPORT INFORMATION
- DOT (USA) Classification: not regulated
- TDG (Canada) Classification: not regulated
- International Civil Aviation Organization (ICAO) Classification: not regulat
- International Maritime Dangerous Goods (IMDG) Classification: not regulated

15. REGULATORY INFORMATION
- This document has been prepared in accordance with the MSDS requirements of

- Material(s) known to the State of California to cause cancer: none
- Material(s) known to the State of California to cause adverse reproductive effects: none
- Massachusetts Substance List: none
- New Jersey Workplace Hazardous Substance List: none
- Pennsylvania Hazardous Substance List: none
- This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.
- WHMIS (Canada) Ingredient Disclosure List: none
- WHMIS (Canada) Status: noncontrolled
- Carcinogenicity Classification (components present at 0.1% or more):
  - International Agency for Research on Cancer (IARC): not listed
  - American Conference of Governmental Industrial Hygienists (ACGIH): not listed
  - National Toxicology Program (NTP): not listed
  - Occupational Safety and Health Administration (OSHA): not listed
- Chemical(s) subject to the reporting requirements of Section 313 or Title I of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 C Part 372: none
- SARA (U.S.A.) Sections 311 and 312 hazard classification(s): not applicable
- US Toxic Substances Control Act (TSCA): All components of this product are listed on the TSCA inventory or otherwise comply with TSCA premanufacture notification requirements.
- Canadian Environmental Protection Act (CEPA) and Domestic Substances List (DSL): This product is listed on the DSL or otherwise complies with CEPA ne substance notification requirements.

16. OTHER INFORMATION

US/Canadian Label Statements:

CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
Minimize dust generation and accumulation.
FIRST AID: Get medical attention if symptoms occur. If burned by contact wi molten material, cool as quickly as possible. Do not peel from skin.
Note to Physicians: Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin not necessary.

Since emptied containers retain product residue, follow label warnings even after container is emptied.
FOR COMMERCIAL OR INDUSTRIAL USE ONLY BY TRAINED PERSONNEL.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposa of these materials and the safety and health of employees and customers and t protection of the environment.

- HMIS Hazard Ratings: Health-0, Flammability-1, Chemical Reactivity-0
- NFPA Hazard Ratings: Health-0, Flammability-1, Chemical Reactivity-0
- NOTICE: HMIS and NFPA ratings involve data and interpretations that may vary from company to company and are intended only to rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.
- TSCA: All components of this material are listed in the TSCA (USA) inventory.

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.
970856/R-1, S-1, F-1, C-0

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: "EKTAR" FB PCT Glass-Fiber-Reinforced Polymer CG001
Product Identification Number(s): PLS CG001
Manufacturer/Supplier: Eastman Chemical Company, A Division of Eastman Kodak Company, Kingsport, Tennessee 37662
MSDS Prepared by: Material Safety Program, Eastman Chemical Company, A Divisi of Eastman Kodak Company, Kingsport, TN 37662
For Emergency Health, Safety & Environmental Information, call: 800-EASTMAN
For Emergency Transportation Information, call CHEMTREC: 800-424-9300 or call 800-EASTMAN
For Other Information, call your Eastman representative or the Eastman operat 615-229-2000 (USA)
Chemical Name: not applicable
Synonym(s): KAN 446292; PM 11580-00; PM 13027-00
Molecular Formula: not applicable
Molecular Weight: not applicable
Product Use: plastic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component	(CAS Registry No.)
40-80	polyester	(025135-20-0)
13-50	fibrous glass filaments	(not applicable)
0-7	benzoate ester-nucleating agent	(not applicable)
0-3	modifiers/additives	(not applicable)

3. HAZARDS IDENTIFICATION

CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
HMIS Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0

MATERIAL SAFETY DATA SHEET
1000047791F/USA
Approval Date: 11/06/1992
Print Date: 12/10/1992
Page 1

NFPA Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0
NOTE: HMIS and NFPA ratings involve data and interpretations that may vary fr company to company. They are intended only for rapid, general identification the magnitude of the specific hazard. To deal adequately with the safe handli of this material, all the information contained in this MSDS must be consider

4. FIRST-AID MEASURES

Inhalation: If symptomatic, move to fresh air. Get medical attention if sympt persist.
Eyes: Any material that contacts the eye should be washed out immediately wit water. Get medical attention if symptoms persist.
Skin: If burned by contact with molten material, cool as quickly as possible. not peel material from skin. Get medical attention.
Ingestion: Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary.
Note to Physicians: Burns should be treated as thermal burns. The material wil come off as healing occurs; therefore, immediate removal from the skin is not necessary.

5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, dry chemical

Kingsport, Tennessee 37662
For Emergency Health and Safety Information Call (615) 229-2000
For Other Information, Call Your Eastman Representative
Eastman Operator: (615) 229-2000 Date of Preparation: March 11, 19
MSDS No. 11,324A

IDENTIFICATION AND USE
- Name: "EKTAR" MB Polymer DA111
- Chemical Name: not applicable
- Synonym: PM 12902
- Molecular Formula and Weight: not applicable
- Product Use: plastic

COMPOSITION

Component(s)	Approx Weight %	CAS Reg No	Eastman Kodak No
Polyester	40-50	25135-20-0	035427
Polycarbonate	40-50	--	217879
Acrylic polymer	0-10	--	951471
Additives	0-11	--	--

HAZARD SUMMARY

CAUTION! MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES

PHYSICAL DATA
- Physical State: solid (pellet)
- Color: varies with formulation
- Odor: slight
- Odor Threshold: not applicable
- Specific Gravity (water = 1): 1.2
- Vapor Pressure: negligible
- Vapor Density (air = 1): not applicable
- Evaporation Rate: not applicable
- Boiling Point: not available
- Melting Point: 280C (536F)
- Solubility in Water: negligible
- pH: not applicable
- Octanol/Water Partition Coefficient: not applicable

FIRE AND EXPLOSION HAZARD
- Flashpoint: nonvolatile, combustible
- Lower Explosive Limit: not available
- Upper Explosive Limit: not available
- Autoignition Temperature: not available
- Hazardous Combustion Products: carbon dioxide, carbon monoxide
- Means of Extinction: water spray or dry chemical
- Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- Sensitivity to Mechanical Impact: not available
- Explosive Power: not available
- Sensitivity to Static Discharge: not available
- Unusual Fire and Explosion Hazards: Powdered material may form explosive dust-air mixtures. Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."

REACTIVITY DATA
- Stability: stable
- Incompatibility - Material can react with: oxidizers
- Hazardous Polymerization: will not occur

TOXICOLOGICAL PROPERTIES
- Exposure Limits
  - ACGIH Threshold Limit Value (TLV) and OSHA (USA) Permissible Exposure Limit (PEL): not established
- Effects of Acute Exposure
  - Inhalation: Low hazard for usual industrial handling.
  - Eyes: No specific hazard known. However, any material that contacts the eye may be irritating or may cause mechanical injury.

- Toxicity: [illegible]
- IARC fibrous glass filament: Group 3 (not classifiable as to their carcinogenicity to humans)
- NTP (USA): not listed
- OSHA (USA): not listed
- ACGIH: not listed
- Toxicity Data
  These formulations have not been tested. Toxicity information for the components and the fact that they are encapsulated within the polymer matrix suggest the formulations are of low toxicity.

PREVENTIVE MEASURES, VENTILATION, AND PERSONAL PROTECTION

- Preventive Measures: None should be needed under anticipated conditions of use.
- Ventilation: Good general ventilation (typically 10 air changes per hour) should be sufficient to control airborne levels. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, mechanical generation of dusts, heating, drying, etc.
- Respiratory Protection: An approved respirator should be worn if needed. Respirator type: dust and fume
- Eye Protection: Safety glasses with side shields (or goggles) are recommended for any type of industrial chemical handling.
- Hand Protection: Wear gloves to protect against thermal burns.
- Recommended Decontamination Facilities: eye bath, safety shower and washing facilities
- Note: Recommendations for personal protection are for industrial handling of material; requirements for laboratories should be in accordance with good laboratory practices.

FIRST AID

- Inhalation: If symptomatic, remove to fresh air and get medical attention if symptoms persist.
- Eyes: Any material that contacts the eye should be washed out immediately and medical attention obtained if symptoms persist.
- Skin: If burned by contact with molten material, cool as quickly as possible with water and see a physician for treatment of burn. Note to Physicians: Burns should be treated as thermal burns. The plastic will come off as healing occurs; therefore, immediate removal from the skin is not necessary.
- Ingestion: Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary.

SPILL, LEAK, AND DISPOSAL PROCEDURES

- Steps to be taken in case material is spilled or released: Sweep or scoop up and remove.
- Waste Disposal (Observe all laws concerning health and environment.): incineration

SPECIAL STORAGE AND HANDLING PRECAUTIONS

Keep from contact with oxidizing materials.

TRANSPORTATION INFORMATION

- DOT (USA) Classification: not regulated
- TDG (Canada) Classification: not regulated
- International Civil Aviation Organization (ICAO): not regulated
- International Maritime Dangerous Goods (IMDG): not regulated

OTHER INFORMATION

- OSHA (USA) hazardous chemical(s) according to 29 CFR 1910.1200: none
- WHMIS (Canada) Ingredient Disclosure List: none
- WHMIS (Canada) controlled material(s): none
- WHMIS (Canada) controlled product: no
- Material(s) known to the State of California to cause cancer: none
- Material(s) known to the State of California to cause adverse reproductive effects: none
- Massachusetts Substance List: none
- New Jersey Workplace Hazardous Substance List: none

Hazardous Combustion Products: CO, CO2, NOx.
Unusual Fire and Explosion Hazards: Powdered material may form explosive dust-air mixtures.

6. ACCIDENTAL RELEASE MEASURES
Sweep or scoop up and remove.

7. HANDLING AND STORAGE
Personal Precautionary Measures: No special precautionary measures should be needed under anticipated conditions of use.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical and Plastics Industries."
Storage: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure Limits:
ACGIH Threshold Limit Value (TLV): not established
OSHA (USA) Permissible Exposure Limit (PEL): not established
Ventilation: Good general ventilation (typically 10 air changes per hour) sho be used. Ventilation rates should be matched to conditions. Supplementary loc exhaust ventilation, closed systems, or respiratory protection may be needed special circumstances such as poorly ventilated spaces, mechanical generatior dusts, heating, drying, etc.
Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: dust. If respirators are used, a program should be institute to assure compliance with OSHA Standard 29 CFR 1910.134.
Eye Protection: It is a good industrial hygiene practice to minimize eye contact.
Skin Protection: Wear gloves to protect against thermal burns.
Recommended Decontamination Facilities: eye wash, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES
- Physical Form: solid (pellet)
- Color: varies with formulation
- Odor: odorless
- Odor Threshold: not applicable
- Specific Gravity (water = 1): 1.0
- Vapor Pressure: negligible
- Vapor Density (Air = 1): not applicable
- Evaporation Rate: not applicable
- Volatile Fraction by Weight: not applicable
- Boiling Point: not available
- Melting Point: 250-290C (482-554F)
- Viscosity: not available

- Solubility in Water: negligible
- pH: not applicable
- Octanol/Water Partition Coefficient: not applicable
- Flash Point: not applicable, combustible solid
- Lower Explosive Limit: not applicable
- Upper Explosive Limit: not applicable

Explosive Power: not available
Sensitivity to Static Discharge: not available

10. STABILITY AND REACTIVITY
Stability: stable
Incompatibility: Material can react with strong oxidizing agents.
Hazardous Polymerization: will not occur

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:
General: The toxicological properties of this material have not been evaluated.
Inhalation: Expected to be a low hazard for usual industrial or commercial handling by trained personnel.
Eyes: Expected to be a low hazard for usual industrial or commercial handli by trained personnel.
Skin: Molten material will produce thermal burns.
Ingestion: Expected to be a low ingestion hazard.

12. ECOLOGICAL INFORMATION
Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur durin the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.
Summary: This material has not been tested for environmental effects. It is a high molecular weight polymer with a very low water solubility. As such, it i expected to have a low biochemical oxygen demand and to cause essentially no oxygen depletion in aquatic systems. It is expected to have a low potential t

affect aquatic organisms, secondary waste treatment microorganisms, and the germination and early growth of plants. It is expected to be nonbiodegradable and unlikely to bioconcentrate. In a spill situation this material may be visually unpleasant; however, it is not expected to cause any adverse environmental effects.

13. DISPOSAL CONSIDERATIONS
Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

14. TRANSPORT INFORMATION
- DOT (USA) Status: not regulated.
- TDG (Canada) Status: not regulated.
- Air - International Civil Aviation Organization (ICAO)
- ICAO Status: not regulated.
- Sea - International Maritime Dangerous Goods (IMDG)
- IMDG Status: not regulated.

15. REGULATORY INFORMATION
- This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- OSHA hazardous chemical(s): none
- Material(s) known to the State of California to cause cancer: none
- Material(s) known to the State of California to cause adverse reproductive effects: none
- Massachusetts Substance List: none
- New Jersey Workplace Hazardous Substance List: none
- Pennsylvania Hazardous Substance List: none
- This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.

- WHMIS (Canada) controlled product: noncontrolled
- Carcinogenicity Classification (components present at 0.1% or more):
  - International Agency for Research on Cancer (IARC): fibrous glass [illegible] not classifiable
  - American Conference of Governmental Industrial Hygienists (ACGIH): not

listed
- National Toxicology Program (NTP): not listed
- Occupational Safety and Health Administration (OSHA): not listed

- Chemical(s) subject to the reporting requirements of Section 313 or Title I of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 C Part 372: none
- SARA (U.S.A.) Sections 311 and 312 hazard classification(s): not applicable
- US Toxic Substances Control Act (TSCA): All components of this product are listed on the TSCA inventory or otherwise comply with TSCA premanufacture notification requirements.

16. OTHER INFORMATION

US/Canadian Label Statements:

CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
Minimize dust generation and accumulation.
FIRST AID: If burned by contact with molten material, cool as quickly as possible. Do not peel from skin. Get medical attention.
Note to Physicians: Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin not necessary.
CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
Product Name: "EKTAR" FB Glass-fibers-Reinforced, Flame-Retardant Polymers EG
Product Identification Number(s): PLS EG901
Manufacturer/Supplier: Eastman Chemical Company, A Division of Eastman Kodak Company, Kingsport, Tennessee 37662
MSDS Prepared by: Material Safety Program, Eastman Chemical Company, A Divisi of Eastman Kodak Company, Kingsport, TN 37662
For Emergency Health, Safety & Environmental Information, call: 800-EASTMAN
For Emergency Transportation Information, call CHEMTREC: 800-424-9300 or call 800-EASTMAN
For Other Information, call your Eastman representative or the Eastman operat 615-229-2000 (USA)
Chemical Name: not applicable
Synonym(s): KAN 446064; PM 11433-00
Molecular Formula: not applicable
Molecular Weight: not applicable
Product Use: plastic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component - (CAS Registry No.)
40-80	polyester (029154-49-2)
10-40	fibrous glass filaments (not applicable)
5-15	brominated polyolefin-flame retardant (not available)
2-6	antimony compounds (015432-85-6), (001309-64-4), (007440-36-0)
0.1-10	modifiers/additives (not applicable)

3. HAZARDS IDENTIFICATION
CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS

HMIS Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0
NFPA Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 1
NOTE: HMIS and NFPA ratings involve data and interpretations that may vary fr company to company. They are intended only for rapid, general identification the magnitude of the specific hazard. To deal adequately with the safe handli of this material, all the information contained in this MSDS must be consider

4. FIRST-AID MEASURES
Inhalation: If symptomatic, move to fresh air. Get medical attention if sympt persist.
Eyes: Any material that contacts the eye should be washed out immediately wit water. Get medical attention if symptoms persist.
Skin: If burned by contact with molten material, cool as quickly as possible. not peel material from skin. Get medical attention.
Ingestion: Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary.
Note to Physicians: Burns should be treated as thermal burns. The material wi come off as healing occurs; therefore, immediate removal from the skin is not necessary.

5. FIRE FIGHTING MEASURES
Extinguishing Media: Water spray, dry chemical
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and

Unusual Fire and Explosion Hazards: Powdered material may form explosive dust-air mixtures.

6. ACCIDENTAL RELEASE MEASURES
Sweep or scoop up and remove.

7. HANDLING AND STORAGE

Personal Precautionary Measures: No special precautionary measures should be needed under anticipated conditions of use.
Prevention of Fire and Explosion: Keep from contact with oxidizing materials. Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."
Storage: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure Limits:
ACGIH Threshold Limit Value (TLV):
0.5 mg/m3 TWA antimony, antimony compounds, as Sb
OSHA (USA) Permissible Exposure Limit (PEL):
0.3 mg/m3 TWA antimony, antimony compounds, as Sb
Ventilation: Good general ventilation (typically 10 air changes per hour) sho be used. Ventilation rates should be matched to conditions. Supplementary loc exhaust ventilation, closed systems, or respiratory protection may be needed special circumstances such as poorly ventilated spaces, mechanical generation dusts, heating, drying, etc.
Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: dust. If respirators are used, a program should be institute to assure compliance with OSHA Standard 29 CFR 1910.134.
Eye Protection: It is a good industrial hygiene practice to minimize eye contact.
Skin Protection: Wear gloves to protect against thermal burns.
Recommended Decontamination Facilities: eye bath, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES
- Physical Form: solid (pellet)
- Color: varies with formulation
- Odor: slight
- Odor Threshold: not applicable
- Specific Gravity (water = 1): 11.0
- Vapor Pressure: negligible

- Vapor Density (Air = 1): not applicable
- Evaporation Rate: not applicable
- Volatile Fraction by Weight: not applicable
- Boiling Point: not available
- Melting Point: 630C (483.6F)
- Viscosity: not available
- Solubility in Water: negligible
- pH: not applicable
- Octanol/Water Partition Coefficient: not applicable
- Flash Point: not applicable, combustible solid

- Autoignition Temperature: not available
- Sensitivity to Mechanical Impact: not available
- Explosive Power: not available
- Sensitivity to Static Discharge: not available

10. STABILITY AND REACTIVITY

Stability: stable
Incompatibility: Material can react with strong oxidizing agents.
Hazardous Polymerization: will not occur

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General: The toxicological properties of this material have not been evaluated.

Inhalation: Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Eyes: Expected to be a low hazard for usual industrial or commercial handli by trained personnel.

Skin: Molten material will produce thermal burns.

Ingestion: Expected to be a low ingestion hazard.

12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur durin

the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.
Summary: This material has not been tested for environmental effects. It is a high molecular weight polymer with a very low water solubility. As such, it i expected to have a low biochemical oxygen demand and to cause essentially no oxygen depletion in aquatic systems. It is expected to have a low potential t affect aquatic organisms, secondary waste treatment microorganisms, and the germination and early growth of plants. It is expected to be nonbiodegradable and unlikely to bioconcentrate. In a spill situation this material may be visually unpleasant; however, it is not expected to cause any adverse environmental effects.

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

14. TRANSPORT INFORMATION

- DOT (USA) Status: not regulated.
- TDG (Canada) Status: not regulated.
- Air - International Civil Aviation Organization (ICAO)
- ICAO Status: not regulated.
- Sea - International Maritime Dangerous Goods (IMDG)
- IMDG Status: not regulated.

15. REGULATORY INFORMATION

- This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- OSHA hazardous chemical(s): antimony oxide
- Material(s) known to the State of California to cause cancer: antimony oxide
- Material(s) known to the State of California to cause adverse reproductive effects: lead
- Massachusetts Substance List: antimony oxide
- New Jersey Workplace Hazardous Substance List: none
- Pennsylvania Hazardous Substance List: antimony oxide

- WHMIS (Canada) controlled material(s): antimony oxide
- WHMIS (Canada) controlled product: noncontrolled
- Carcinogenicity Classification (components present at 0.1% or more):
  - International Agency for Research on Cancer (IARC): fibrous glass filamen not classifiable
  - American Conference of Governmental Industrial Hygienists (ACGIH): not listed
  - National Toxicology Program (NTP): not listed
  - Occupational Safety and Health Administration (OSHA): not listed
- Chemical(s) subject to the reporting requirements of Section 313 or Title I of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 C Part 372: antimony oxide
- SARA (U.S.A.) Sections 311 and 312 hazard classification(s): not applicable
- US Toxic Substances Control Act (TSCA): All components of this product are listed on the TSCA inventory or otherwise comply with TSCA premanufacture notification requirements.

16. OTHER INFORMATION

US/Canadian Label Statements:

CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
Minimize dust generation and accumulation.
FIRST AID: If burned by contact with molten material, cool as quickly as possible. Do not peel from skin. Get medical attention.
Note to Physicians: Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin not necessary.
CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
Product Name: "EKTAR" FB PCT Glass-Fiber-Reinforced, Flame-Retardant, Low Wa
Polymer CG902
Product Identification Number(s): PLS CG902
Manufacturer/Supplier: Eastman Chemical Company, A Division of Eastman Kodak
Company, Kingsport, Tennessee 37662
MSDS Prepared by: Material Safety Program, Eastman Chemical Company, A Divis
of Eastman Kodak Company, Kingsport, TN 37662
For Emergency Health, Safety & Environmental Information, call: 800-EASTMAN
For Emergency Transportation Information, call CHEMTREC: 800-424-9300 or cal
800-EASTMAN
For Other Information, call your Eastman representative or the Eastman operat
615-229-2000 (USA)
Chemical Name: not applicable
Synonym(s): KAN 970693; PM 13023-00
Molecular Formula: not applicable
Molecular Weight: not applicable
Product Use: plastic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component - (CAS Registry No.)
35-70	polyester (025135-20-0)
15-45	fibrous glass filaments (not applicable)
10-25	mica (012003-38-2)
5-15	brominated polyolefin-flame retardant (not available)
0-7	benzoate ester-nucleating agent (not applicable)
3-5	antimony compounds (015432-85-6), (001309-64-4), (007440-36-0)
0-9	modifiers/additives (not applicable)

3. HAZARDS IDENTIFICATION

MATERIAL SAFETY DATA SHEET
10000478O/F/USA
Approval Date: 11/06/1992
Print Date: 12/10/1992
Page 2

CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
HMIS Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0
NFPA Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0
NOTE: HMIS and NFPA ratings involve data and interpretations that may vary fr
company to company. They are intended only for rapid, general identification
the magnitude of the specific hazard. To deal adequately with the safe handli
of this material, all the information contained in this MSDS must be consider

4. FIRST-AID MEASURES
Inhalation: If symptomatic, move to fresh air. Get medical attention if sympto
persist.
Eyes: Any material that contacts the eye should be washed out immediately with
water. Get medical attention if symptoms persist.
Skin: If burned by contact with molten material, cool as quickly as possible.
not peel material from skin. Get medical attention.
Ingestion: Material is not expected to be absorbed from the gastrointestinal
tract so that induction of vomiting should not be necessary.
Note to Physicians: Burns should be treated as thermal burns. The material wil
come off as healing occurs; therefore, immediate removal from the skin is not
necessary.

5. FIRE-FIGHTING MEASURES
Extinguishing Media: Water spray, dry chemical
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.
Hazardous Combustion Products: carbon dioxide, carbon monoxide
Unusual Fire and Explosion Hazards: Powdered material may form explosive dust-air mixtures.

6. ACCIDENTAL RELEASE MEASURES
Sweep or scoop up and remove.

7. HANDLING AND STORAGE
Personal Precautionary Measures: No special precautionary measures should be needed under anticipated conditions of use.
Prevention of Fire and Explosion: Keep from contact with oxidizing materials Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical and Plastics Industries."
Storage: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure Limits:
ACGIH Threshold Limit Value (TLV):
3 mg/m3 TWA mica, respirable dust
0.5 mg/m3 TWA antimony, antimony compounds, as Sb
OSHA (USA) Permissible Exposure Limit (PEL):
3 mg/m3 TWA mica, respirable dust
0.5 mg/m3 TWA antimony, antimony compounds, as Sb
Ventilation: Good general ventilation (typically 10 air changes per hour) sh be used. Ventilation rates should be matched to conditions. Supplementary lo exhaust ventilation, closed systems, or respiratory protection may be needed special circumstances such as poorly ventilated spaces, mechanical generatio dusts, heating, drying, etc.
Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: dust. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.
Eye Protection: It is a good industrial hygiene practice to minimize eye contact.
Skin Protection: Wear gloves to protect against thermal burns.
Recommended Decontamination Facilities: eye bath, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical Form: solid (pellet)
- Color: varies with formulation
- Odor: odorless
- Odor Threshold: not applicable
- Specific Gravity (water = 1): >1.0
- Vapor Pressure: negligible
- Vapor Density (Air = 1): not applicable
- Evaporation Rate: not applicable
- Volatile Fraction by Weight: not applicable

- Solubility in Water: negligible
- pH: not applicable
- Octanol/Water Partition Coefficient: not applicable
- Flash Point: not applicable, combustible solid
- Lower Explosive Limit: not applicable
- Upper Explosive Limit: not applicable
- Autoignition Temperature: not available
- Sensitivity to Mechanical Impact: not available
- Explosive Power: not available
- Sensitivity to Static Discharge: not available

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10. STABILITY AND REACTIVITY

Stability: stable

Incompatibility: Material can react with strong oxidizing agents.

Hazardous Polymerization: will not occur

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11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

General: The toxicological properties of this material have not been evaluated.

Inhalation: Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Eyes: Expected to be a low hazard for usual industrial or commercial handli by trained personnel.

Skin: Molten material will produce thermal burns.

Ingestion: Expected to be a low ingestion hazard.

---

12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur durir the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publicly owned treatment works.

Summary: This material has not been tested for environmental effects. It is a high molecular weight polymer with a very low water solubility. As such, it i expected to have a low biochemical oxygen demand and to cause essentially no oxygen depletion in aquatic systems. It is expected to have a low potential t affect aquatic organisms, secondary waste treatment microorganisms, and the germination and early growth of plants. It is expected to be nonbiodegradable and unlikely to bioconcentrate. In a spill situation this material may be visually unpleasant; however, it is not expected to cause any adverse environmental effects.

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

---

14. TRANSPORT INFORMATION

- DOT (USA) Status: not regulated.
- TDG (Canada) Status: not regulated.
- Air - International Civil Aviation Organization (ICAO)
- ICAO Status: not regulated.
- Sea - International Maritime Dangerous Goods (IMDG)
- IMDG Status: not regulated.

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15. REGULATORY INFORMATION

- This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- OSHA hazardous chemical(s): mica, antimony oxide

- Material(s) known to the State of California to cause adverse reproductive effects: lead
- Massachusetts Substance List: antimony oxide

- New Jersey Workplace Hazardous Substance List: none
- Pennsylvania Hazardous Substance List: antimony oxide
- This document has been prepared in accordance with the MSDS requirements o the WHMIS Controlled Products Regulation.
- WHMIS (Canada) Ingredient Disclosure List: antimony compounds
- WHMIS (Canada) controlled material(s): mica, antimony oxide
- WHMIS (Canada) controlled product: noncontrolled
- Carcinogenicity Classification (components present at 0.1% or more):
  - International Agency for Research on Cancer (IARC): crystalline silica, respirable airborne particles, 2A; fibrous glass filaments, not classifi
  - American Conference of Governmental Industrial Hygienists (ACGIH): not listed
  - National Toxicology Program (NTP): not listed
  - Occupational Safety and Health Administration (OSHA): not listed
- Chemical(s) subject to the reporting requirements of Section 313 or Title I of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 C Part 372: antimony oxide
- SARA (U.S.A.) Sections 311 and 312 hazard classification(s): not applicabl
- US Toxic Substances Control Act (TSCA): All components of this product are listed on the TSCA inventory or otherwise comply with TSCA premanufacture notification requirements.

16. OTHER INFORMATION

US/Canadian Label Statements:

CAUTION!
POWDERED MATERIAL MAY FORM EXPLOSIVE DUST-AIR MIXTURES
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS
Minimize dust generation and accumulation.
FIRST AID: If burned by contact with molten material, cool as quickly as possible. Do not peel from skin. Get medical attention.
Note to Physicians: Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin not necessary.
CAUTION: FOR MANUFACTURING, PROCESSING OR REFACKING BY TRAINED PERSONNEL

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information

gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposa of these materials and the safety and health of employees and customers and t protection of the environment.

ATT 2

"WRITE-IT"

To: Bill Thomson, Ecoflo Date: 12/21/92

Subject: Metals Analysis on Mixed Polyester Pellets

Per your request last Friday for some total metals data on some typical plastic for disposal, I found the following TCLP and Total Metals data for the same material:

Metal	TCLP Metals Concentration (mg/L)*	TCLP Regulatory Limit (mg/L)	TOTAL Metals Concentration (ug/L)*
Arsenic	<0.03	5.0	<0.82
Barium	1.5	100.0	55.0
Cadmium	0.01	1.0	84.9
Chromium	<0.01	5.0	22.6
Lead	<0.05	5.0	<1.4
Mercury	<0.01	0.2	<0.5
Selenium	<0.20	1.0	<5.5
Silver	<0.10	5.0	<2.7
Antimony			1100
Beryllium			<0.03
Nickel			11.6
Thallium			<2.7

*Note difference in units: milli for TCLP, micro for TOTAL.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

April 3, 2001

CERTIFIED MAIL – Return Receipt Requested

Mr. Jon Mantay
County Administrator
Bay County Board of County Commissioners
310 West 6th Street
Panama City, Florida 32401

RE: Request for Approval of Segregated Bulk Waste Materials
Bay County Resource Recovery Facility
0050031-002-AV

Dear Mr. Mantay;

The Department has evaluated Mr. Chalmous Beechem's letters received February 19 and 20, 2001, which requested approval of several (10) segregated bulk waste materials to be incinerated at the Bay County Resource Recovery Facility. Based on a review of the requests, we feel that the following segregated bulk waste materials are currently permitted to be incinerated under Specific Conditions A.5.1.4. thru A.5.1.8., and subject to the feed rate percentages defined within the Specific Conditions, e.g. 3% and 5%, by weight.:

1. Shurtape Adhesive Tape Scraps
2. Kimberly Clark Diaper Scraps
3. Avery and Dennison Paper Label Scraps
4. International Garbage from Tyndall AFB (segregated overseas garbage)
5. Waste Tires
6. Bausch and Lomb Eye Drops (off-spec, recalled and outdated cosmetics and pharmaceuticals)
7. Aaron Oil Company (used oil filters and cleanup brooms and swabs)
8. Hawaiian Tropic Tanning Products (off-spec, recalled and outdated cosmetics and pharmaceuticals)

The Department feels that the following two segregated bulk waste materials are currently not permitted to be incinerated under Specific Conditions A.5.1.4. thru A.5.1.8.:

1. Eastman Kodak Plastic Resins
2. Clorox "Combat" Roach Bait

Further consideration for approval of these materials as a method of operation will be given upon receipt of a formal request. This request shall include an application, with signature from the Responsible Official and seal of a registered Florida P.E., ultimate analysis of the subject material, projected potential emissions of any pollutants (criteria and HAPs) as a result of both complete and incomplete combustion/incineration,

and any other pertinent material and data, including calculations, assumptions and reference material.

If there are any questions, please give Mr. Bruce Mitchell a call at 850/921-9506 or write to me at the above letterhead address.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/rbm

cc: Chalmous Beechem, Montenay Bay LLC
Scott Sheplak, BAR
Sandra Veazey, NWD
Martha Nebelsiek, Esq., DEP

4/5/01 cc: Reading File
Bruce Mitchell
Mailed on 4/5/01 (Certified)

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Jon Mantay
County Administrator
Bay County Board of County Commissioners
310 West 6th Street
Panama City, Florida 32401

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) Yolanda Kelley — B. Date of Delivery 4/9/01

C. Signature
X Yolanda Kelley ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label)
7099 3400 0000 1449 5113

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

7099 3400 0000 1449 5113

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Mr. Jon Mantay

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Name (Please Print Clearly) (to be completed by mailer)
Mr. Jon Mantay
Street, Apt. No.; or PO Box No.
310 West 6th Street
City, State, ZIP+4
Panama City, Florida 32401

PS Form 3800, July 1999 See Reverse for Instructions

Bruce

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Clair
2. Scott
3.
4. Scott
5.

PLEASE PREPARE REPLY FOR:

____ SECRETARY'S SIGNATURE
____ DIV/DIST DIR SIGNATURE
____ MY SIGNATURE
__X__ YOUR SIGNATURE
____ DUE DATE _____

ACTION/DISPOSITION

____ DISCUSS WITH ME
____ COMMENTS/ADVISE
____ REVIEW AND RETURN
____ SET UP MEETING
____ FOR YOUR INFORMATION
____ HANDLE APPROPRIATELY
____ INITIAL AND FORWARD
____ SHARE WITH STAFF
____ FOR YOUR FILES

COMMENTS:

Approval/disapproval of requested segregated bulk waste materials at Bay Co RRF. Also, included is the research overview done by Bill Leffler.

JCutts
Bruce

Clair,

We met last Thursday (Bruce, Bill, Edc I) to discuss their requests. Bill Leffler did a good job on researching this. It's important to note that the facility and Dade County are under

ONYX Specialty Waste (a haz waste handler).

FROM: Bruce DATE: 7-2-01 PHONE: Scott

DEP 15-026 (12/93)

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Clair Kanny
2. _____
3. _____
4. _____
5. _____

PLEASE PREPARE REPLY FOR:

____ SECRETARY'S SIGNATURE
____ DIV/DIST DIR SIGNATURE
____ MY SIGNATURE
____ YOUR SIGNATURE
____ DUE DATE _____

ACTION/DISPOSITION

____ DISCUSS WITH ME
____ COMMENTS/ADVISE
____ REVIEW AND RETURN
____ SET UP MEETING
____ FOR YOUR INFORMATION
____ HANDLE APPROPRIATELY
____ INITIAL AND FORWARD
____ SHARE WITH STAFF
____ FOR YOUR FILES

COMMENTS:

The facility knows that we've been reviewing this carefully. The facility asked us for our opinion on the types of masks they have been burning or would like to. We've done this as a service for them; they could read the permit as well as we can.

FROM: Scott Sheplak DATE: 4/2/01 PHONE: _____

DEP 15-026 (12/93)

Memorandum

State of Florida

Department of Environmental Protection

TO: Clair Fancy

THRU: Bruce Mitchell

FROM: William Leffler, PE

DATE: March 27, 2001 **draft for internal discussion only**

SUBJECT Request for Authorization to burn segregated wastes
Montenay Bay, LLC Title V permit no 0050031-002-AV

Background

On February 19, 2001, Montenay Bay, Inc., a division of ONYX Specialty Wastes Services, Inc., requested Department approval to burn several types of segregated wastes in the Panama City MSW Facility.

Shurtape adhesive tape waste 17 to 20 tons per week summer, 34 to 40 tons per week winter
Avery, Dennison label waste 20 to 60 tons per week winter, none in summer.
Kimberly Clark diaper manufacturing waste, 17 to 20 tons per week/ winter none in summer.
International food waste from Tyndall Air Force Base (segregated overseas garbage) 2 to 3 tons per year.
Clorox "Combat" Roach Bait, 100 tons per year.
Waste tires, not to exceed 3% of the facility's total fuel.
Bausch and Lomb eye drops (off spec and out dated pharmaceuticals) 15 To 20 tons per month.
Hawaiian Tropic tanning products (off spec, recalled and outdated cosmetics and pharmaceuticals)
Aaron Oil Co. (used oil filters and cleanup booms and swabs) 15 to 20 tons per month
Eastman Kodak Plastic Resins) 15 to 20 tons per week

The Facility

The Montenay Bay facility is a dual Westinghouse O'Conner rotary waterwall combustor. This type of system uses a rotating tube combustion chamber. Following a presorting of objects too large to fit in the combustor, the waste is fed from the tipping floor to a mixing pit and then injected by a ram into the inclined rotary combustion chambers. The rotary tubes rotate slowly causing the waste to advance and tumble as it burns. Underfire air is injected through the waste rotary chamber wall and the waste bed, and overfire air is provided above the waste bed. Bottom ash passes through slots in the combustor barrel to an afterburner grate and then to a wet quench pit. Moist bottom ash is extracted for land disposal.

Approximately 80 percent of the combustion air is provided along the combustion tube length with most of the air provided in the first half of the combustion tube. The rest of the combustion air is supplied to the afterburner grate and above the rotary combustor outlet in the boiler.

Each unit has a separate forced draft fan to supply combustion air. The heat released in the combustion process is recovered through the radiant, superheater, evaporator and economizer sections of the boiler and used to drive a turbine generator production electric power for sale.

There are separate electrostatic precipitator s (ESP) following the boiler to remove particulate matter. and each ESP is followed by an induced draft fan with discharge to separate flues in a common stack.

This unit is subject to 40 CFR 60, Subpart E, Standards of Performance for Incinerators, incorporated in Rule 212.400(5) F.A.C., and its emissions from this unit are limited by the terms of the permit and

> The controlled combustion temperature of this unit is 1800 F° (982° C). The dwell time is nominally one second and the Electrostatic precipitator operates at 400 to 450 F° (204° to 234° C) and has a dwell time of one second.

Note: the ESP operates at a temperature lower than the flue gas temperature required by permit condition A.5.3.0. requiring a minimum flue gas temperature of 673 ^{o} F, as determined from a March 7, 1991 testing and modeling report. This extra cooling of the exhaust stream was a probable factor requiring the recent replacement of the induced draft fans.

Startup date was May 1, 1987

The Permit.

The Title V permit for this facility was renewed on August 2, 2000. It recognizes that the facility is subject to Title V and NSPS 40 CFR 60 Subpart E , Standards of performance for incinerators, adopted and incorporated in Rule 52-304.800(7)(b) F.A.C. and Rule 323.400(5), F.A.C. The facility is also subject to PSD Permit No FL-129 and Rule 62-400(6), F.A.C. and the State Incinerator Rule 62-296.401(1) F.A.C. There has been a Best Available Control Determination (BACT)

The permit provides the following special conditions regarding fuel:

A.5.1.0. Fuels.

A.5.1.1. The only fuels allowed to be burned in the MWCs are municipal solid waste and wood waste, with distillate fuel oil as an auxiliary fuel. Other wastes shall not be burned without written prior approval from the Department. The wood waste utilization rate shall not exceed 160 tons per day for the facility. Wood waste shall be used when sufficient MSW is not available to maintain a steady heat rate.
[PSD-FL-129]

A.5.1.2. The primary fuel for the facility is municipal solid waste (MSW), including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), Florida Statutes (1995).
[Rule 62-4.070(3), F.A.C.]

A.5.1.3. Unauthorized Fuel. Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described in Specific Conditions **A.5.1.6.**, **A.5.1.7.**, and **A.5.1.8.**, below. However, the facility

(a) shall not burn:
(1) those materials that are prohibited by state or federal law;

(2) those materials that are prohibited by this permit;
(3) lead acid batteries;
(4) hazardous waste;
(5) nuclear waste;
(6) radioactive waste;
(7) sewage sludge;
(8) explosives;
(9) beryllium-containing waste, as defined in 40 CFR 61, Subpart C.

(b) and shall not knowingly burn:
(1) untreated biomedical waste;
(2) segregated loads of biological waste.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.4. The fuel may be received either as a mixture or as a single-item stream (segregated load) of discarded materials. If the facility intends to use an authorized fuel that is segregated non-MSW material, the fuel shall be either:

(a) well mixed with MSW on the tipping floor; or
(b) alternately charged with MSW in the hopper.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.5. The facility operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility, and subject to a percentage weight limitation, below (Specific Conditions **A.5.1.7.** and **A.5.1.8.**). For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogeneous composition of waste material, as determined by visual observation.
[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.6. Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:

(a) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
(b) Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
(c) Wood pallets, clean wood, and land clearing debris;
(d) Packaging materials and containers;
(e) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
(f) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.7. Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30-day average.
[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.8. Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e., the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30-day average.

(a) Construction and demolition debris.
(b) **Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.**
(c) **Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.**
(d) **Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.**
(e) **Waste materials that:**

(i) are generated in the manufacture of items in categories (c) or (d), above and are functionally or commercially useless (expired, rejected or spent); or
(ii) are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.

(f) Waste materials that contain oil from:
(i) the routine cleanup of industrial or commercial establishments and machinery; or
(ii) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.

(g) Used oil and used oil filters. Used oil containing a PCB concentration equal or greater than 50 ppm shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).

(h) Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to prior approval of the Department.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.2.0. Auxiliary Fuel Burners. These devices shall be used at startup during the introduction of MSW fuel until design furnace gas temperature is achieved. They shall be fueled only with distillate fuel oil or natural gas. If the annual capacity value for distillate fuel oil or natural gas is greater than 10%, as determined by 40 CFR 60.43b(e), the facility shall be subject to 40 CFR 60.44b, Standards for Nitrogen Oxides.
[Rules 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; and, PSD-FL-129]

A.5.3.0. Operating Temperature. The furnace mean temperature at the fully mixed zones of the combustors shall not be less than 1,800 ^{o} F. This corresponds to a minimum flue gas temperature of 673 ^{o} F, as determined from a March 7, 1991 testing and modeling report.
[Rules 62-4.070(3), 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; and, PSD-FL-129]

A.6. Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.; and, PSD-FL-129]

Related Waste Rules.

Wastes not characterized as Municipal Solid Waste (MSW) may be either hazardous wastes or subject to the **Universal Waste Rule**. 40 CFR Parts 9, 260, 261, 262, 264, 265, 266, 268, 270, and 273.

RCRA

Under RCRA no material can be a hazardous waste unless it is a solid waste. RCRA defines a solid waste as:

> . . . any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial or mining and agricultural operations, and from community activities . . . [excluding] . . . solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows, or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act . . . , or source, special nuclear, or byproduct material as defined by the Atomic Energy Act [AEA] of 1954 . . . . [Section 1004(27)]

The statutory definition of a hazardous waste is provided in RCRA as follows:

> . . . a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may - (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. [Section 1004(5)]

Furthermore, a solid waste is a hazardous waste if it is not excluded by regulation (40 *CFR* 261.4) and if it is listed (261.30) as a hazardous waste, is a waste mixture containing one or more listed hazardous wastes, or exhibits one or more characteristics of hazardous

waste (i.e., ignitability, corrosivity, reactivity, or toxicity) (40 *CFR* 261.21 to 261.24). Listed wastes meet the definition of hazardous waste regardless of the concentration level of hazardous constituents in them. With few exceptions [e.g., spent solvents listed solely because they are ignitable (40 *CFR* 261.31)], the only way to have a listed waste relieved from hazardous waste management requirements is to petition EPA or a state to delist the waste (40 *CFR* 260.22).

On February 11, 1993, the Environmental Protection Agency proposed new "streamlined" hazardous waste management regulations governing the collection and management of certain widely generated wastes (batteries, pesticides and thermostats) known as universal wastes (58 FR 9346). The stated purpose of the rule is to facilitate the environmentally-sound collection and increase the proper recycling or treatment of hazardous waste nickel cadmium and other batteries, certain hazardous waste pesticides, and mercury-containing thermostats. The RCRA regulations had been a major impediment to national collection and recycling campaigns for these wastes. This rule will greatly ease the regulatory burden on retail stores and others that wish to collect or generate these wastes.

EPA's stated purpose of the universal waste rule was to **greatly facilitate programs ... to reduce the quantity of these wastes going to municipal solid waste landfills or combustors**.

According to the regulations, three types of wastes are considered universal wastes. They are:

- Used batteries, not including spent lead-acid batteries regulated under 40 *CFR* 266 and batteries that are not hazardous wastes under 40 *CFR* 261.
- Recalled pesticides, except those managed by farmers under 40 *CFR* 262.70, not considered a hazardous waste under 40 *CFR* 261, and pesticides that are not wastes as defined under 40 *CFR* 261.
- Mercury-containing thermostats, except those not considered a hazardous waste under 40 *CFR* 261.

EPA further establishes standards for handlers, transporters, destination facilities and importers. The Agency also allows households exempt under 40 CFR 261.4(b)(i) and conditionally exempt small-quantity generators exempt under 40 CFR 261.5 to voluntarily participate in the program.

A handler is a facility that accumulates universal wastes and is a generator of universal wastes, or a facility that receives universal waste from other universal waste handlers, accumulates universal waste and sends universal waste to another universal waste handler or a destination facility. A destination facility is a facility that treats, disposes of or recycles universal waste. A handler cannot be a destination facility. A transporter transports universal waste by air, rail, highway or water.

The regulations establish two classes of handlers: small-quantity and large-quantity. Small quantity handlers (SQHs) accumulate up to 5000 kilograms of covered wastes, while large-quantity handlers (LQHs) accumulate more than 5000 kilograms. No handler may export a universal waste without complying with 40 *CFR* 262.53, 56 and 57, gaining the approval of the receiving country and obtaining a copy of the EPA Acknowledgement of Consent form.

For all universal wastes, the SQH must ensure there are no releases from storage containers holding the wastes. Pesticides may be stored in tanks regulated under 40 *CFR* 265, Subpart J.

- The SQH must properly label all containers storing universal wastes as "universal wastes" or "waste." The label must be legible, and if storing pesticides, the label that accompanied the pesticide also must be attached. Universal waste storage may not exceed one year from the time when the first quantity of universal waste is added to the container

All SQH personnel who handle universal wastes must be properly trained in emergency procedures, must respond to releases, must take the universal waste to a universal waste facility and must properly mark the waste per U.S. Department of Transportation (DOT) regulations. The SQH is not required to keep waste shipment records.

An LQH must notify EPA of its activities, unless it already has an EPA Resource Conservation and Recovery Act (RCRA) identification number. This notification must include the name and address of the LQH, a list of the types of universal wastes managed and a statement that the 5000-kilogram limit will be exceeded. An LQH can accumulate universal wastes longer than one year, but must be able to show the actual accumulation time.

In general, the LQH has the same handling, storage, accumulation, labeling, release response and training requirements as the SQH. In addition, the LQH must keep a record of each universal waste shipment it receives and a record of each shipment. The record may be a log, an invoice, a manifest, a bill of lading or another shipping document. The LQH must retain these records for at least three years from the date of receipt of shipment or the date the shipment left the LQH facility.

A universal waste destination facility (DF) is a facility that treats, disposes of or recycles universal wastes. DFs must comply with 40 *CFR* 264-270. The DF cannot store universal wastes as a part of recycling the wastes without complying with 40 *CFR* 261.6(c)(2).

The DF cannot send or take any universal waste to a non-universal waste facility, and may reject any shipments. It may send them back either to the shipper or to another DF, if both parties agree. If the waste is a hazardous waste and not a universal waste, the DF must notify EPA of the illegal shipment.

An importer of universal wastes must comply with the appropriate handler, transporter and destination facility regulations. EPA anticipates adding other universal wastes and has established a petition program to add new wastes

Toxic Substances Control Act

15 U.S.C. s/s 2601 et seq. (1976)

The Toxic Substances Control Act (TSCA) of 1976 was enacted by Congress to give EPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. EPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. EPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.
Also, EPA has mechanisms in place to track the thousands of new chemicals that industry develops each year with either unknown or dangerous characteristics. EPA then can control these chemicals as necessary to protect human health and the environment. TSCA supplements other Federal statutes, including the Clean Air Act and the Toxic Release Inventory under EPCRA.

The 1998 Florida Legislature enacted the Florida Accidental Release Prevention and Risk Management Planning Act (ARP/RMP), Chapter 252, Part IV, Florida Statutes. This Act grants the Department of Community Affairs (DCA) the necessary authority and resources to seek delegation for Clean Air Act Amendments of 1990, Section 112(r) [Section 112(r)] implementation from the U. S. Environmental Protection Agency. Section 112(r) required the U. S. Environmental Protection Agency (EPA) to publish a list of at least 100 substances and their associated threshold quantities to determine who must comply with a new Risk Management Program. EPA was also tasked with developing regulations and guidance for response, prevention, and detection of accidental releases associated with the regulated substances. Section 112(r) additionally requires the regulated facilities to prepare a Risk Management Plan that includes a Hazard Assessment, Accidental Release Prevention Programs, and an Emergency Response Program. The resulting regulations that EPA adopted in accordance with Section 112(r) are the Chemical Accident Prevention Provisions (CAPP) found in CFR, Part 68. CAPP lists the regulated substances and their thresholds. For owners and operators of regulated substances the CAPP frames a three Program Level regulatory system. Qualifying for a particular Program Level is based on: the amount of previous risk management steps, a stationary sources' accidental release history, proximity to public receptors, and type(s) of regulated substance(s).

Florida's Accidental Release Prevention and Risk Management Planning Act chapter 252, (parts II and IV), Florida Statutes, authorizes DCA to require submission of Risk Management Plans and to conduct Risk Management Program inspections and audits. It also provides for funding, fees, enforcement authority and penalties.

Emergency Planning and Community Right-to-Know Act, EPRCA 42 U.S.C. 11001 et seq. (1986)

Also known as Title III of SARA, EPCRA was enacted by Congress as the national legislation on community safety. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards.
To implement EPCRA, Congress required each state to appoint a State Emergency Response Commission (SERC). The SERC's were required to divide their states into Emergency Planning Districts and to name a Local Emergency Planning Committee (LEPC) for each district.
Broad representation by fire fighters, health officials, government and media representatives, community groups, industrial facilities, and emergency managers ensures that all necessary elements of the planning process are represented.

EPCRA is administered by the U.S. Environmental Protection Agency (EPA) and implemented by the Florida Department of Community Affairs (DCA). The purpose of this law is to encourage emergency planning efforts at the state and local levels and to increase the public's access to information about the potential chemical hazards that may exist in their communities. The data collected is used by 11 Local Emergency Planning Committees (LEPCs) to develop hazardous materials emergency plans to use in responding to and recovering from a release or spill of hazardous or toxic substances. These plans are reviewed and approved by the SERC. All of the chemical data collected, as well as the plans, are available for the general public to review upon request

Federal Insecticide, Fungicide, and Rodenticide Act

7 U.S.C. s/s 136 et seq. (1972)

The primary focus of FIFRA was to provide federal control of pesticide distribution, sale, and use. EPA was given authority under FIFRA not only to study the consequences of pesticide usage but also to require users (farmers, utility companies, and others) to register when purchasing pesticides.

Through later amendments to the law, users also must take exams for certification as applicators of pesticides. All pesticides used in the U.S. must be registered (licensed) by EPA. Registration assures that pesticides will be properly labeled and that if used in accordance with specifications, will not cause unreasonable harm to the environment.

FIFRA does not directly address disposal of waste pesticides. It does make it unlawful to use the product other than as specified on the label. There are exceptions for shipping, analysis where the user does not expect to receive any "benefit in pest control from the product".

The Florida Department of Agriculture and Consumer Affairs has delegated regulatory authority under FIFRA. Dennis Howard is the bureau chief of the pesticides section 487-0532. Jim Cooper and Max Feken in that section expressed concern for the effects that a

spill or widespread disbursement might have on aquatic life, but stated that state the program is without authority to prevent incineration.

Products for which permission to incinerate is sought.

1. Bausch and Lomb Eye Drops and Pharmaceuticals

Estimated waste stream 15 to 20 tons per month.

Several products are described but the specifications do not indicate whether the waste is to be combusted in bulk or in consumer packaging. Except for dexemethasone, and thimerosol the ingredients are benign.

By far the largest portion of all of the products was purified water with surfactants and conditioners, which are intended to clean or lubricate the contact lenses either externally or while in place in the eye. These products are very carefully formulated for the most sensitive human contact

The dexemethasone is an anabolic steroid and poses a substantial hazard to personnel handling the waste if the containers are broken, or if handled in bulk, but little hazard if the products are to be handled in consumer market packaging.. Its combustion characteristics and chemical fate are unknown.

Thimerosol is a preservative used in very small quantities to prevent biological degradation of the product it contains mercury and is the same as merthiolate an antiseptic taken off the market in the 1970's because of its mercury content. Thimerisol used as a preservative in otherwise sterile ophthalmic solutions is used at extremely low levels, 0.01 percent in small consumer packages. Nevertheless methyl mercury is particularly biotoxic and will not be retained by an electrostatic precipitator. 100 tons of waste could result in as much as a 10 pounds of emissions as Mercury. The waste manifest included with the request indicates that ophthalmic solutions preserved with Thimerosol will be rejected. This conservative approach is commendable and the above analysis is to consider the possible effect of an oversight.

Several of the products are listed as "floor mix" and not identified with consumer package sizes. It may be that these products are delivered in bulk for incineration. To the extent that these are powders or aqueous suspensions there is concern that a portion may pass the basket grates without combustion and be concentrated in the ash.

2. Hawaiian Tropic Sun Tanning Products

MSDS sheets were attached for several product lines which indicate little except that the products are non combustible and consist of an emulsion containing 55.70 % volatile oils. Presumably the volatile component consists of vegetable oils, principally coconut palm oil and perfumes. The mixture is quite combustible if placed in an open container and ignited with a wick. The sunblock ingredients are not specified in the MSDS.

Historically the sunblock ingredient was PABA but examination of a recently produced bottle indicated the use of Octyl Methoxycinnamate, Octyl Salicynate and Titanium Dioxide.

Older formulations of Hawaiian Tropic products used para-amino-benzoic acid, (PABA) an amino acid derivative that should have no environmental consequences upon combustion, but is documented as a contact irritant. http://vm.cfsan.fda.gov/~lrd/fr990521.html.

FDA registration statements and the preface to a new federal regulation regarding labeling of sunscreen products indicates that it is possible that high doses of PABA can be somewhat irritating to the liver; in addition, nausea and vomiting have occurred, as have anorexia, fever, skin rash, and even vitiligo. Deficiency problems are not very common; they occur more frequently with the use of sulfa or other antibiotics that alter the functioning of intestinal bacteria and, therefore, the production of PABA. General fatigue, irritability, depression, nervousness, graying hair, headache, and constipation or other digestive symptoms may occur. http://vm.cfsan.fda.gov/~dms/cos-sun.html, http://vm.cfsan.fda.gov/~lrd/fr990521.html.

Newer formulations of suntan and sunscreen products are moving away from PABA and oil based formulations and toward polymerized alcohols, acrelates, hydropropycellulose octylacrylomide copolymer, cetyl phosphate and propylene glycol.

3. Aaron oil Co, oil spill cleanup swabs and booms and used oil filters, Condition A.5.1.8.(d)

The permit authorizes the combustion of oil spill debris (condition A.5.1.7,(b)); waste materials containing oil including rags, wipes and adsorbents (condition A.5.1.8 (f)); and used oil and oil filters containing no more than 50 ppm (condition A.5.1.8.(g))

Both laboratory analysis sheets is offered wit this request which indicated the presence of metals as might be anticipated from used motor oil. The analysis provided is typical of used motor oil, indicating a presence of small amounts of semi volatile metals including arsenic, cadmium, chromium lead and selenium. Neither laboratory report indicated the sampling protocol and whether the analysis was upon the free oil component or whether it included the filter media as well.

Neither sample indicated presence of PCB's. See: Guidance DARM PER_03 (March 1, 2000); 40 CFR 761.20(e).

The sampling and analysis dates of these materials (12/29/99 and 3/25/00 causes concern as to whether this material such a problem that it has been in storage for two years. Combustion is the appropriate method to dispose of petroleum spill cleanup materials and used oil filters. It is a qualitatively better choice than introduction of these materials into a landfill system with potential groundwater consequences, but the appropriate laboratory work has not been submitted even for this single lot. The laboratory report from

Analytical Chemical Testing Laboratory Inc includes a chain of custody statement for the laboratory sample but there is no correlating chain of custody statement correlating the analysis to the material presently contained in compactor trailer #26. Mr. Chalmous Beecham at Montenay Bay states that the lab report is a "typical report" from an old file and does not specifically represent any material on hand or under consideration as a special fuel.

Further examination of the laboratory report from Environmental Science Corp Sample 112993-01 reveals an alteration on the sample ID line where "soft filters" is handwritten which is inconsistent with the sample description of "used oil adsorbents" Again there is no chain of custody relating this analytical data to the material awaiting disposal at Panama City. The "analyte parameter" indicates the tests were TCLP extractions rather than gross sample analysis. TCLP refers to the leachable portion of the sample and is applicable to solid waste land disposal regulations rather than combustion of the waste. The report also indicates small quantities of pesticides and chlorinated hydrocarbons (Tetrachloroethene and chloroform) not typical of petroleum cleanup operations nor products to be anticipated in oil filters of reasonably maintained internal combustion engines.

The wide range of possible oil sources from various clean up operations is too varied for this single laboratory analysis to be relevant. Incineration is appropriate for used consumer (automotive) oil filters, with a reasonable monthly cap.
Because each cleanup operation is unique, and may involve contaminants other than simple refined petroleum products, booms and swabs from cleanup operations should be separately screened based on specific laboratory analysis or project history basis.

Past requests for incineration of oil cleanup materials in the Tampa Bay area have been limited to MSW facilities that have high efficiency scrubbers. Montenay Bay's electrostatic precipitator will have little effect on VOC vapors passing from the combustor.

4. **Eastman Kodak Plastic Condition 5.A.1.8**

The letter attaches several MSDS sheets describing various copolymer products including two that are fiber glass reinforced polyester and one that is coated with an antimony flame retardant. The fiberglass and antimony are potential carcinogens. The letter does not describe the physical form of the material, whether fabricated into film, consumer parts, granulated virgin polymer or recycled polymer of known origin. Mr. Chalmous Beecham operations manager of Montenay bay advised that the product is delivered in large chunks, blocks cast in cardboard boxes of mixed off spec or recycled product or as granules of virgin product. The facility has burned this type of material in the past and has a better experience with the large chunks and blocks than with the granules. The granules tend to fall prematurely through the ash grates in the combustion tubes. Except for marked cartons containing virgin product it is not possible to identify which contain the glass, mica, antimony and brominated polyolefin flame retardant.

MSDS SHEETS describe the products as"

Ektar DN 001 Copolyester PLS DN001
Ektar FB PCT Glass Reinforced Polyester Polymer PLS CG001
Ektar FB Glass Fiber Reinforced Polymer, Flame retardant PLS EG901
Ektar FB PCT Glass Fiber reinforced, Flame Resistant Low Wa?? PLS CG902

The Eastman product information site http://www.eastman.com/Product_Information/EastProdCata.asp did not contain information on these products. Inquiry to Eastman indicated that he products were long ago discontinued and are no longer manufactured or marketed by Eastman

A "Write It" memo dated 12/21/92 from Bill Thompson, EcoFlo, is attached to the MSDS forms. It which purportedly represents analytical data. No chain of custody is provided for the sample, nor is there any chain of custody for the material tying it to these proffered analytical results. While this memo indicates a relatively benign material, the use of mg/l and ugh/l units causes concern when the material a solid material. If it is a solid pelletized resin or ground scrap why are the analytes expressed in units per liter? The Antimony concentration indicated in the memo indicates a significantly lower concentration than that given in the MSDS, indicating that the material may be a composite waste or blended waste which may contain materials other than the four resins declared in the MSDS sheets provided by Montenay Bay.

The MSDS Sheets describe one of the products PLS DN001 and as pelletized copolyesters which should provide no deleterious products of combustion if adequate air is supplied.

Two of the products contain 25 to 30 percent glass fiber. Its fate during combustion is uncertain, especially in an incinerator with a rotating basket grate and only an electrostatic precipitator emission control device. Glass melts at a temperature range of 800° to 1000° F during which it transitions through a plastic range from solid to liquid. While it is possible that the fiberglass may fuse into a harmless ash. The glass fibers may also become entrained in the high velocity flue gas and pass up the stack as a micro-fibrous fly ash.

Each of the flame retardant products contains 5 to 15 % Brominated polyolefin flame retardant which will result in an undetermined hydrobromic acid (HBr) or haloginated hydrocarbon emission. The MSDS data states that the composition of this ingredient is not available, so the HBr emission cannot be estimated. The environmental consequences of hydro bromic acid are presumed similar to HCl emissions or Halon fire suppressant gasses. http://es.epa.gov/techinfo/research/reduce/rrel439.html, http://es.epa.gov/techinfo/research/reduce/rrel439.html, There is documented concern regarding the formation of dioxin and furan combustion products incidental to the

incineration of brominated flame retardant plastics in Europe. 06E8593[1].pdf. See also ***Flame Retardants: A General Introduction*** Environmental Health Criteria No 192, 1997 ISBN 92 4 157193 6 and ***Polybrominated DiBenzo-p-dioxins and Dibenzofurans*** Environmental Health Criteria No 205, 1998 ISBN 92 4 157205 1, both summarized at http://www.who.int/dsa/hustpub/ass.htm.

For combustion of plastics generally see: http://www.firesafety.org/PreventingFires/

One of the products, Ektar FB PCT, contains 10 to 25 percent Mica. Mica is a mineral filler characterized by very thin silica-iron-alumina platelets. Upon heating, these mineral platelets disintegrate into microscopic fibers similar to asbestos which have been identified as a cancer risk. The delamination and disintegration of the mica platelets varies with the mineral source of the mica, but the extreme situation is exemplified by the Libby Montana EPA Superfund Site involving both asbestoform fibers from the production of vermiculate confused by the presence of tremolite asbestos fibers in the base mineral.
Unlike glass fiber, the melting point of these alumino-silicates is well above the 1800° F combustion temperature of the incinerator. There is no rational means of calculating the fiber disbursal in flyash, nor the effectiveness of the ESP in capturing it from the flue gas. While this plastic resin has a high percentage of mica, the impact of the mica may be minimal when considered against the quantity of mica reinforced plastics in the MSW waste stream. Mica is used for many Bakelite type plastics and for plastic laminates such as Formica and Micarta. http://minerals.usgs.gov/minerals/pubs/commodity/mica/.

Two of the products are described with an Antimony (Sb) flame resistant coating. Antimony is a pollutant included in the Clean Air Act (42 USC 7412 (b), and some of its compounds are carcinogenic, but not a regulated air pollutant. it is represented to constitute about 5 percent of the waste stream and is concentrated at in a film coating. Antimony is inorganic and is not reduced by combustion. Its melting and vapor points are 630.74° C and 1950°C. (CRC Handbook of Chemistry and Physics 62d Ed) The controlled combustion temperature of this unit is 1800 F° (982° C). In this temperature range the antimony it is probable that the antimony will all be a fly ash aerosol which will be partially separated by the electrostatic participator air pollution controls at this facility. Antimony is a CAA Part 112 hazardous air pollutant . Given the estimated waste stream is 15 to 20 tons per week (say 20) the potential to emit (PTE) is:

20 tons x 52weeks x .05 = 52 TPY (this is a new title V problem)

Even if the plastic resin waste is a blended product, rather than containing the full 5% Antimony, and its typical concentration is only 1 %, as reflected in the memo dated 12/21/92 from Bill Thompson, EcoFlo. the PTE is still in the range of 10 TPY. Toxicological and environmental fate of antimony compounds can be found at http://www.epa.gov/ttn/uatw/hlthef/antimony.html.

Antimony in the metallic form is only mildly toxic (probably because of its insolubility), Personnel exposure limit should not exceed .05 Mg/M^3 per 40 hour work week. In the

oxide and salt forms it is listed as very toxic. (Merck Index 6th Ed.). What of Antimony Bromide? ($SbBr_2$)

Tom Driscoll of EPA advises that manufacturing of Antimony Oxides has been delisted as a HAP. Rules are still under development for Combustion of Antimony containing hazardous wastes.

Each of the MSDS sheets caution that powdered material may present and explosion hazard

None of the MSDS Sheets describe the material as recycled or waste photographic film with either developed or undeveloped emulsion, but such waste is not specifically excluded.

Silver salvage operations, processing old x-ray films, use a cyanide process which may carry risks of personal exposure on the tipping floor, but incineration is appropriate for cyanide destruction. Further evaluation is necessary if this waste contains old silver based photographic media, whether or not the silver based emulsion has been salvaged.

No information has been recovered on the environmental fate of the organic pigments used in color sensitive photographic media. It is not specified that any of the plastic material is color film,

Polyester Film is not considered an easily combustible material, whether Estar base (polyester) or cellulose triacetate base. Hazards in use and storage are small, being somewhat less than those presented by common newsprint paper. The thickness of the film base has a significant effect on the burning rate. Compared with film on cellulose triacetate base, Estar base film of roughly comparable thickness has a lower burning rate; however, all Kodak films pass, by a wide margin, the standard burning test for safety film (American National Standards (ANSI), standard PH1.25-1976. See also Kodak MSDS website: http://www.kodak.com/US/en/corp/hse/prodSearchMSDS.shtml.

Telephone contact with Freda Odham at Eastman Chemical Company (800) 327 8626 revealed that these products were discontinued about 1992 (she is researching additional MSDS information especially on antimony and glass reinforced materials) She said that Eastman produced only the resins and it was not possible to determine who may have further fabricated the material into film or other product. She acknowledged that some of these products are sold on the recycle market as ground or pelletized from production scrap. In MSDS for product DN 101, (the basic resin without fiberglass bromine or antimony), Eastman recommends disposal by either landfilling or incineration, No specific recommendations are made for the products containing glass, bromine, or antimony,

The high levels of antimony in this waste is a serious concern. Apparently, the waste stream evades classification as hazardous because it can be classified as "universal

waste". It retains a potential of use in recycled plastic products or as fuel. While The Universal Waste Rule 40 CFR 273 allows simplified waste collection, storage, recordkeeping and transport, it does not specifically authorize incineration. The rule recognizes that waste to energy recovery is a factor justifying the classification as universal waste.

5. **Waste Tires**

Montenay bay is authorized by its reissued permit to burn waste tires, up to three percent by weight of the fuel throughput. This limit was selected to minimize visual emissions and to encourage incineration of locally generated tire waste. At the three percent limit, large scale importing of tires for fuel is avoided, and incentive for the incineration of locally generated tires exceeds their value for stockpiling in hopes of exporting to a distant tire derived fuel facility.

There is no standard moisture limit on the total fuel, so it is supposed that the larger portion of the tires corresponding with high moisture MSW in intended to optimize the use of fuel value of the tire waste to compensate for the energy needed to evaporate the higher levels of moisture in wet MSW.

No data sheets were provided indicating the nature of the waste tire material It is presumed that the tires are typical passenger car and light truck tires to be burned whole. No opinion is offered on the possibility of ash problems resulting from rim wire and steel belting.

The environmental consequences of tire based fuel has been well documented. See ***Air Emissions from Scrap Tire Combustion*** EPA 600/R-97-5. The air emissions of toxic combustion end products is significantly lowered by controlled high temperature combustion and precipitation of unoxidized carbon. Much of the metallic emissions and partially combusted long chain hydrocarbon is captured with the carbon particulate in the electrostatic precipitator. There are other substantial risks from disposal of tires in landfills, including the possibility of uncontrolled oxygen starved combustion. Open burning of tires creates several noxious compounds, much smoke and raises public safety problems.

Because Panama City is not a major industrial area there is no established market for used tires as an industrial fuel. Local power plants are oil and gas fired and there is no market for local tires closer than Pensacola to the west, and Gainesville or Lake City to the east.

6. Clorox Roach Bait, Condition A.5.1.8.(d) (separate letter)

The letter attaches MSDS sheets indicating a cardboard and plastic enclosure which is baited with 1.5 grams of bait containing **Fipronil** 0.3 percent, worker PEL 0.1 $mg.m^3$ Estimated waste quantity is 100 tons per year. For chemical and environmental info see http://www.epa.gov/enviro/html/emci/chemref/120068373.html and http://www.aventis-cropscience.co.uk/pub_hygiene_msds.asp

The chemical formulation and classification data for fipronil is as follows:
Status: ISO 1750 (approved)
IUPAC: (*RS*)-5-amino-1-(2,6-dichloro- , , -trifluoro-*p*-tolyl)-4-trifluoromethylsulfinylpyrazole-3-carbonitrile
CAS: 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-1*H*-pyrazole-3-carbonitrile
Reg. No.: 120068-37-3
Formula: $C_{12}H_4Cl_2F_6N_4OS$
Activity: acaricides (pyrazole acaricides) insecticides (pyrazole insecticides)
http://www.hclrss.demon.co.uk/index_rev_frame.html
http://www.aventis-cropscience.co.uk/pub_hygiene_msds.asp

The information presented by Montenay Bay does not provide sufficient information to determine the actual quantity of Fipronil to be combusted because the number of traps is not determinable from the estimated 100 tons per year.

There is a similar product line that employs **Hydramethelon** (MaxForce) as the active ingredient and a companion product which is a hydramethelon based bait gel for direct application to crawlways where traps are not appropriate.

Both fipronil and hydramethelon are neurotoxics which are far more lethal to insects and fish than to birds and mammals. Marine crustaceans are particularly susceptible to toxic effects of fipronil. The fish and marine crustacean toxicity makes incineration attractive in coastal areas where there is a concern for leachate from landfill disposal. But the issue with these products is not the incineration of local wastes, but rather the importation of these materials for use as a special fuel.

Aventis Crop Science, Inc and its predecessor Rhone Poulenc AG Company, represent the products of combustion to be:

Hydrogen Fluoride
Oxides of Nitrogen
Oxides of Sulfur
Oxides of Carbon and
Hydrochloric Acid
(Termidor MSDS 99232 August 1999)

This simplistic statement presumes a theoretical complete combustion of the fipronil by oxygen alone without any chemical interference from other PHOC's or PIC's. World wide experience with incineration of hazardous chemicals gives reason to treat this oversimplification with extreme caution. Greenpeace, ***Report on the Hazardous Waste Incineration Crisis*** (1991). www://greenpeace.org/toxice/reports/gopher-reports/inciner.txt. This super-simplified chemistry ignores the extreme oxidation potential of the chlorine and fluorine. These elements are presumed to bond with hydrogen, to form hydrofluoric acid and hydrochloric acid, but in the high temperature environment chlorine and fluorine tend to hold onto carbon bonds with fragmented

portions of the base chemical molecule. As products of incomplete combustion, (PIC's), these halogenated compounds survive the high heat of incineration only to coalesce or adsorb moisture other PIC's upon cooling

Both Fipronil and Hydramethelon insecticides are halogenated (chlorinated and fluorinated) multi ring hydrocarbons containing 25 to 30 percent chlorine and fluorine by weight. While the overall quantities are small, there is a probability that the products of partial incineration (PIC's) will include some halogenated hydrocarbons, as well as a certainty that the emissions will include Hydrofluoric acid (HF). The high halogen concentration in these pesticides, coupled with the already existing hydro-carbon bond is highly conductive to the formation of dioxin and furan like compounds. These constituents will not be reduced by the facility's electrostatic precipitator.

Personnel exposure to the insecticide will be minimized by mixing unopened cartons of the product with MSW. Individual traps are sealed in aluminized plastic wrap.

Examination of the Combat Roach Trap indicated a very thin plastic shell, which Clorox identified as high impact polystyrene, with a cardboard and plastic packaging such that excellent combustion could be expected. The bait, which is mixed with the insecticide is a food product formulated from whey and peanut butter with other semi-volatile aromatic oils fats added to attract the roaches

Aventis Crop Science, Inc., the manufacturer of the Fipronil active ingredient cautions against land fill disposal. Aventis claims to use sodium or calcium hypochlorite (common household bleach) for routine decontamination and cleanup of small industrial spills. The chemical mechanism of this cleanup technique is not further explained. It is probable that the excess chlorine may cause a partial breakup of the fipronyl molecule, but the efficiency if such pretreatment on the production of halogenated hydrocarbons upon combustion has not been demonstrated. Not has it been demonstrated that the post decontamination products are not as toxic or more toxic than the fipronyl.

The hypochlorite destruction may not be effective for use on fipronil bait traps because of the difficulty in saturating the oily bait within the plastic shell. Effective destruction would require mechanical shredding of the plastic and the use of a surfactant to saturate the bait medium. Disposal of the residual after treatment with calcium hypochlorite may present additional problems due to chemical reactive hypochlorite or free chlorine. It is suggested that the free chlorine and residual hypochlorite could be reduced to chloride by reduction with caustic soda (NaOH).

Randy Downey, of U.S. EPA Region 4, pesticides section, (404) 562 8968, is investigating the questionable application of the universal waste rule to truckload quantities of "post consumer market" pesticides and disposal "according to the consumer package label" requirements of FIFRA when dealing with truckload quantities of "post consumer" packages.

The extremely neuro-toxic constituents in this waste are a serious concern. Apparently, the waste stream evades classification as hazardous because it can be classified as "universal waste". The Universal Waste Rule 40 CFR 273 allows simplified waste collection, storage, recordkeeping and transport but does not specifically authorize incineration at a municipal waste combustor. Nevertheless, the risks of incineration must be the compared to the environmental risks to surface and groundwater which may be attendant to land disposal of the toxic roach bait, and the potential human exposure risks of disassembly and chemical destruction.

Segregated loads or pesticide containing products are not contemplated in section A.5.1.8 (c), (d) or (e) of the Title V permit. they are not intended for human use nor are they consumer packaged goods intended for human or domestic animal use.

It would be preferable to incinerate this waste at a facility with a wet caustic soda scrubber, if such a facility can be identified.

7. Kimberly Clark Diaper Scraps

Diaper and adult incontinence products are fabricated from large sheets of cellulose fiber batting and a polypropylene shell. The cellulose batting may be interlayered with some adsorbent gels derived from clay products or other specialty cellulose products, but for the most part the waste consists of "cutouts" where the hourglass shapes are formed to make the garment conform to the legs. The adsorbent gels are applied in strips that are generally not within the punched area.

While this cellulose fiber material is completely combustible, it is very bulky and sometimes it is difficult to maintain a uniform feed rate unless it is well mixed with other more dense wastes.

Montenay Bay suggests that it will burn diaper material only in the winter months, when MSW availability becomes limited because of the seasonal demographics of the Panama City area. Because of the waste load varies seasonally with the occupancy of the resort hotels and seasonal residential population, there ate times that the ordinary MSW waste stream is insufficient to maintain continuous combustion in the facility
The polypropylene shell is 2 mil thickness and is made "biodegradable" by the addition of corn starch and other fillers. It is completely combustible in the MWC process without any known toxic residue

Diaper manufacturing scrap has been burned for several years at Timber Energy Resources Inc in Telogia FL.

8. Surtape Adhesive tape scraps,

17 to 20 tons per week summer, 34 to 40 tons per week winter

Suretape manufactures a wide range of adhesive backed cloth and paper tapes including "duct tape."

Shuford Mills, the manufacturer of surtape, claims that all of its products are exempt from providing MSDS information because it produces "articles" rather than "products." It offers a no warranty assurance that the material is not toxic, nor that it will have no toxic end products of combustion. Shuford also claims a proprietary trade secret in its adhesive formulations. A single MSDS sheet for a product designated CP-83 Pressure sensitive tape states that it is a "tan paper tape coated on one side with rubber based adhesive". The rubber based adhesives are typically compounded with hydrocarbon solvents including toluene (CAS 958072 4), a hazardous air pollutant under 42 USC 7412, and methyl ethyl ketone (MEK).

Shuford's web site reveals that its adhesive tape products include several lines of duct tape, gaffer's tape and masking tape as well as specialty packaging and medical adhesive tapes. http://www.shurtape.com.

9. Avery and Dennison paper label scraps

20 to 60 tons per week winter, none in summer.

Avery Dennison products take the form of pressure-sensitive laminate rolls or sheets; self-wound, transfer or double-coated tapes; or they can be converted into various industrial and retail products. These self-adhesive materials can have up to a dozen or more layers of different materials, each selected to impart a special feature or capability to the end use. The thickness and coverage of each layer must be within precise tolerances. Off spec materials and end of run materials are offered through waste brokers.

Avery-Dennison like Shuford claims a proprietary interest in its adhesive formulations, which it has successfully defended in recent litigation with an international competitor. They do indicate the presence of amorphous propylene-hexane copolymers, hydrocarbon resins, and styrene resins.

9. International Garbage from Tyndall Air Force Base

Anticipated waste stream is 2 to 3 tons per year.

Tyndall Air Force Base at (at Panama City) and Hurlbert Field (at Fort Walton Beach) are major hubs for the Military Air Transport Command, which provides international passenger and freight services for all of the US Military services.

Many of these flights originate in foreign countries, which are subject to agricultural product quarantines enforced by the United States Department of Agriculture. USDA Regulations 9 CFR 94.6 dealing with international disease vectors such as foot and mouth disease, and 7 CFR 330.400 dealing with agricultural quarantines, require the

segregation of foreign garbage, chemical sterilization and incineration as a separate waste stream. Until recently international garbage from Tyndall AFB was either incinerated on site in a small multipurpose incinerator or trucked to Hurlbert Field for incineration in a larger incinerator. The possibility of segregated wastestream incineration at Montenay offers the possibility of hotter and more controlled incineration for sanitation and the minimization of possible exposure for the government personnel who intermittently operated the incinerator. It also offers a backup disposal option should any of the government incinerators not be operating at any time.

Special sanitary procedures are specified in a compliance agreement between Aztec Environmental, Inc and USDA and by regulations at 9 CFR 94.5 and 7 CFR 330.400. The compliance agreement defines international garbage as waste material derived from food or associated refuse of any character including packaging and other waste from preparation areas passenger areas or other areas on vessels, aircraft or other means of conveyance. "Foreign" includes Puerto Rico, virgin Islands, Hawaii,, American Samoa, Guam, Northern Mariana Islands and any foreign country except Canada.

International Garbage is to be offloaded and transported in distinctive Red or Yellow Bags identified as international garbage and transported in leak proof locked storage containers. There is required training, manifesting and recordkeeping for the cartage contractor.

While the initial waste stream of 2 to 3 tons seems very small there is possible expansion of this waste stream to include wastes from the Navy at Panama City and Pensacola and wastes from other port facilities which may not have suitable incineration facilities. Each additional source requires USDA approval.

Possible problems may arise should this facility handle international garbage which has been stored for any significant time during which insects may hatch and be spread from punctured or broken bags. For this reason a MAC facility with a slight negative pressure on the tipping floor would provide additional insect control not provided in the situation where an outdoor trash incinerator was used.

Conclusions:

The present environmental laws in Florida offer no direct prohibition to the incineration of the materials proposed by Montenay Bay. There are no emission limits nor MACT standards applicable TSCA and the risk management aspects of the Clean Air Act, (42 USC 7412)administered by the Department of Community Affairs may result in a reconsideration by Montenay Bay and a self imposed moratorium on incineration of these products, in the face of community knowledge of the unregulated public health risks.

Combustion of waste tires and used oil filters is presently allowable under the existing Title V air permit.

No significant environmental consequences are anticipated from the incineration of:

- Shurtape label waste (Avery, Dennison) 17 to 20 tons per week summer, 34 to 40 tons per week winter.
- Kimberly Clark diaper manufacturing waste, 17 to 20 tons per week/ winter none in summer.
- International food waste from Tyndall Air Force Base (segregated overseas garbage) 2 to 3 tons per year.
- Waste tires, not to exceed 3%, by weight, of the facility's total fuel.
- Bausch and Lomb eye drops (off spec and out dated pharmaceuticals) 15 To 20 tons per month.
- Hawaiian Tropic tanning products (off spec, recalled and outdated cosmetics and pharmaceuticals) 15 to 20 tons per month.

The following waste streams should be more carefully evaluated in coordination with the solid waste program and with the Department of Community Affairs EPCRA and RMA programs.

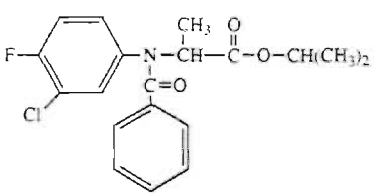
- Aaron Oil Co. (used oil filters and cleanup booms and swabs) 15 to 20 tons per month (requiring a batch by batch analysis or evaluation regarding other contaminants for oil spill cleanup swabs booms and adsorbents)

Eastman Kodak (plastic resins) 15 to 20 tons per week. The waste stream should be screened to eliminate materials containing brominated flame retardant and antimony fire retardant. Segregated loads of plastic resins containing potentially dangerous fire retardant chemicals are not products contemplated in section A.5.1.8 (c), (d) or (e) of the Title V permit. they are not intended for human use nor are they consumer packaged goods intended for human or domestic animal use. Neither is this material a "waste generated by manufacturing, industrial or agricultural activities...substantially similar to materials that are found routinely in MSW" which might be allowed "subject to prior approval of the Department." Section A.5.2.8 of the Title V Air Operating Permit.

Clorox Roach Bait, 100 tons per year. This material needs further evaluation products of incomplete combustion (PIC's) and effect on gulf aquaculture, or redirection to a facility with suitable pretreatment facilities and with caustic scrubbers. Segregated loads of pesticide containing products are not contemplated in section A.5.1.8 (c), (d) or (e) of the Title V permit,. This material are not "intended for human use" nor are it "consumer packaged goods intended for human or domestic animal use." Neither is this material a "waste generated by manufacturing, industrial or agricultural activities...substantially similar to materials that are found routinely in MSW" which might be allowed "subject to prior approval of the Department." Section A.5.2.8 of the title V Air Operating Permit.

Fine Chaff/Pith — see Lite-R-Cobs*.
Finesse* — see Chlorsulfuron; Metsulfuron-methyl.
Finidim* — see Fenuron.
Fintrol* Antibiotic (antimycin) — Discontinued 1982 by Ayerst Laboratories.
Fipronil
BP: Aventis CropScience (Regent*)
Pilarquim Corp. (Agenta*)
Identification
COMMON NAME: Fipronil.
Chemistry
COMPOSITION: (5-amino-1-(2,6-dichloro-4-(trifluoromethyl)phenyl)-4-((1,R,S)-(trifluoromethyl)su-1-H-pyrasole-3-carbonitrile).
CLASS: Fiproles.
Action/Use
ACTION: Insecticide.
USE: For use in corn.
FORMULATION: Wettable granule.
Safety Guidelines
SIGNAL WORD: WARNING.
TOXICITY CLASS: II.
PROTECTIVE CLOTHING: Coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear, approved respirator, chemical-resistant headgear for overhead exposure, and chemical-resistant apron when cleaning equipment or mixing and loading.
HANDLING AND STORAGE CAUTIONS: Do not contaminate water, food, or feed. Store unused product in original container only, in cool, dry area out of reach of children. Do not transfer this product to another container for storage.
Emergency Guidelines
FIRST AID: Get medical aid. Eyes, flush with plenty of water. Skin, wash thoroughly with soap and water. Inhalation, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Ingestion, call physician or poison control center. Drink 1-2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
FirstRate*
BP: Dow AgroSciences LLC (FirstRate*)
Identification
COMMON NAME: Cloransulam-methyl.
Action/Use
ACTION: Herbicide.
USE: For use on soybeans.
FORMULATIONS: Water soluble packet.
Safety Guidelines
SIGNAL WORD: CAUTION.
TOXICITY CLASS: III.
Fish Oil
Formerly utilized as an adhesive in lead arsenate suspensions applied to forest and shade trees; for the production of fish-oil soap as a spray spreader. Repellent to buffalo gnats. When formulated with other ingredients used as spot treatment for animal wounds to control screwworm.
Fisons B25* Herbicide (barban) — Discontinued by Schering AG.
Fission* Herbicide (cacodylic acid + sodium cacodylate + sodium chlorate) — Discontinued 2000 by Monterey Chemical Co.
Fist* — see Fenvalerate.
Fit* — see Fenoxaprop-ethyl.
Fitios* Insecticide (ethoate-methyl) — Discontinued by Farmoplant S.p.A.
Fitios B/77* Insecticide (ethoate-methyl) — Discontinued by Agrimont S.p.A.
Fitodith 80* — see Zineb.
Fitomyl PB* — see Benomyl.
Fitoraz* — see Cymoxanil; Propineb.
Fitosan* 2 — see Propanil.
Five Star* — see 2,4-D.
Fixofruit* — see Dichlorprop.
Fixor* — see 1-Naphthaleneacetic Acid.
Flame* — see Surfactant.
Flame Cultivation
Weed control with heat from gas flame precisely timed and directed to kill weeds in and near the row. LP-Gas is used for this purpose. Cotton, corn, soybeans, and several other crops are flame cultivated.
Flamenco* — see Castellan*.

Flammable Materials (Regulations)
Regulations covering flammable materials issued by the U.S. Department of Transportation in its Docket HM-102 went into effect January 1, 1976. They specify a new definition for the class of materials identified as flammable liquids, and create and define a new class of materials identified as combustible liquids. In addition, the ordinances modify the definition for pyrophoric liquids with the flammable class, and determine the requirements for the materials that are covered by the new definitions.
Flammable liquids are defined as those having a flashpoint below 100°F (37.8°C). A combustible liquid is one whose flashpoint is at or above 100°F (37.8°C) and below 200°F (93.3°C). A pyrophoric liquid is any liquid that ignites spontaneously in dry or moist air at or below 130°F (54.5°C).
Approved flashpoint testing methods are a tag closed tester or a setaflash closed tester. Flammable liquids having a flashpoint of 73°F or higher are not subject to specification packaging when in a container having a capacity of 110 gallons or less. However, the flashpoint of the material or an indication that its flashpoint is 73°F or higher must be marked on the outside of the package.
Combustible liquids in portable tanks, cargo tanks, or tank cars are exempt from the subchapter provisions, except those which pertain to shipping papers, waybills, switching orders or other billing. The same exemption applies to the marking of portable tanks, marking or placarding rail cars and motor vehicles, and the reporting of incidents. Finally, the subchapter requirements do not apply to combustible liquids in packaging having capacities of 110 gallons or less.
Flamprop-isopropyl
Identification
COMMON NAME: Flamprop-isopropyl (ISO, BSI, WSSA).
EXP. CODE NUMBERS: WL 29672.
OTHER CODE NUMBERS: CAS 52756-22-6.
DISCONTINUED NAMES: Barnon* (Shell International Chemical Co.).



Flamprop-isopropyl

Action/Use
ACTION: Herbicide.
Safety Guidelines
SIGNAL WORD: CAUTION.
TOXICITY CLASS: III.
Flamprop-methyl — see Mataven*.
Flamprop-M-isopropyl — see Suffix BW*.
Flash* — see Quinalphos.
Flashpoint
The lowest temperature at which a liquid gives off ignitable vapors. This can vary by product and formulation, with some having no flashpoint at all.
Flavan
Chemistry
COMPOSITION: 2,4,4,5',6-pentamethyl-2'-flavanol.
Action/Use
ACTION: Miticide, insecticide.
Flavensomycin* Antibiotic — Discontinued 1991 by Farmoplant S.p.A.
Flazasulfuron
BP: Ishihara Sangyo Kaisha, Ltd. (Aikido*, Chikara*, Katana*, Shibagen*, Upsilon*)
Identification
COMMON NAME: Flazasulfuron (ISO draft, BSI).
EXP. CODE NUMBERS: SL-160, OK-1166 (Ishihara Sangyo Kaisha, Ltd.).
OTHER CODE NUMBERS: CAS 104040-78-0.
Chemistry
COMPOSITION: 1-(4,6-dimethoxypyrimidin-2-yl)-3-(3-trifluoromethyl-2-pyridylsulphonyl)urea (IUPAC).
PROPERTIES: White powder. Melting point 147-150°C. Solubility in acetone 22.7 g/l; methanol 4.2 g/l; acetonitril 8.7 g/l; hexane 0.5 mg/l.

AMA Plus 2,4-D* Herbicide (AMA + 2,4-D) — Discontinued by W.A. Cleary Chemical Corp.

Amachlore* — see Chlorpyrifos.

AMADS

Identification
COMMON NAME: AMADS.
CODE NUMBERS: CAS 21351-39-3; EINECS 224-343-6.
FORMULATORS' TRADE NAMES: SuperQuik* (Entek Corp.).
DISCONTINUED NAMES: Enquik*, Wilthin* (Entek Corp.).

Chemistry
COMPOSITION: 1-aminomethanamide dihydrogen tetraoxosulfate.
PROPERTIES: Yellow-orange liquid; odorless.

Action/Use
ACTION: Herbicide, dessicant.
PREMIXES: Engame* (+ glyphosate) (Entek Corp.) • CottonQuik* (+ ethephon) (Entek Corp. & Griffin L.L.C.).

Environmental Guidelines
HAZARDS: May be harmful to wildlife directly sprayed.

Safety Guidelines
SIGNAL WORD: DANGER.
TOXICITY CLASS: I.
HANDLING AND STORAGE CAUTIONS: Avoid contact with skin and eyes. Do not eat, drink, or smoke when using. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Do not wear contaminated clothing or shoes. Store in clean, dry, and well ventilated area. Keep out of reach of children.

Emergency Guidelines
FLASHPOINT: None to boiling.
FIRE EXTINGUISHING MEDIA: That which is appropriate for the surrounding area.
FIRST AID: Get medical aid. Eyes, flush immediately with plenty of water for at least 30 minutes. Skin, immediately wash with plenty of water. Remove contaminated clothing and shoes. Inhalation, remove to fresh air. Ingestion, do not induce vomiting. Rinse mouth with water and dilute by drinking 1 glass (½ glass to children under 5) of milk or water.
EMERGENCY TELEPHONE: 800-424-9300 (CHEMTREC).

Amasil P* Fungicide (calcium formiate + calcium propionate) — Discontinued by BASF AG.

Amaze* — see Phenthoate.

Amaze* Insecticide (isofenphos) — Discontinued by Bayer.

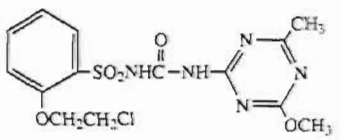
Amazin* — see Azadirachtin.

Amazing* — see *lambda*-Cyhalothrin; Tetramethrin.

Amber*
BP: Syngenta (Amber*, Logran*)

Identification
COMMON NAME: Triasulfuron (ISO-draft, BSI).
EXP. CODE NUMBERS: CGA-131036 (Ciba-Geigy).
OTHER CODE NUMBERS: CAS 82097-50-5.
DISCONTINUED NAMES: Exa* (+ methabenzthiazuron) (Bayer).

Chemistry
COMPOSITION: 3-(6-methoxy-4-methyl-1,3,5-triazin-2-yl)-1-[2-chloroethoxy]-phenysulfonyl]-urea.
CLASS: Sulfonylurea.
PROPERTIES: Light brown granules; odorless. Melting point 186°C.



Triasulfuron

Action/Use
ACTION: Selective herbicide.
USE: Preemergence in wheat to control many broadleaf and grassy weeds; postemergence in wheat, barley, and fallow to control many broadleaf weeds.
FORMULATIONS: Wettable granules.
PREMIXES: Rave* (+ dicamba), Graminon* Forte (+ isoproturon) (Syngenta).

Registration Notes
U.S.: Registered in February 1992.
OUTSIDE U.S.: Sold commercially in Europe.

Environmental Guidelines
SOIL PARTICLE ADSORPTION: Adsorption to clay or soil colloids is relatively low, and thus leaching can occur. Further studies underway.
SOLUBILITY: In water 1500 ppm at 20°C and pH 7.

Safety Guidelines
SIGNAL WORD: CAUTION.
TOXICITY CLASS: IV.
TOXICITY: Tech (Rat): Oral LD_{50} >5050 mg/kg; Inhalation LC_{50} >2.32 (4 h) mg/l air. (Rabbit): Dermal LD_{50} >2000 mg/kg. Minimally irritating to eyes; non-irritating to skin.
HANDLING AND STORAGE CAUTIONS: Avoid contact with skin, eyes, and clothing. Do not inhale dust, vapor, or mist. Do not contaminate food or feed. Wash thoroughly after handling. Store in well-ventilated, secure area out of reach of children and domestic animals.
PROTECTIVE CLOTHING: Long-sleeved shirt, long pants, protective eyewear, rubber gloves, waterproof boots, and hat.

Emergency Guidelines
FIRE EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide, water.
FIRST AID: Get medical aid. Eyes, flush immediately with plenty of water. Skin, wash thoroughly with soap and water. Remove contaminated clothing and shoes. Inhalation, remove to fresh air. Apply artificial respiration, if necessary. Ingestion, drink 1-2 glasses of water and induce vomiting.

Ambithion* Insecticide (fenitrothion + malathion) — Discontinued by American Cyanamid Co.

Ambox* Acaricide, Fungicide (binapacryl) — Discontinued 1987 by Hoechst AG.

Ambush* — see Permethrin.

Amchem 820 — see Butralin.

Amchem 70-25 — see Butralin.

Amchem 2,4,5-TP* Herbicide (silvex) — Discontinued 1984 by Union Carbide Corp.

Amconil* — see Chlorothalonil.

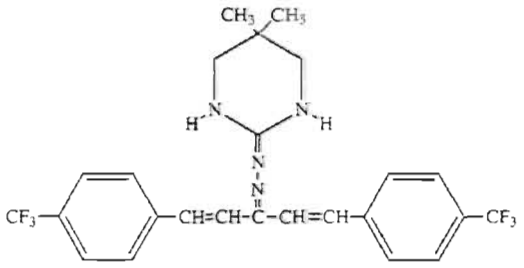
Amcothene* — see Acephate.

Amdon* Herbicide (picloram) — Discontinued 1985 by Union Carbide Corp.

Amdro*
BP: BASF Corporation (Amdro*, Siege*)

Identification
COMMON NAME: Hydramethylnon (ISO-E draft, ANSI, BSI); hydraméthylnone (ISO-F draft).
EXP. CODE NUMBERS: AC-217,300; CL-217,300.
OTHER CODE NUMBERS: CAS 67485-29-4, SHA 228401.
DISCONTINUED NAMES: Maxforce* (American Cyanamid Co.).

Chemistry
COMPOSITION: Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinone [3-[4-(trifluoromethyl)phenyl]-1-[2-[4-(trifluoromethyl)phenyl]ethenyl]-2-propenylidene]hydrazone (CAS).
CLASS: Amidinohydrazone.
PROPERTIES: Yellow-tan, free-flowing granules with an odor characteristic of vegetable oil.



Hydramethylnon

Action/Use
ACTION: Slow-acting insecticide.
USE: Ants (big headed, fire, harvester).
FORMULATIONS: Oil bait.

Environmental Guidelines
HAZARDS: Fish: LC_{50} 0.16 mg/l (96 h) (rainbow trout). LC_{50} 0.10 mg/l (96 h) (channel catfish). 1.70 mg/l (96 h) (bluegill sunfish). Bird: Oral LD_{50} >2510 mg/kg (mallard duck). Oral LD_{50} 1828 mg/kg (bobwhite quail).
SOLUBILITY: Insoluble in water.

Safety Guidelines
SIGNAL WORD: CAUTION.
TOXICITY CLASS: III.
TOXICITY: (Rat): Oral LD_{50} >5000 mg/kg. (Rabbit): Dermal LD_{50} >2000 mg/kg; non-irritating to eye, mildly to skin.
Tech (Rat): Oral LD_{50} 1131 mg/kg (male); 1300 mg/kg (female). (Rabbit): Dermal LD_{50} >5000 mg/kg.

Department of
Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Jeb Bush
Governor

David B. Struhs
Secretary

I have briefly discussed these materials with Andy Allen and Jack McNulty of your staff. I would like to have Jerome Jack's assistance as well as Bill Kellenberger before formulating a final position with respect to the incinerations of any of these materials.

If I can provide any further information, please call me at (850) 921-9522, sc 291-9522, or email me at william.leffler@dep.state.fl..us.

Sincerely.

William Leffler, P.E.
Permit Engineer
Title V Section

Enc 4 letters w/ attachments

Plastic is polystyrene

Lysol neurotoxin flash > 200°F

Hydrocarbons = peanut butter =

[Date Prev][Date Next][Thread Prev][Thread Next][Date Index][Thread Index]

Ecological effects of two new insecticides (fwd)

- *To*: Permaculture WA <perma@eepo.com.au>
- *Subject*: Ecological effects of two new insecticides (fwd)
- *From*: Victor Guest <vic@daena.eepo.com.au>
- *Date*: Wed, 22 Oct 1997 07:48:20 WST
- *Reply-To*: PERMA@eepo.com.au
- *Sender*: perma@eepo.com.au

Sender: ag-impact@freedom.mtn.org
From: Steffen Johnsen <stefulla@post8.tele.dk>
To: Multiple recipients of list <ag-impact@freedom.mtn.org>

Ecological effects of two new insecticides - Fipronil and
Lambda-cyhalothrin -
in rice paddies.

Fipronil and lambda-cyhalothrin are both intensively marketed in Asia for use i rice, and their producers (Rhone-Poulenc and Zeneca respectively) claim the products to be compatible with IPM practices.

A development project sponsored by the Danish Government, in Vietnam, undertook field studies to investigate these claims.

The major findings were:
1) Natural pest control was far superior to the use of any of these chemicals, provided the fields had not previously been damaged by pesticide use.

2) Both chemicals had negative impact on this natural control and indications were seen that lambda-cyhalotrhin may induce severe pest problems.

3) Fipronil has some disturbing effects on several groups of aquatic organisms, mainly crustaceans. This calls for extreme caution when it is used in paddies. because the floodwateroften is more or less continuous with water used in shrimp farming.

4) In the marketing of lambda-cyhalothrin the company quotes a study performed at PhilRice which documents only transitory and small negative effects on natural enemies of pests. This study could replicate these findings only in a field which was already severely damaged by frequent insecticide applications. In undisturbed fields lambda-cyhalothrin had very severe negative impact on all groups of natural enemies.

5) In the marketing of fipronil it is stressed that it often improves yield in paddy rice. This study made the same observation and went on to compare effects of fipronil (in a granular formulation, 'Regent 0.3G') with that of a foliar fertilizer, containing micronutrients, in a well

fertilized and a poorly fertilized farmers field. In the former neither Regent nor the foliar fertlizer had any effects on yield, while in the latter both increased yield by about 15%. Chemical analysis of the Regent formulation seem to confirm that it does contain microutrients.

The project is now completed. Full reports and further information may be obtained from the advisor who headed it. He may be contacted at: stefulla@post8.tele.dk

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- Prev by Date: **Re: reminder**
- Next by Date: **economic value of trees as providers of shade (fwd)**
- Prev by thread: **Enquiries about Holistic Management (fwd)**
- Next by thread: **economic value of trees as providers of shade (fwd)**
- Index(es):
  - **Main**
  - **Thread**

MAJOR DIFFERENCES BETWEEN FIPRONIL AND HYDRAMETHYLON

The manufacturers of MaxForce Gel have brought back the older formulation using *Hydramethylon* of Maxforce Gel Bait for roaches.

They have found that although slower than the *Fipronil (FC)* formulation, having a slower kill, it has been found to spread more thoroughly through the population.

If you would like to try both, that's fine. You can try one tube of one kind and a couple tubes of another, just let us know.

 Return To Roaches

 Return To Baits for Insects

Ask Us / Catalog of Remedies / Home

How To Find Us / Tips / Free Offer

Your comments and questions are always welcome.

E-mail

Toll Free 800-476-3368

Fax 770-454-0242

M A T E R I A L S A F E T Y D A T A S H E E T

RHONE-POULENC AG COMPANY
P.O. Box 12014, T.W. Alexander Drive, Research Triangle Park, NC 27709
24-HOUR EMERGENCY TELEPHONE 1-800-334-7577 OR CHEMTREC 1-800-424-9300

Effective Date: TENTATIVE I Date Printed: APR 13, 1992

EXPERIMENTAL SUBSTANCE

This is an experimental substance and very little is known about its properties. It should be carefully handled to avoid any personnel exposure. It is not on the TSCA inventory and can only be used under the TSCA rules for R&D Exemption.

PRODUCT NAME: FIPRONIL

I. IDENTIFICATION

CHEMICAL NAME: Aryl heterocycle (FIPRONIL)

FORMULA: Proprietary

SYNONYMS: None

CAS # & NAME: None

WARNING! MAY BE FATAL IF SWALLOWED.

II. HAZARDOUS INGREDIENTS

MATERIAL	WEIGHT %
(1) aryl heterocycle (FIPRONIL)	>95

EXPOSURE LIMITS: None established

III. PHYSICAL DATA

SOLUBILITY IN WATER: Very low
APPEARANCE: White powder

IV. HEALTH HAZARD DATA

TOXICOLOGY DATA:		
	Oral LD50 (rats):	97 mg/kg body weight
	Dermal LD50 (rats):	>2000 mg/kg body weight
	Skin Irritation (rabbits):	None
	Eye Irritation (rabbits):	Minimal

(continued on Page 2)

IV. HEALTH HAZARD DATA (continued)

CARCINOGENICITY, MUTAGENICITY:
This product is in development and has not been tested for its carcinogenic potential.
The Ames test for mutagenicity was negative.

EFFECTS OF SINGLE OVEREXPOSURE:
General symptoms of overexposure may include respiratory difficulty, lethargy, tremors, and in severe cases, convulsions. Eye and skin irritation are minimal.

EFFECTS OF REPEATED OVEREXPOSURE:
This product is in development and has not been thoroughly tested. However, repeated administration of dose levels which are not acutely toxic may result in signs of toxicity. In cases of overexposure, the signs of toxicity may be delayed and may consist of decreased responses of some reflexes, lethargy, tremors and convulsions. Preliminary data on the degradation products suggests that some of them may be as toxic or more toxic than the parent compound. Therefore, adequate protective clothing should be worn when using the product or when entering fields treated with the product.

EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:
No information available

EMERGENCY AND FIRST AID PROCEDURES:

PRECAUTION: Persons attending the victim should avoid direct contact with heavily contaminated clothing and vomitus. Wear impervious gloves while decontaminating skin and hair.

Remove the patient from immediate source of exposure and assure that the individual is breathing. If not breathing, use cardio-pulmonary resuscitation or artificial respiration. GET MEDICAL ATTENTION.

Swallowing:
If patient is conscious and alert, give 2-3 glasses of water or milk to drink. Give one tablespoon of Syrup of Ipecac to induce vomiting. If vomiting has not occurred in 20 minutes, the same dose of Syrup of Ipecac may be repeated one additional time. Alternatively, induce vomiting by touching back of throat with finger. Do not make an unconscious person vomit. GET MEDICAL ATTENTION.

(continued on Page 3)

RHONE-POULENC AG COMPANY
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24-HOUR EMERGENCY TELEPHONE 1-800-334-7577 OR CHEMTREC 1-800-424-9300

IV. HEALTH HAZARD DATA (continued)

Skin:
Immediately wash skin with plenty of soap and water, while removing contaminated clothing and shoes. Shoes and clothing contaminated substantial spillage of concentrated product should be discarded in a manner which limits further exposure. Otherwise, wash clothing separately before reuse. GET MEDICAL ATTENTION.

Inhalation:
Remove victim to fresh air. If not breathing, administer cardio-pulmonary resuscitation or artificial respiration. If breathing is difficult, administer oxygen. GET MEDICAL ATTENTION.

Eyes:
Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. GET MEDICAL ATTENTION.

NOTES TO PHYSICIAN:

No specific antidote is available.

Treat symptomatically. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT Degrees C (F): Not known

EXPLOSIVE LIMITS IN AIR (ounces/cubic foot): Not known

AUTOIGNITION TEMPERATURE Degrees C (F): Not known

EXTINGUISHING MEDIA: Use carbon dioxide or dry chemical for small fires. Use water spray or foam (alcohol, polymer, or ordinary) for large fires.

SPECIAL FIRE FIGHTING PROCEDURES: Provide for the protection of employees and residents:

a) Evacuate residents who are downwind of fire.
b) Prevent unauthorized entry to fire area.
c) Persons who may have been exposed to contaminated smoke should be examined by a physician and treated appropriately.
d) Dike area to prevent runoff and contamination of water sources.

(continued on Page 4)

RHONE-POULENC AG COMPANY
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PRODUCT NAME: FIPRONIL

V. FIRE AND EXPLOSION HAZARD DATA (continued)

Notify local authorities that firemen should:
a) Wear protective clothing and use self-contained breathing apparatus.
b) Be immediately relieved from duty, if exposed to contaminated smoke, and checked for symptoms of poisoning. These should not be mistaken for heat exhaustion or smoke inhalation. See Section IV, Health Hazard Data for symptoms of poisoning, first aid procedures, and notes to physician.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
No information available

VI. REACTIVITY DATA

STABILITY:
No information available

CONDITIONS TO AVOID:
No information available

MATERIALS TO AVOID:
No information available

HAZARDOUS DECOMPOSITION PRODUCTS:
No information available

HAZARDOUS POLYMERIZATION:
No information available

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
To the extent possible, clean up spillage using shovels. Carefully scoop up loose material and place it in appropriate containers so as to avoid dust generation. Stand upwind if possible.
Residual spillage that cannot be removed by shovelling should be cleaned from hard surfaces as appropriate.
If spilled on the ground, the affected area should be scrapped clean and placed in an appropriate container for disposal.
Do not flush material to public sewer systems or any waterways.
Wear appropriate protective clothing and equipment (see below) during cleanup activities.
Ensure adequate decontamination of tools and equipment following cleanup.

WASTE DISPOSAL METHOD:
Dispose of in accordance with local, state and federal regulations.

(continued on Page 5)

M A T E R I A L S A F E T Y D A T A S H E E T

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VIII. SPECIAL PROTECTION INFORMATION

PROTECTIVE EQUIPMENT SHOULD BE USED DURING THE FOLLOWING PROCEDURES:
- Manufacture or formulation of this product
- Repair and maintenance of contaminated equipment
- Clean-up of leaks and spills

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved respirator for dust. Use positive pressure self-contained breathing apparatus for emergency conditions.

VENTILATION: Local exhaust ventilation.

PROTECTIVE GLOVES: Chemical-resistant gloves.

EYE PROTECTION: Goggles, eye bath.

OTHER PROTECTIVE EQUIPMENT: Protective clothing, safety shower.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not ingest. Do not breathe vapor, spray (mists), or dust. Do not get in eyes, on skin or on clothing.

Do not store near food, feedstuffs, fertilizers, or seed.
Do not contaminate water, food, or feed by storage or disposal.
Keep away from heat, sparks, open flame and other ignition sources.

The information herein is given in good faith but no warranty, expressed or implied, is made.

R in right margin indicates a revision.

(Last Page)

Common name : Hydramethylnon CL 217,300

AMDRO® Insecticide Technical

AA 3/4/97

AMERICAN CYANAMID CO.
WAYNE, NJ 07470

MATERIAL SAFETY DATA SHEET (VENEZUELA)

MSDS NO. IN01973-7
CAS NO. 067485-29-4
DATE: JAN 27, 1992

EMERGENCY TELEPHONE: 58-36-22-02-93
(201)-835-3100 (U.S.A.)

PRODUCT IDENTIFICATION	TRADE NAME: AMDRO Insecticide Technical SYNONYMS: Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinone (3-[4-(trifluoromethyl)phenyl]-1-(2-[4-(trifluoromethyl)phenyl]ethenyl)-2-propenylidene)hydrazone; Hydramethylnon; CL217,300 CHEMICAL FAMILY: Amidinohydrazone MOLECULAR FORMULA: C<25>H<24>F<6>N<4> MOLECULAR WEIGHT: 494.500 USAGE: Technical
WARNING STATEMENTS	CAUTION. HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION. KEEP OUT OF REACH OF CHILDREN.

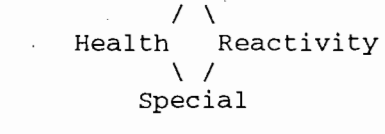
INGREDIENTS	COMPONENT	CAS. NO.	%	PEL/TLV
	Hydramethylnon	067485-29-4	95.00	1.4 mg/m>3< (TWA)
	Inerts		5.00	None Established

REFERENCE:	Hydramethylnon	American Cyanamid - 1986
	Inerts	None

PHYSICAL PROPERTIES	APPEARANCE AND ODOR:	Yellow to orange crystalline solid; odorless
	BOILING POINT:	Not Applicable
	MELTING POINT:	365 - 374F (185 - 190C)
	VAPOR PRESSURE:	Maximum is 6 x 10>-8< mm Hg at 25C
	BULK DENSITY:	18.2 lbs/ft>3<
	VAPOR DENSITY:	Not Applicable
	% VOLATILITY (BY VOL.):	2%
	OCTANOL / H<2>O PARTITION COEF.:	206
	PH:	Not Available
	SATURATION IN AIR (BY VOL.):	Not Applicable
	EVAPORATION RATE:	Not Applicable
	SOLUBILITY IN WATER:	Insoluble (5 - 7 ppb)

FIRE AND EXPLOSION	FLASH POINT:	Not Applicable
	FLAMMABLE LIMITS	Not Available

HAZARD INFORMATION	(% BY VOL.): AUTOIGNITION TEMP: Not Available DECOMPOSITION TEMP:203C FIRE EXTINGUISHING MEDIA: Use water, foam, carbon dioxide, or dry chemical, to extinguish fires. FIRE CONTROL TACTICS: Avoid heavy hose streams, airborne dusts may create an explosion hazard. Wear self-contained, positive pressure breathing apparatus and full fire fighting protective clothing. Keep unnecessary people away. Use as little water as possible. Dike area of fire to prevent pesticide run-off. Use spray or fog - solid stream may cause spreading. Conduct fire fighting and rescue operations from upwind of the fire area. Evacuate people downwind who may come in contact with smoke, fumes, or contaminated surfaces. Do not decontaminate personnel or equipment, or handle broken packages or containers without protective equipment as specified in the Exposure Control Section. Decontaminate emergency personnel with soap and water before leaving the fire area. Avoid breathing dusts, vapors and fumes from burning materials. Alert medical personnel to be ready to treat for pesticide poisoning. Control run-off water - if water enters a drainage system, advise the authorities downstream. SPECIFIC HAZARDS - DUST: This material has been tested in a 20-liter spherical bomb (per NFPA 68-1978) and has been found to be a Class 2 dust explosion hazard. If the material is further processed, the dust explosion hazard may change and it should be retested.

NFPA HAZARD RATING	(As Recommended by American Cyanamid Co.) 0 Least 1 Slight 2 Moderate 3 High 4 Severe 

REACTIVITY DATA	STABILITY:	Stable
	POLYMERIZATION:	Will not occur

(cont from pg. 2)	INCOMPATIBLE MATERIALS:	Not Available
	HAZARDOUS DECOMPOSITION PRODUCTS:	Combustion may produce hydrogen fluoride and oxides of carbon and nitrogen.

HEALTH HAZARD INFORMATION	TOXICITY DATA AND EFFECTS OF OVEREXPOSURE: ACUTE TOXICITY DATA: The acute oral LD<50> for male rats is 1131 mg/kg indicating that this product is moderately toxic by ingestion in single dose. The acute dermal LD<50> for the rabbit is > 5000 mg/kg indicating that this product is practically non-toxic by single skin applications. Sub-acute dermal studies in which rabbits were exposed to

the active ingredient at levels of 250 mg/kg/day for 21 days did not reveal any adverse findings. Mild to moderate skin irritations were the only symptoms noted in these studies.
Hydramethylnon produces reversible irritation to the eyes of rabbits after a 24-hours wash phase and no irritation after a 20-second wash phase.
This product is considered to be practically non-hazardous by inhalation.
CHRONIC TOXICITY DATA:
Mutagenicity:
Technical hydramethylnon was examined in the Ames mutagenicity test and was found to be nonmutagenic. Similar results were achieved in a Dominant Lethal Test conducted in male rats treated with hydramethylnon by gavage for 5-days.
Teratogenicity:
No teratogenic effects were found at any dose level tested in albino rats. However, at the dose level of 30 mg/kg/day (highest dose tested), hydramethylnon produce both maternal and embryotoxic effects.
Reproduction:
In a multi-generation reproduction study, reproductive performance was not compromised by hydramethylnon administration. However, all high dose treatment groups (200 ppm) exhibited decrease body weights, anorexia, and poor fertility.

(cont from pg. 3) Carcinogenicity:
No conclusive oncogenic effects were observed in mice and rats at any dose level tested. However, under microscopic examination, from chronic feeding studies in rats, mice and dogs, there was wasting of muscle and subcutaneous fat as well as testicular atrophy in high dose males. Decreased body weight, anorexia and signs of emaciation were prominent in high dose feeding groups (200 ppm).
EMERGENCY AND FIRST AID PROCEDURES:
: Drink 1-2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention.
: Wash with plenty of soap and water.
: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

EXPOSURE CONTROL METHODS

Local exhaust ventilation should be used to maintain exposures below the 8-hour TWA and to control the generation of airborne dust at points of transfer or other points where full enclosure is not feasible.
Employees engaged in handling bulk quantities of hydramethylnon should remove work clothing, and shower prior to exiting the work site. All employees working with the material should wash their hands prior to consuming food or tobacco products.
Food, gum, and tobacco products should not be allowed in areas where material is being processed.
A NIOSH-approved respirator must be worn by employees where it is not feasible to use engineering controls and employee-exposure exceeds 1.4 mg/m>3<.

A NIOSH-approved cartridge respirator for pesticides is acceptable for exposures up to 10 x the TWA. Use a NIOSH-approved air or self-contained pressure-demand respirator for higher levels of exposure.
Dust-proof goggles are recommended for employees engaged in operations where there is a risk of accidental exposure to eyes. Normal work clothing, like cloth overalls, is indicated.

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SPILL OR LEAK PROCEDURES	Wear protective clothing and equipment described above. Sweep up any spill and place in a waste disposal container. Flush area with water.
	WASTE DISPOSAL: Dispose in accord with local, state, and federal regulations.
SPECIAL PRECAUTIONS	HANDLING AND STORAGE: Do not contaminate water, food, or feed by storage or disposal. Store in a secure, dry well-ventilated separate room, building or covered area. Not for use or storage in or around the home. Keep away from sources of ignition and protect from exposure to fire and heat. Segregate from oxidizers and incompatible materials listed in the Reactivity Data Section. Maintain good housekeeping to control dust accumulations. Due to the dust explosion hazard, all equipment should have explosion venting per NFPA 68-1978. All electrical wiring and equipment should meet the provisions of NFPA-70.

ADDITIONAL REGULATORY INFORMATION

SARA Title III Data
Section 311 and 312 Hazard Categories
Immediate Health Hazard - Y Reactive Hazard - N
Delayed Health Hazard - N Sudden Pressure - N Release Hazard
Fire Hazard - N
Section 302 Extremely Hazardous Substances - None
Section 313 Toxic Chemicals - None
CERCLA Reportable Quantity
None

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APPENDIX
This compound is toxic to fish as determined under artificial laboratory conditions (96-hour LC<50> to bluegill sunfish, 1.70 mg/l; 96-hour LC<50> to rainbow trout, 0.16 mg/l). AMDRO is not expected to be toxic to fish in the natural environment because of its low solubility in water and rapid degradation in sunlight.
Behavior in the Environment: AMDRO degrades rapidly in sunlight with a half-life of less than 1 hour in water and 6 days in soil. AMDRO does not leach in the soil and is metabolized by soil microorganisms. It does not accumulate in the environment as demonstrated by model ecosystems.
AMDRO IS A REGISTERED TRADEMARK OF THE AMERICAN CYANAMID COMPANY.
The information and statements herein are believed to be reliable but are

not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.
Last Revision Date: 3/7/91

SOURCE AND DATE INFORMATION	SHEET NO.:	IN01973-7
	DATE:	JAN 27, 1992

HANDLING AND STORAGE CAUTIONS: Wash thoroughly after handling. Do not contaminate water, food, or feed by storage or disposal. Store in a cool, dry, secure place and keep container tightly closed. Use product within 3 months after opening for best results.
SPILL CONTROL/CLEANUP: Sweep up any spill and place in a closed container for disposal.
PRODUCT/WASTE DISPOSAL: Dispose in accordance with local, state, and federal regulations.
Emergency Guidelines
FLASHPOINT: >220°F (SFCC).
FIRE EXTINGUISHING MEDIA: Water, foam, carbon dioxide, or dry chemical.
ANTIDOTE: No specific antidote. Treatment should be directed at the control of symptoms and clinical condition.
FIRST AID: Eyes, wash with plenty of water. Skin, wash with plenty of soap and water. Inhalation, remove to fresh air. Ingestion, drink 2 glasses of water, induce vomiting. Get medical attention.

American Association of Pesticide Safety Educators (AAPSE)

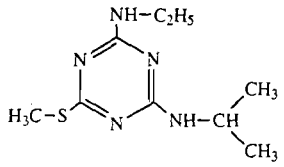
An association of environmental and pesticide safety educators providing science-based educational programs to the public through Cooperative Extension and the Land-Grant University system. Its purpose is to develop and promote effective, high quality pesticide education programs.
See Regulatory Compliance Section for list of state pesticide coordinators.

Amerol* — see Amitrole.
Amesip* — see Ametryn.
Amethopterin* — see Methotrexate.
Ametop* Herbicide (ametryn) — Discontinued 2000 by Agrochemical Industries Co., Ltd.
Ametrex* — see Ametryn.
Ametrex Extra* Herbicide (ametryn + simazine) — Discontinued 1997 by Makhteshim-Agan.
Ametrol* — see Ametryn.
Ametron* — see Ametryn; Diuron.

Ametryn

BP: AAKO B.V.
Biesterfeld U.S., Inc.
Chem East S.A.
Crystal Chemical Inter-America (Crisatrina*)
Fulon Chemical Industrial Co., Ltd.
Jiangsu Overseas Group
Makhteshim-Agan (Ametrex*)
Milenia Agro Ciencias S/A (Herbipak*)
OXON Italia S.p.A. (Amesip*)
Pyosa, S.A. de C.V.
Sanachem (Pty) Ltd. (Sancopax*)
Syngenta (Evik*, Gesapax*)
Tonglu Huifeng Biochemicals Co., Ltd.

Identification
COMMON NAME: Ametryn (ISO, BSI, JMAF, WSSA); ametryne (ISO-F).
EXP. CODE NUMBERS: G-34162 (Ciba-Geigy).
OTHER CODE NUMBERS: CAS 834-12-8; SHA 080801.
FORMULATORS' TRADE NAMES: Almulex* (Agrolex Pte. Ltd.) • Xsipax* (Agsin Pte. Ltd.) • Callitryne* (Calliope S.A.) • Crisatrina* (Dupocsa) • Amesip* (Forward International Ltd.) • Inquiport*-Ameflow (Inquiport, S.A.) • Ametrol* (Insecticidas Internacionales, C.A.) • Cascabel* (Proficol S.A.) • Woprotryne* (B.V. Industrie- & Handelsonderneming Simonis).
DISCONTINUED NAME: Ametop* (Agrochemical Industries Co., Ltd.) • Ametrex Extra* (+ simazine) (Makhteshim-Agan).
Chemistry
COMPOSITION: 2-ethylamino-4-isopropylamino-6-methylthio-s-triazine.
CLASS: Triazine.
PROPERTIES: Colorless crystals. Melting point 84-85°C. Readily soluble in organic solvents.



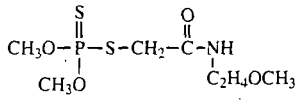
Ametryn

Action/Use
ACTION: Selective herbicide.
USE: Controls most annual broadleaf and grassy weeds in banana (directed basal spray), pineapple and sugarcane (broadcast or interline/interspace spray). Post-directed spray in corn.
FORMULATIONS: Emulsifiable concentrate, flowable wettable, wettable powder.
PREMIXES: Crisazina-Crisatrina Kombi* (+ atrazine) (Crystal Chemical Inter-America and Dupocsa) • Metrimex* (+ atrazine) (Forward International Ltd.) • Amezol* (+ atrazine), Dimetrin* (+ diuron) (Insecticidas Internacionales, C.A.) • Atramet Combi* (+ atrazine), Amigan* (+ terbutryn) (Makhteshim-Agan) • Ametron*, Bimetron* (+ diuron) (Milenia Agro Ciencias S/A) • Cascabel* M (+ atrazine), Amigan* (+ terbutryn) (Proficol S.A.) • Trinatox D* (+ 2,4-D) (Pyosa, S.A. de C.V.) • Gesapax-H* (+ 2,4-D) (Syngenta).
Registration Notes
U.S.: Evik* may be applied alone (Florida, Texas) on grapefruit and orange. With Princep* (Florida) for common bermudagrass, annual grasses and broadleaf weeds including balsam-apple, Florida pusley, milkweed vine, and spanishneedles. Tank mix (Hawaii) with Karmex* for sugarcane.
OUTSIDE U.S.: Crisazina-Crisatrina Kombi*.
Environmental Guidelines
HAZARDS: Fish: LC_{50} 8.8 (96 h) (rainbow trout); 4.1 (bluegill); 14.1 mg/l (goldfish). Bee: Low toxicity.
SOLUBILITY: In water to 185 ppm at 20°C.
Safety Guidelines
SIGNAL WORD: CAUTION.
TOXICITY CLASS: III.
TOXICITY: Tech (Rat): Oral LD_{50} 1950 mg/kg.
Evik* 80W (Rat): Oral LD_{50} 1750 mg/kg.
HANDLING AND STORAGE CAUTIONS: Avoid eye and skin contact. Do not inhale spray mists or drift. Store product in original container only.
Emergency Guidelines
FIRST AID: Get medical aid. Eyes, flush immediately with plenty of water. Skin, wash thoroughly with soap and water. Remove contaminated clothing and shoes. Inhalation, remove to fresh air. If not breathing, give artificial respiration. Ingestion, drink 1-2 glasses of water and induce vomiting.

Ametryne — see Ametryn.
Amex* — see Butralin.
Amezol* — see Ametryn; Atrazine.
Amiben* Herbicide (chloramben) — Discontinued 1994 by Rhone-Poulenc.
Amibendazim* — see Carbendazim.
Amichlor* — see Chlorpyrifos.
Amicidin* — see Fenvalerate.
Amicidin Super* — see Esfenvalerate.
Amicozeb* — see Mancozeb.
Amid* — see Pyridaben.
Amidion* — see Tetradifon.

Amidithion

Identification
COMMON NAME: Amidithion (ISO, BSI, ESA, abandoned ANSI); anidiphos (France).
EXP. CODE NUMBERS: C 2446.
OTHER CODE NUMBERS: CAS 919-76-6; SHA 059601.
DISCONTINUED NAMES: Thiocron* (Ciba-Geigy Ltd.).
Chemistry
COMPOSITION: S-2-methoxyethylcarbamoylmethyl O,O-dimethyl phosphorodithioate (IUPAC).



Amidithion

Action/Use
ACTION: Systemic insecticide-acaricide.
Safety Guidelines
SIGNAL WORD: CAUTION.
TOXICITY CLASS: III.
TOXICITY: (Rat): Oral LD_{50} 600-660 mg/kg; Dermal LD_{50} 1600 mg/kg.

Amidochlor — see Limit*.
Amidor* — see Methamidophos.
Amidor* Insecticide (imidocloprid) — Discontinued 1998 by Agrolex Pte. Ltd.
Amidos* — see Dichlorvos.

UnExCo Home
Label & MSDS Page

CHEMICAL INFORMATION PAGE

These are most of the chemicals we use - most of the time. When you click on the brand name of the pesticide you will jump to our "unofficial" exterminator's description of the chemical. What WE think of it, the advantages and disadvantages, in plain terms, me-to-you, no gobbledegook, no commercial hype, no B.S. and no Jeremy Rifkin-type scare tactics. If you want the MSDS & specimen labels, we have supplied links to the manufacturer, (where possible) but since they change their websites (and names) routinely, we are not going to try to link individual MSDS and label information. We suggest you click on the manufacturer and search their site for the required information. If you need to have specimen labels or MSDS sheets for any of these products and cannot obtain them from the manufacturers, contact us, we will be happy to send you a copy.

Click here for our take on these chemicals Manufacturer links

Brand Name	Common Name	Manufacturer
Dursban Pro [Label] [MSDS]	chlorpyrifos	Dow Chemical Company
Dursban LO (low odor)	chlorpyrifos	(aka: DowAgro Sciences)
Dursban 50W	chlorpyrifos	(same)
Dursban 5G (granular)	chlorpyrifos	(same)
Dursban Equity (termiticide)	chlorpyrifos	(same)
Empire	chlorpyrifos	(same)
Premise 75 - [label] [MSDS]	imidacloprid	Bayer Company
Termidor (label & MSDS info)	Fipronil	Aventis
Di-Tox-E	chlorpyrifos w/ DDVP	Hub States Chemical
Commodore WP	permethrin	ICI Americas, Inc.
MaxForce [label] [MSDS]	hydramethylnon	Clorox.com MaxForce.com
Diatect 2D	pyrethrum, diatomaceous earth	Diatect
Ficam	bendiocarb	AgrEvo
Precor	methoprene	Sandoz (Zoecon)
Flytek fly bait	muscamone	Sandoz (Zoecon)

Brand Name	Common Name	Manufacturer
Wasp Freeze	pyrethrins (usually)	various manufacturers
Drione dust - [label] [MSDS]	pyrethrins & silica gel	AgrEvo
Talon-G - [label] [MSDS]	brodifacoum	Zeneca
Avitrol [label] [MSDS]	4-Aminopyridene	Avitrol Corporation

United Exterminating Company promotes a "common sense" attitude towards the use of chemicals. They should not be used if they are not needed. You

should always think of pesticides as "medicine" which should only be applied when a problem has arisen. Just as medicine does, pesticides sometimes takes awhile to work, and it should be used only according to directions. Any deviation may not yield the same result. The golden rule is to **read the label - and follow it.**

Dursban Pro (chlorpyrifos) is Dow's latest incarnation of their widely marketed insecticide, which they have successfully registered for just about anything. This is what you call a "broad-spectrum" insecticide. It is used inside and outside, by the exterminator, farmer and homeowner. Without getting technical, Dursban is one of the organophosphates, a very large class of insecticides that are cholinesterase inhibitors and act on the nervous system.

The good news about chlorpyrifos in general, and Dursban Pro in particular, is that it is easily broken down in and by the environment, in a relatively short period of time. How long is that? Depends on where it is. If it's in the open sun, it might last for the whole day. In other areas, known by the exterminator, they can last much longer. As long as several months, depending on circumstances. Obviously, these places must be dark, have little air circulation and no additional moisture or other disturbance.

The bad news is that organophosphates are very toxic. Organophosphates are probably three times as toxic as chlordane, the chemical that has been banned here in the United States. (Go here for the straight scoop on chlordane) The toxicity of chlorpyrifos in conjunction with the environment has caused some concern to both environmentalists and the scientific community. Several widely-reported bird and fish kills have occurred, and the wide use of this chemical has caused many problems.

Most of these have been accidents or misuse, rather than the results of legal applications, but even the legal applications can wreak havoc when animal populations ingest these compounds. Greens keepers have been blamed for chemical overuse on golf courses when flocks of birds have been affected. In years past, greens keepers have routinely hyped up their fairways and greens by hyper-dosing with insecticides and fertilizers for maximum effect.

Don't get me wrong. Chlorpyrifos, when used as directed, might just be as safe as the chemical companies say it is, but it does become a real danger when we are in intimate contact with it on a regular basis. The dilute mixtures used in pest control applications are supposed to be strong enough to kill small insects without the same effect on large animals such as us.

Additionally, exterminators apply these insecticides in areas you don't normally contact. As opposed to where the farmers put their insecticides (on the food you eat.) You can easily see that insecticides make their way into our bodies much more from the farmers than exterminators. This fact is often overlooked. And even though organophosphates are more toxic, (and less long-lasting) this is good. They are designed to dissipate before they can harm us, but still get the job done.

PROBLEMS?
In 1999, the EPA issued an abstract and warning concerning Dursban preparations (the chlorpyrifos ingredient, actually) that are suspected to cause health problems in humans. According to the EPA, there have been some 325 cases of poisoning reported from 1993 through 1996, the years of study.

Dow Chemical claims that the EPA has made "fundamental errors" of science. Dow also claims that proper use gives wide margins of safety and only serious misuse causes any problems.

Dow Chemical's Dursban is singled out, possibly because of it's wide marketing, although there are many other products using the same active ingredient.

Even though environmental groups are now calling for the banning of Dursban because of this, Dow claims that Dursban is safe if used as indicated on the labels.

FLASH! In June of 2000, the EPA has announced that Dursban (chlorpyrifos) will be phased out of use within the next year or so. This means that exterminators will be forced to use another, probably more expensive insecticide in place of the workhorse Dursban.

These comments apply to all of the chlorpyrifos products. The come in several formulations. **Dursban Pro** is an emulsifiable concentrate - which means it is meant to be mixed with water, in a specified concentration, to reach a finished solution. **Dursban LO** (for Low Odor) has been largely displaced by Dursban Pro. L.O. is not supported or manufactured by Dow any longer, but many exterminators will still be using what they have. Both act essentially the same, Pro has a bit less odor than L.O. They both have an odor which dissipates very quickly.

Actually, the odor is not from the insecticide, but rather the solvent that the insecticide is dissolved in. The pure, technical grade insecticide is a waxy, odorless solid, which needs to be dissolved in a solvent. The solvent used is usually a very high grade xylene, a common industrial solvent used in many consumer goods.

Dursban 50W is a wetable powder, designed to be used with water in outside applications, usually on lawns or ornamentals. The advantage of 50W is that it lasts longer under extreme circumstances. All organophosphates are expensive to produce, so along with marketing and advertising costs, it makes for an expensive application.

Dursban 5g (granular) is made up of (usually) ground-up corn cobs, clay, or some other inert carrier, and laced with insecticide. It is used only on the outside,

where it is sprinkled on the ground where the morning dew causes the insecticide to bleed slowly into the soil. The granular formulations are available in several strengths, but "5g" is the least strong and the usual preference for pest control. Stronger preparations may burn or otherwise affect shrubs or other plants.

Dursban Equity is a termiticide (chlorpyrifos) and restricted to underground termite control or soil poisoning pre-treatments for new construction. Equity is a "low odor" product, but it does have the same distinctive "xylene" smell. It has been well designed for it's job, and is a very effective insecticide, one of the oldest replacements for chlordane. It is actively marketed alongside it's older brother, Dursban TC, another termiticide that has a somewhat stronger odor mostly because of a less refined version of the xylene carrier. Most exterminators are loath to use TC on post-construction treatments (because of the odor problems) and save it for pre-construction pre-treats, treating the soil before foundations are completed so that any odors are minimized.

Empire is the brand name of another chlorpyrifos product of Dow, formulated as a micro-encapsulated concentrate. Micro-encapsulated insecticides, (there are many) contain the active ingredient in "tiny time capsules," which are activated upon contact with the target pests. The capsules presumably keep the active ingredient from dissipating before it has a chance to work. Encapsulated products are expensive to manufacture, but they do keep the active ingredient available longer than the standard water emulsion. It is used both inside and outside and is especially good for outside use because of it's longevity. Sometimes it is visible when applied to dark surfaces, so an operator has to be careful where it is used. It is usually used for inside and outside general pest control, but can also be used as a termiticide in foam application procedures.

INSECTICIDES IN PAINTS

Micro-encapsulated insecticides are also used in paints, as an additive, for (presumably) controlling insects that contact the paint. As far as the "effectiveness" for this as a control, we think you should opt out.

Why? They charge a lot for the additive, then recommend you double the amount you add (double cost) and then, realistically, how long do you think you're going to get protection? Oh. And don't expect results if this paint gets wet - or is in the sun. Both will wear away that insecticide in one quick hurry. Save your money.

A word about Dow Chemical. Or DowAgro Sciences, as the agricultural arm is now called. Dow is like Britain used to be: "The sun never sets on Dow's territory." All in all, most exterminators have no complaints with Dow. They have an excellent representative network, and respond quickly when needed. Salesmen the company uses are intelligent and capable. Which also translates into more sales for Dow. Sometimes this is not a good thing. While not quite like, say, Microsoft and computers, Dow is a huge presence in the chemicals field. Clever marketing, fractional diversifications and intelligent acquisitions have increased its profits and income over the years. Exterminators pay a premium price for their products and the consumer takes a hit too. Dow uses

very fancy advertisements (fold-outs and inserts) in our regular trade magazines and in consumer publications. To properly register a pesticide is outrageously expensive and time-consuming, contributing substantially to the final cost of insecticides. Dow, because of this, has become an attractive target for lawsuits in several corners. Most are a "bad rap," but extensive play in the media often distorts the actual facts. The general public, it seems, is a bit more chemical-conscious these days, which is probably the reason you are reading this. Unfortunately, mass hysteria rules best, and many headlines work to exploit that fact. Dow is not the evil ogre that it is sometimes made out to be.

TERMITICIDES

Premise 75 is presently registered only as a termiticide, although other uses are in the mill. It is an insecticide in a completely different class than all other termiticides that have ever been on the market. It comes as a wetable powder, packaged in dissolvable plastic pouches that are mixed directly in the tank. Since it is a suspension and not an emulsion, it needs to be agitated or it will settle out of solution.

The toxicity of Premise is lower than most insecticides, and the pure, technical grade insecticide is less toxic than many other termiticides that have been diluted to the finished solution. It has absolutely no odor or taste, and may be mixed and handled with minimum protective clothing. This, of course, makes it attractive to exterminators, who usually don't like the onerous requirements of protective clothing, especially in hot weather or close environments. The fact that we don't have to worry about "a smell" only adds an advantage. Since we use this product so much, we keep copies of the Specimen Label and the MSDS information sheets.

Termidor, manufactured by **Aventis**, is another completely new formulation for the control of termites. Extensively tested in Europe since 1994, it has proven itself to be a very effective termiticide. It has been through the extensive US testing procedures and has been released, as of September, 2000, as a restricted chemical, for sale to exterminators only.

There are presently two separate Termidor preparations for termite control. Termidor 80 WG is registered for both post-construction and pre-construction, while Termidor SC is registered for post-construction only. That may change in the future, and there are other products that will soon be out using this chemical.

Here is the specimen label, MSDS information and the Termidor website.
Termidor 80 WG [label] [MSDS]
Termidor SC [label] [MSDS]

The chemical itself, Fipronil, a branded and patented compound, is also used in insect baits, specifically for roaches. The use of Fipronil, for roaches, has had a massive positive effect on the industry and the same effects can be expected in

the termite control segment of our industry. Termidor comes to market with a proven and astonishing record for effectiveness.

While I am always a bit cynical about the claims that chemical manufacturers always make with new introduced products, my own limited experience with this chemical has so far mirrored the claims of the company. The manufacturer, Aventis, devotes a high percentage of their income to R&D, far more than other chemical companies - I like that. I also like dealing with a responsive company. I have found this to be true with Aventis.

At this writing, (September, 2000) our own company applications of Termidor have not had a full year to really assess the effectiveness. That finding will come in the spring of 2001 and I will report my own observed results, right here, by June, 2001.

INSECTICIDES

Di-Tox-E is a product registered and blended by a Midwestern company, Hub States, and marketed directly by their own sales organization to exterminators only. The base ingredient, chlorpyrifos, is augmented by a very powerful insecticide, DDVP, which is short for dichlorovinyl dimethyl phosphate. This (DDVP) is nasty stuff. It can eat through our normally impervious stainless steel tanks. For years, DDVP was used by exterminators, both alone and with other insecticides, for it's quick knockdown. In spite of the heroic efforts of Hub States, it still retains the distinctive DDVP odor. Most people, including exterminators, object to the odor. Our operators use it, occasionally, in vacant houses with big problems. It is dynamite for fleas, if you can stand the smell. It is an emulsifiable concentrate. They also market another product, **Di-Tox plus**, with the same formula, to which they have added pyrethrum and piperonyl butoxide as a synergist. Like giving a pea-shooter to a cop with a gun. Another nod to Madison Avenue.

The U.S. Environmental Protection Agency recently issued a preliminary risk assessment for Dichclorvos, the final organophosphate to be reviewed under the Food Quality Protection Act. More commonly known as DDVP, Dichclorvos is used in food processing establishments and widely regarded as an effective alternative to methyl bromide. The EPA has concerns about the risk DDVP poses to workers and persons in residential settings. A final risk assessment is expected to be released next year. Here is the link to the EPA preliminary risk assessment.

Commodore WP, (permethrin) a wetable powder, is another synthetic pyroid, designed by man and not found in nature. It is a chiral chemical, which means that it is composed of mostly left-handed or right-handed molecules. This, for some reason as yet not known completely, means that it has a much more powerful effect than the normal mixture of right and left handed molecules. The effects on mammals are less, however, and for the most part, temporary, affecting

especially the mucus membranes of humans, and creating a condition called *paresthesis*, a sensitization of the skin from synthetic pyrethroid exposure. It has the same disadvantage of other wetable powders, that it must be agitated during use. Also, most wetable powders are abrasive and quick to wear out sprayer tips, therefore slowly changing application rates and affecting spray patterns.

MaxForce, (for roaches) marketed to exterminators, and Combat, marketed to the consumer in your local supermarket, are made in a "bait" form which contains hydramethylnon. The product is applied by exterminators using a special hypodermic needle-type instrument. As a bait, it is consumed by roaches, which in turn are eaten by other roaches, giving it a "domino effect" by causing secondary poisoning to other roaches. Cockroaches are also coprophagous, meaning they eat each others dung - which will also be poisonous. It is very effective and can eliminate roaches entirely (in a structure) if used correctly.
MaxForce - [Label] [MSDS]

The consumer version is a little different than the professional version, but they both work. Baiting for roaches eliminates the need to use older spray and bomb methods - which are more toxic and more invasive. The bait, at least the exterminator's version, is very acceptable to roaches and they consume it readily. It is now labeled for use in kitchens and food preparation areas. It looks like peanut butter in color and consistency, and so little is used for the control of roaches that human toxicity is not generally a concern. For tips on how to use this product in the control of roaches, see our page about roaches.

This product can be purchased by the general public (it is not restricted) and can be purchased from our Equipment and Supplies Page.

FLUSHING AGENTS
PT 150, (pyrethrin) **PT 230**, (pyrethrin w/silica gel) and **PT 565**, (pyrethrin) are aerosols, manufactured by Whitmire Laboratories, are specialized products used by exterminators as adjuncts to their regular routines. Aerosols are very expensive and potentially wasteful. People (including exterminators) inherently use too much. Misuse is mostly the danger with the use of these products. Some aerosols are flammable, so there may be an extra danger. Aerosols, packed under pressure such as they are, are subject to leakage and frequently do. Leakage results in a short-filled container, making proper dosages guesswork or impossible. Aerosols are also more likely to be short-filled at the factory, with the same results. They are, however, easy to use for the exterminator, and many exterminators use them daily. Whitmire (and other manufacturers) are constantly rolling out new products, mostly the same stuff, with only minor changes in ingredients.

RODENT CONTROL

Talon G, (brodifacoum) **Contrac**, (bromo-hydroxy) and **Rozol Tracking Powder** (chlorophacinone) are all products used for rodent control, mostly rats and mice. They all act in the same manner, as vitamin K inhibitors. Vitamin K affects the blood's ability to clot. The first two examples are baits, meant to be eaten by the target rodent. The third example is a powder, usually talc, that is impregnated with the active ingredient, and only needs to be dusted inside their burrows or runways. The dust is then transferred to the animal's fur, and licked off in their routine cleaning. Over several days, enough is ingested to produce the required results. Tracking powder has the advantage of being a "passive" poison so it does not have to be ingested as food. It can be used where rodents are getting a food supply better than your bait. The disadvantage is that is not effective in wet environments.

All of these products cause dehydration which eventually causes the animal to hemorrhage internally, causing death. Unfortunately, there's no pretty way to say it. These compounds are supposed to work to drive the target outside. Sometimes it works that way, sometimes it doesn't. Visit our information panels about mice or rats.

Modern rodenticides are made and meant to act over a period of days. This, and the fact that it takes a fair dosage to kill, (measured by body weight) means that accidental ingestion of these products is supposed to give plenty of time to reverse the process.

Also, baits for rodents are usually made up of grain products that are generally not very palatable to humans or pets. The latest incarnations include a "bittering" agent which is supposed to make it even more unpalatable to non-target animals.

SPECIALTY INSECTICIDES

Diatect 2D is a mixture of pyrethrum, piperonyl butoxide and diatomaceous earth. This is a unique product, you might almost call it "natural." Pyrethrum is a natural-type product, made out of chrysanthemum flowers. Regular chrysanthemums don't work. A special variety is used and grown mostly in Africa. Pyrethrum is safe, (again, when used as directed) for mammals. Indeed, used alone, without synergizers, it doesn't even do a good job of killing insects.

In today's Diatect, piperonyl butoxide is used as a synergizer with the pyrethrum and used as a flushing agent, to increase insect activity, and bringing them into contact with the other constituent, diatomaceous earth. Diatomaceous earth is made up of fresh-water diatoms and is toxic to insects by affecting the exoskeleton of insects, causing dehydration and death. The product is also marketed to the homeowner with no legal restriction.

Like everything else, it has its uses, but it is certainly not a cure-all. It was originally manufactured for the exterminator, but the company has changed management and now gets most of its revenue from direct sale to consumers. It actually has a limited range of usage, as far as I'm concerned, but can be very

valuable in certain instances. It is expensive because of the pyrethrum ingredient and the commercial marketing. It is also heavily promoted for do-it-yourself pest control.

Drione dust is actually pyrethrins, plus piperonyl butoxide and silica gel. As a packaged product, I have to say, it sure comes in handy sometimes. I don't actually think too much of the actual chemical product as a general cure-all, like people think it might be. There are just so many old wives.... It is, however, a useful product for the exterminator and sometimes the homeowner. *(More comments....)*

This is good for a variety of insects, and can be used to "flush" insects from their hiding places. It is NOT to be used on stinging insects.

Ficam (bendiocarb) is a brand name by Nor-Am Chemicals. It has many formulations, a granular, used only on the outside, and various other liquid formulas. They also have a 1% dust preparation. Ficam is a different class of insecticide, one of the carbamates. It is a solid and is ground up to the necessary size. Mixed with water, carbamates are suspensions, not emulsions. It is quite toxic to wildlife, especially so to fish and other aquatic animals. The physical nature of the product easily lends itself to run-off problems if not used properly. Fortunately, it does not have a long life span. Also because of those physical properties, people (again, exterminators too) tend to dose it too heavily when they use it. If it isn't mixed properly, (it's hard to mix) it can be misapplied unintentionally.

In dust and granular forms, carbamates are, size-for-size, much more powerful than other dusts and granulars and must be used sparingly. Another disadvantage is that is has very little odor, and for such a toxic insecticide, should have more of a tag. Exterminators, whether they realize it or not, should appreciate the chemical tag smell, it lets them know when they still have chemicals on their hands. The odor tells you. Carbamates are absorbed into the human skin readily.

Homeowners know this product as Sevin. Although Sevin is different (a little) from Ficam, both use the same family of chemical, (carbamates) and all the same warnings apply here. Sevin, or some form of carbamate, is sold in virtually every garden store. Be careful using it, don't breathe the dust, better yet, use a pesticide certified respirator, (not a dust mask) wash your work clothes after use and take a shower. We do.

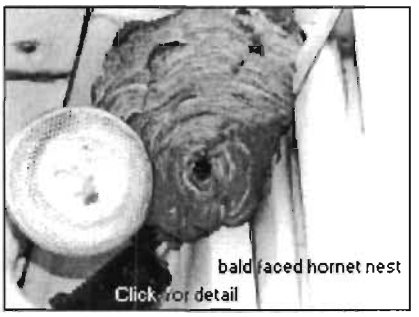
NOTE: It has been reported that Ficam will not be supported by the manufacturer when their pesticide registrations run out, so there is a general rush on, to stockpile this product. Stockpiling is not a wise decision. There are many good reasons not to.

Flytek fly bait (methylcarbothioate) mentioned here because in some places it is marketed to the consumer. This product is toxic to mammals. Not only that, but they are yellow crystals and have a "sweet taste" so can be ingested by mistake. This makes it quite hazardous to use around children or animals. It works (so-so) on houseflies only. Usually it is better to work toward the elimination of the source of the fly infestation. Sometimes bug lights are helpful.

Precor, (methoprene) another product marketed by Zoecon, is a sort of a "birth control" for fleas. That is, it works on insects only, preventing them from maturing through their normal growth process, and halting their development before they reach the adult stage. It is, however, very slow to work and has absolutely no effect on adult fleas. Precor is best used in conjunction with a faster acting insecticide. It takes several weeks, normally, for Precor to kick in. See our information page about fleas and flea control.

This chemical is also used in many different pets today, so usage around animals also treated with this chemical is a direct concern to the exterminator, your pet and YOU!

Wasp or hornet freeze (pyrethrins) are aerosols that shoot a powerful stream of insecticide, ostensibly for the elimination of wasps and hornets. These products are available to the consumer in most local hardware or garden stores. They consist of (mostly) pyrethrins, sometimes accompanied by synergists, piperonyl butoxide, and propellants.



Usually, it's the propellants that do the most damage to you, me and, perhaps, your siding. Some brands can damage siding or paint, so watch out where you're spraying this stuff.

These products are made by dozens of manufacturers, you can, more or less, consider them all as "bug-stuff" - meaning that there isn't much difference between brand names. Some producers manufacture for many different brands, and just change the name on the label.

The biggest problem with any of these products is that they are unreliable. Very unreliable sometimes, and this important if you're dealing with stinging insects. Sometimes you only get one shot! Test your can before use so you know how and if it works. Be sure to practice on an object about the same size, position and distance from where you will be. And, of course, make sure you have enough left over for the job, plus extra shots. Although you hope extras won't be needed. Most types, from most manufacturers will empty their entire contents in only a

few seconds. Have plenty on hand and don't forget to *practice!*

A couple of hints: Don't use this on cicada killers. *(Take a look at Dr. Joe Coelho's The Cicada Killer Thriller Page)* And don't ever use this stuff in the daytime. Use it at night when most of the insects should be back at their nest. Wait until it's pitch dark outside. And even though the directions say you can do it from 15 feet away, you're much better off to get as close as you can. We get the nozzle right up to the entrance of the nest. Use rubber gloves and especially safety glasses. You can get some blow-back and that stuff in your eyes is not fun. If this makes you squeamish, get a professional. If you have questions, call us.

Chlordane, one of the class of chemicals called *chlorinated hydrocarbons*, has been banned from use in the United States for almost fifteen years. Until then, it was used, liberally, for a wide variety of insects. It is best used as a soil poisoning where the advantage (longevity) is also the disadvantage. This chemical sticks around! The open-field test is almost 30 years. While this can be bad for the environment, if used correctly, (underground) it used to offer long lasting protection from termites when it was legal.

The toxicity of chlordane is actually almost one third the toxicity of most of the present day organophosphate termiticides. Chlordane shows up in measurable amounts in the fatty tissues of mammals, and has even been detected in Eskimos and polar bears, even though it isn't used in these areas. This fact has scared us into banning chlordane from use in the United States.

Chlordane (and all of its analogues) got the bad reputation from wide misuse. For years, it was available to even the homeowner, who tends to think that "more is better," leading to over application and resultant run-off. In the years before the ban, even exterminators tended to use it because it was cheap to buy and usually very effective. Chlordane is easily manufactured as a byproduct of petroleum.

> The vast majority of chlordane, however, is still manufactured in the United States, for sale only outside of the U.S. Unfortunately, that means that it is also used by those other countries on crops which are then shipped into the United States. Many countries either allow, or have no laws regarding the use of any pesticide. Chlordane residues are on many imported agricultural products.

Imagine this Scenario: You are a farmer. You have a hundred acres of crops to spray for pests. The chemical you have been using, malathion, must be sprayed 3 or 4 times during the season for adequate coverage. Each time you spray, the chemical costs you, say, a hundred dollars per. So during the summer season your insecticide costs (not including labor) are 300-400 dollars.

So along comes a chemical salesman, with a product that costs one fourth as much as malathion and only has to be used once a year. And then, you learn from your farmer buddies down at the general store, that if you apply it in the fall, and double up on the dosage, you only have to use it every other year! So if you can cut your cost of operation by that much, who cares about the environment? Certainly the farmers didn't.

The run-off from over applications concentrated in fish and were suspected of causing reproduction problems in the animal species that feed on these fish. Although it was never pure science, Rachel Carson's book, *"The Silent Spring"* is usually credited with being the first to alert most Americans to the problem with chlorinated hydrocarbons. They are one of the most persistent insecticides ever used by man.

Therefore, chlordane is still with us. It is detectable in all of our bodies, and will be for a long time. Science still doesn't know the true effects of this, but the fact that it shows up, scares scientists. The chlordane ban was a knee-jerk reaction to these facts. One of these days, we may be able to use it again. It was a good tool, and most exterminators who used it, still miss it.

[UnExCo Home] [Specimen Labels and MSDS Sheets]
[Top]

MAXFORCE®

PROFESSIONAL INSECT CONTROL™

ROACH KILLER BAIT GEL (SINGLE/TRIPLE) MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

TRADE NAME: MAXFORCE® PROFESSIONAL INSECT CONTROL™ ROACH KILLER BAIT GEL—EPA REGISTRATION NO. 64248-5

DESCRIPTION: THICK YELLOW GEL, SWEET ODOR.

II. HEALTH HAZARD DATA

MAXFORCE® BAIT GEL IS MINIMALLY IRRITATING TO THE EYES AND SKIN. IT IS NOT ACUTELY TOXIC UPON ORAL OR DERMAL EXPOSURE. UNTOWARD EFFECTS RESULTING FROM OVEREXPOSURE ARE NOT ANTICIPATED TO OCCUR FROM THE USE OF THE BAIT GEL. FOLLOW THE PRECAUTIONS OUTLINED BELOW.

PRACTICAL TREATMENT: IF SWALLOWED, DRINK TWO GLASSES OF WATER AND INDUCE VOMITING BY TOUCHING BACK OF THROAT WITH FINGER. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.

III. HAZARDOUS INGREDIENTS

INGREDIENT	CONCENTRATION	WORKER EXPOSURE LIMIT
HYDRAMETHYLNON	2.15%	1.4 MG/M³ (TWA)*

CAS REG. NO.: 67485-29-4

NONE OF THE INGREDIENTS IN THIS PRODUCT ARE ON THE IARC, OSHA OR NTP CARCINOGEN LISTS.

*AMERICAN CYANAMID PEL

IV. SPECIAL PROTECTION AND PRECAUTIONS

HYGIENIC PRACTICES: WEAR IMPERVIOUS GLOVES. WHEN HANDLING LARGE AMOUNTS OF PRODUCT WEAR IMPERVIOUS APRONS. IMMEDIATELY REMOVE CONTAMINATED CLOTHING SHOULD CONTACT OCCUR. LAUNDER CLOTHING BEFORE RE-USE.

ENGINEERING CONTROLS: USE GENERAL VENTILATION TO MINIMIZE EXPOSURE.

WORK PRACTICES: AVOID SKIN AND EYE CONTACT.

KEEP OUT OF THE REACH OF CHILDREN.

V. TRANSPORTATION AND REGULATORY DATA

U.S. DOT HAZARD CLASS: NOT RESTRICTED.

U.S. DOT PROPER SHIPPING NAME: INSECTICIDE, NON-TOXIC, SOLID—NOT RESTRICTED.

USDA: NOT FOR USE IN USDA MEAT OR POULTRY PLANTS.

EPA CERCLA/SARA TITLE III SUPERFUND AMENDMENT AND REAUTHORIZATION ACT:

THIS PRODUCT CONTAINS NO CERCLA/SARA TITLE III MATERIALS.

VI. SPILL OR LEAK PROCEDURES

NON-HAZARDOUS WASTE.

PLACE IN A CONTAINER FOR DISPOSAL.

DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

VII. REACTIVITY DATA

STABLE UNDER NORMAL USE AND STORAGE CONDITIONS.

PRODUCT WILL STAIN POROUS SURFACES.

VIII. FIRE AND EXPLOSION DATA

NOT FLAMMABLE OR EXPLOSIVE.

IX. PHYSICAL DATA

APPEARANCE: THICK YELLOW GEL

DENSITY: 8.75-9.58 lbs./gal.

pH: NOT APPLICABLE.

24-HOUR EMERGENCY PHONE:
NOTIFY YOUR SUPERVISOR
ROCKY MOUNTAIN POISON CENTER
1-800-446-1014

FOR TRANSPORTATION EMERGENCIES CHEMTREC
1-800-424-9300

FOR INQUIRIES/PROBLEMS CALL: 1-800-426-6228
6:30 a.m.-4:00 p.m. PST

MAXFORCE®
PROFESSIONAL INSECT CONTROL

Material Safety Data Sheet

Print date – September 12th, 2000 10:42 a.m. (E) PS PSA PSFHV – 1.1 (1/14)

1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Product Name: TERMIDOR® SC TERMITICIDE/INSECTICIDE
Product Code: 264598
MSDS Number : 99232
Chemical Name: FIPRONIL:
5-amino-1-(2,6-dichloro-4-(trifluoromethyl)
phenyl)-4-((1,R,S)-(trifluoromethyl)sulfinyl)-1-H-pyrazole-3
-carbonitrile
Chemical Formula: C12H4Cl2F6N4OS

EPA Registry Number: 432-901

AVENTIS ENVIRONMENTAL SCIENCE USA LP
95 CHESTNUT RIDGE ROAD
MONTVALE, NJ 07645
UNITED STATES

2. COMPOSITION / INFORMATION on INGREDIENTS

COMPONENT	CAS REG NUMBER	%
Fipronil	120068-37-3	9.1%
Inert ingredients		90.9%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Physical Appearance and odor: A light brown viscous liquid, odorless.

- HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN!
- CAUSES EYE IRRITATION.
- THIS PRODUCT IS TOXIC TO BIRDS, FISH, AND AQUATIC INVERTEBRATES.

3. HAZARDS IDENTIFICATION (Continued)

POTENTIAL HEALTH EFFECTS

IMMEDIATE EFFECTS

SKIN:

Harmful if absorbed through the skin. Do not get on skin or clothing. May produce symptoms similar to those from ingestion. May cause irritation, redness, swelling.

EYES:

Causes eye irritation. May cause redness, tearing. Do not get in eyes.

INHALATION:

Harmful if inhaled. Do not breathe spray mist. May produce symtoms similar to those from ingestion. May cause shortness of breath, excitement, involuntary shaking, irritability.

INGESTION:

Harmful if ingested. May cause shortness of breath, drowsiness, involuntary shaking, muscle weakness, convulsions.

DELAYED/LONG TERM EFFECTS

CARCINOGENIC:

This product does not contain any substances that are considered by OSHA, NTP, IARC, or ACGIH to be probable or suspected human carcinogens(see Section 11 - Toxicological Information).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis.

4. FIRST AID MEASURES

After contact with skin:

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

After contact with eyes:

Flush eye with plenty of water. Call a physician if irritation persists.

After inhalation:

Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.

After ingestion:

Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor.

Hints for the physician:

There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

In severe cases of overexposure by oral ingestion, lethargy, muscle tremors, and in extreme cases, possibly convulsions, may occur.

TREATMENT FOR FIPRONIL OVERDOSE:
Recommendations for treatment are based on anticonvulsant therapy as routinely administered to humans. Phenobarbital or diazepam may be useful in controlling convulsions induced by Fipronil.

Even when symptoms of Fipronil intoxication are rapidly reversed by treatment, the treatment must be continued for several days, gradually decreasing the dose of anticonvulsant based on the patients clinical response. This is necessary due to the slow elimination of the compound.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: > 93°C (199°F).
Flammability Class: WILL BURN

METHOD USED: Closed Cup

FLAMMABILITY LIMITS (VOL/VOL%):

Lower:	Upper:
Data	No Data

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

HAZARDOUS DECOMPOSITION MATERIALS (UNDER FIRE CONDITIONS):
Hydrogen Flouride
Oxides of Nitrogen
Oxides of Sulfur
Oxides of Carbon
Hydrochloric Acid

Advice on protection against fire and explosion:
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.

Suitable extinguishing media:
Foam, Water Spray, Carbon Dioxide, Dry Chemical

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:

CONTAINMENT OF SPILL:
Stop leak if it can be done so without risk. Follow procedures described below under Cleanup and Disposal of Spill.

Methods for cleaning up/taking up:

EVACUATION PROCEDURES AND SAFETY:
Wear appropriate protective gear for the situation. See Personal Protection Information in Section 8.

CLEANUP & DISPOSAL OF SPILL:
Pump any free liquid into an appropriate closed container (see Section 7: Handling and Storage). Recover as much liquid product as possible. Absorb with an inert absorbent. Wash spill site with a 2-5% caustic soda (sodium hydroxide) solution.

If spilled on the ground, the affected area should be scraped clean and placed in an appropriate container for disposal (see Section 7: Handling and Storage). Decontaminate tools and equipment following cleanup. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies. Collect washings for disposal. Ventilate area.

Note: Caustic soda (sodium hydroxide) in contact with certain metals will produce hydrogen gas, which is undesirable in an enclosed space. An alternative is 1 part sodium hypochlorite to 9 parts water and left in contact with the spill for ten minutes prior to mopping or shoveling up the residue.

7. HANDLING and STORAGE

Handling:

- Do not breathe vapors or spray mists.
- Do not get on skin, in eyes or on clothing.
- Do not ingest.

7. HANDLING and STORAGE (Continued)

Storage:

- Do not contaminate water, food, or feed by storage or disposal.
- Store unused product in original container only, out of reach of children and animals.
- Keep out of direct sunlight.
- Store in an area that is cool, away from ignition sources, away from food, feedstuffs, fertilizers, seed, and water sources.
- Store in closed containers.
- Minimum/Maximum Storage Temperatures not available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

INTRODUCTORY REMARKS
These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Additional advice on system design:

ENGINEERING CONTROLS
Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

Hygiene measures:

WORK PRACTICE CONTROLS:
Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

Hygiene measures: (Continued)

(1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
(2) Wash hands and face thoroughly with soap and water before eating, drinking, chewing gum, using tobacco, applying cosmetics, or using the toilet.
(3) Wash exposed skin promptly to remove accidental splashes of contact with this material.
(4) Remove contaminated clothing. Then wash body thoroughly with soap and water and put on clean clothing. Wash clothing with detergent and hot water before reusing. Contaminated clothing should not be taken home or laundered with other clothing.
(5) Remove PPE immediately after handling this product. Wash outside of gloves before removing. Wash PPE before reusing.

Personal protective equipment

Body protection:

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves.

Eye protection:

All pesticide handlers must wear protective eyewear (goggles, a faceshield, or safety glasses with front, brow, and temple protection) when working in a non-ventilated space, including but not limited to crawl-spaces and basements or when applying termiticide by rodding or sub-slab injection.

Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Respiratory protection:

All pesticide handlers must wear a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator with any N, R, P, or HE filter when working in a non-ventilated space, including but not limited to crawl-spaces and basements.

Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped

Respiratory protection: (Continued)

with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

EXPOSURE GUIDELINES:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validating sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

FIPRONIL:

	Notes:	TWA	STEL
Aventis Int.	S	0.03 mg/cu m	
Aventis Int.	S	0.1 mg/cu m (<3 m/y)	

PROPANEDIOL:

	Notes:	TWA	STEL
AIHA		10 mg/cu m	
AIHA		50 ppm	

9. PHYSICAL and CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product.

APPEARANCE:
A light brown viscous liquid.

ODOR:
Odorless

BASIC PHYSICAL PROPERTIES
pH: 7.22 at 1 wt/wt%
SPECIFIC GRAVITY: 1.24 at 25°C (77°F)
WATER SOLUBILITY: Dispersible
MELTING POINT RANGE: Not available
BOILING POINT RANGE: Not available
VAPOR PRESSURE: Not available
VAPOR DENSITY: Not available
VISCOSITY (centipoises): 300 to 400 cps at 24°C (75°F)

10. STABILITY and REACTIVITY

CHEMICAL STABILITY:
This material is stable under normal handling and storage conditions described in Section 7.

CONDITIONS TO AVOID:
Direct Sunlight
Extreme Heat
Open Flame
Spark

INCOMPATIBILITY:
MATERIALS/CHEMICALS TO BE AVOIDED:
Strong bases
Strong acids
Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS:
DECOMPOSITION TYPE: Thermal
Hydrogen Flouride
Oxides of Nitrogen
Oxides of Sulfur
Oxides of Carbon
Hydrochloric Acid

HAZARDOUS POLYMERIZATION:
Hazardous Polymerization Will Not Occur

11. TOXICOLOGICAL INFORMATION

ACUTE EYE IRRITATION:
TOXICOLOGICAL INFORMATION AND INTERPRETATION
Eye - eye irritation, rabbit
Mildly irritating

ACUTE SKIN IRRITATION:
TOXICOLOGICAL INFORMATION AND INTERPRETATION
Skin - skin irritation, rabbit
Slightly irritating
Skin - sensitization, guinea pig
Not sensitizing

11. TOXICOLOGICAL INFORMATION (Continued)

ACUTE DERMAL TOXICITY:
TOXICOLOGICAL INFORMATION AND INTERPRETATION
LD50 - lethal dose 50% of test species, > 2,000 mg/kg, rabbit

ACUTE RESPIRATORY IRRITATION:
No data found for product

ACUTE INHALATION TOXICITY:
TOXICOLOGICAL INFORMATION AND INTERPRETATION
LC50 - lethal concentration 50% of test species, > 1.7 mg/1/4 hr, rat

ACUTE ORAL TOXICITY:
TOXICOLOGICAL INFORMATION AND INTERPRETATION
LD50 - lethal dose 50% of test species, > 1,999 mg/kg, rat

CHRONIC TOXICITY:
This product does not contain any substances that are considered by OSHA, NTP, IARC, or ACGIH to be probable or suspected human carcinogens.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL PRECAUTIONS:
This pesticide is toxic to birds, fish, and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Care must be taken to avoid runoff. Do not contaminate water by cleaning equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters.

ECOTOXICOLOGICAL INFORMATION:
The following data is for similar or related products.

ECOTOXICOLOGICAL INFORMATION AND INTERPRETATION:
LC50 - lethal concentration 50% of test species, > 5,000 mg/kg/8 days, Mallard duck (Anas platyrhynchos).

12. ECOLOGICAL INFORMATION (Continued)

Dietary concentrations. Mean concentration.

LC50 - lethal concentration 50% of test species, 48 mg/kg/8 days, bobwhite quail (Colinus virginianus).
Dietary concentrations. Mean concentration.

EC50 - effective concentration 50% of test species, 190 ug/l/48 hr, Daphnia magna.
Mean concentration. Flow through.

LC50 - lethal concentration 50% of test species, 85 ug/l/96 hr, bluegill sunfish (Lepomis macrochirus).
Mean concentration. Flow through.

LC50 - lethal concentration 50% of test species, 248 ug/l/96 hr, rainbow trout (Oncorhynchus mykiss).
Mean concentration. Flow through.

CHEMICAL FATE INFORMATION:
For chemical fate data call the product use information phone number listed on the bottom of each page.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

CONTAINER HANDLING AND DISPOSAL:

13. DISPOSAL CONSIDERATIONS (Continued)

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state or local authorities, by burning. If burned, stay out of smoke. Consult state and local regulations regarding the proper disposal of container.

EPA HAZARDOUS WASTE: No

14. TRANSPORT INFORMATION

Proper Shipping Name: Not regulated for transportation.

15. REGULATORY INFORMATION

STATE REGULATIONS

STATE REGULATIONS:

This product does not contain any components that are regulated under California Proposition 65.

The following chemicals associated with the product are subject to the right-to-know regulations in these states:
No components regulated

U.S. FEDERAL REGULATIONS

SARA Title III Hazard Classes:

Fire Hazard	Yes
Reactivity Hazard	No
Release of Pressure	No
Acute Health Hazard	Yes
Chronic Health Hazard	Yes

TSCA inventory status
These components are not listed:
FIPRONIL 9.1% (120068-37-3)

SARA 313 : No components listed

15. REGULATORY INFORMATION (Continued)

INTERNATIONAL REGULATIONS

INVENTORY STATUS:

Canada (DSL)	N
Europe (EINECS/ELINCS)	N
Australia (AICS)	N
Japan (MITI)	N
South Korea (KECL)	N

Y = All ingredients are on the inventory.
E = All ingredients are on the inventory or exempts from listing.
P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

16. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS(NFPA):
2 Health Hazard Rating -- Moderate
1 Flammability Rating -- Slight
0 Instability Rating -- Minimal

NATIONAL PAINT & COATING HAZARDOUS MATERIALS IDENTIFICATION:
2 Health Hazard Rating -- Moderate
1 Flammability Rating -- Slight
0 Reactivity Rating -- Minimal

KEY LEGEND INFORMATION:
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
TLV - Threshold Limit Value
PEL - Permissible Exposure Limit
TWA - Time Weighted Average
STEL - Short Term Exposure Limit
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer
ND - Not Determined

Print date – September 12th, 2000 10:42 a.m. (E) PS PSA PSFHV – 1.14 (14/14)

16. OTHER INFORMATION (Continued)

REVISED SECTIONS:

MSDS REVISED INDICATOR: Change made to Section 11: Toxicological Information.

PREPARED BY: Dept. of Regulatory Affairs.
PHONE: 800-438-5837
SUPERSEDES: 04/26/2000

DISCLAIMER:

The information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions.

GUIDANCE FOR A WASTE PESTICIDE COLLECTION PROGRAM UNDER THE UNIVERSAL WASTE RULE

Collection programs for unused pesticide products which are conducted under The Massachusetts Universal Waste Rule [310 CMR 30.1000] must be authorized by the Massachusetts Department of Food and Agriculture (DFA).

A Waste Pesticide Collection Program ("Collection Program") means a program for the collection of unused pesticide products that has been authorized by DFA that sets forth standards regarding the scope of materials to be collected as well as accumulation, storage, packaging, labeling, training, notification and transport.

This guidance has been developed by the Department of Environmental Protection (DEP) in collaboration with the Pesticide Bureau of DFA. The municipality or municipalities which organize the Collection Program ("Sponsor") are responsible for complying with all provisions of 310 CMR 30.1000. For assistance in developing a pesticide collection program, call DFA at (617)-626-1773 or DEP at 1-800-343-3420.

General Rule

Universal Waste Pesticides shall be managed in a way that prevents releases to the environment and in compliance with all provisions of the Collection Program standards (as defined in 310 CMR 30.1010).

Notification

DFA must be notified about any proposed collection program at least forty five days prior to intended implementation of the proposed program.

Scope of Materials to be Collected

For the purposes of this Collection Program, pesticides are considered to be the following materials:

- **Insecticides** (e.g. Garden Dusts, Soap, Sprays, Mosquito Repellents, Bug Sprays),
- **Herbicides** (e.g. Weed Killers, Weed and feed lawncare products),
- **Fungicides** (e.g. Rose and Flower Sprays), and
- **Rodenticides.**

Safety Plan & Training

It is the responsibility of the Sponsor to ensure that its operations are conducted in a safe and secure manner at all times. The Sponsor must take all necessary precautions and provide all necessary safeguards to prevent personal injury and property damage while carrying out the program. The Sponsor must provide protection for all persons, including but not limited to, Collection Program workers ("workers"), employees, members of the public, Collection Site facility ("Collection Site" or "Site") employees, representatives and agents, and any regulating agencies employees who may be on-site regarding this work or other work on-site. The Sponsor must provide protection for all public and private property including but not limited to structures, pipes and utilities, above and below ground.

The minimum number of staff required to safely and efficiently operate the pesticide collection program is two. At least one of the staff assigned to this program must be 29 CFR 1910.120 certified (40 hour HAZWOPPER). The second staff person must be trained to, at least, the awareness level (8 Hours). Nobody is allowed to receive/ collect pesticides alone.

The OSHA training will give Sponsor personnel the knowledge required to handle emergency situations

and the knowledge of the dangers involved in the collection and handling of hazardous materials (i.e. pesticides). Orientation & training session(s) involving the designated Contractor who will be packaging, transporting & disposing is also required. This "hands-on" training will be done in two parts. The first part will outline the proper storage requirements and record keeping, and the second part will be hands on training conducted before and during an actual collection day.

The Sponsor must have measures in place, and the workers must be trained as necessary, to respond as required by environmental laws and regulations to a spill or release of the materials being collected during their collection and transport.

The Sponsor must designate a responsible person as the **Safety Officer** whose duty must be to ensure the safety of the Sponsor's Collection Program **at all times** (and to be on site **at all times** during all operations). This person must be responsible for developing an ***Emergency Response Plan*** and a ***Health and Safety Plans (HASP)*** and have the authority to take immediate action to correct unsafe or hazardous conditions and to enforce all safety precautions.

The Sponsor must have measures in place to protect the Collection Program workers from the hazards associated with pesticides to which they may be exposed in the workplace. All staff who handle the pesticides should be supplied with, and be required to wear, a chemical resistant apron, safety glasses and gloves. Long sleeved shirts and pants are required.

The Collection Site should have a portable eye wash immediately accessible to the pesticide area, and water in the form of a hose, or jugs which can supply 3 gallons per worker. Soap and water and clean towels and a change of clothing should be provided. The Site must have at least two 20-pound, ABC dry chemical or carbon dioxide fire extinguishers available for use.

The Site must have a telephone or two-way communication system with a sign or bulletin board immediately accessible and readable, listing the telephone numbers of emergency responders and the Poison Control Center.

Operations Plan

Receiving the waste pesticides

The Sponsor must provide adequate staffing, which may be contracted, at all Sites to off-load and remove wastes and pesticide containers from vehicles, segregate, classify as flammable, non-flammable or solid, and place in storage bins/ totes prior to storing the collected materials. Trained **Pesticide Collection Program Staff** should check the condition of the materials before removing them from the vehicle. Bags are often torn or damaged and dust can be toxic. Staff should have a supply of clear plastic bags ready to use before moving materials. Shallow plastic totes can be useful for moving and storing small items as well as for stacking and storing.

The Sponsor must provide a mechanism for maintaining an inventory system on-site that identifies types and volumes of wastes, and dates received.

Each storage bin should be labeled as flammable, non-flammable or solid, and labeled on the outside of the bin as filled when maximum capacity is reached. A label showing the date when maximum capacity is reached should be applied to the outside of the bin.

Packaging

The Universal Waste Pesticide shall be overpacked in, or contained in, a vessel that remains closed, structurally sound, compatible with the pesticide and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. All small containers should be placed in rigid plastic totes which can be stacked. Solids should be bagged in clear plastic trash bags, individually if pesticide package is torn or damaged. ***Staff should not bulk any pesticide materials!***

Labeling

Labels on containers are important for understanding the toxicity of the material and for determining future disposal.

Pesticides should be stored with the label that was on or accompanied the product as sold or distributed if still legible **or,** with the appropriate label as required

under Department of Transportation regulation 49 CFR part 172, as in effect on July 1, 1996 **or,** with the words "Universal Waste Pesticide(s)" or "Waste Pesticides".

A storage container (or multiple container package unit), bin, tank, or vessel in which universal waste pesticides are contained shall be labeled or marked clearly with the words ***"Universal Waste Pesticide(s)".***

Accumulation

No more than 5,000 kilograms. (11,000 pounds) of Universal Waste Pesticide can be accumulated and stored at any one time. Universal Waste Pesticides can be accumulated for no longer than one year from the date the Universal Waste Pesticides are received. The length of time that the Universal Waste has been accumulated from the date it is received shall be demonstrated by:

1. Placing the Universal Waste Pesticide in a storage bin and marking or labeling the bin with the earliest date on which any Universal Waste Pesticides in the container are received, and
2. Planning a shipment off-site as soon as the capacity (less than 11,000 pounds) of the storage area is reached, at least within one year from the date the pesticides are received.

Pesticides cannot be stored over the winter unless heating is provided to maintain temperatures between 40F and 100F to prevent the pesticides from freezing. All pesticides should be shipped offsite by the end of November.

Storage

Areas used for the storage of pesticides shall be constructed in accordance with 780 CMR (the State Building Code) and the BOCA Mechanical Codes listed in 527 CMR 12.00 Appendix A and all other applicable State regulations. It is important to consult with an engineer or licensed contractor familiar with the state building code requirements before implementing any plan.

Pesticides which are collected as "universal wastes" must be segregated and placed in a storage area which is labeled as "Universal Waste Pesticides". The storage facility should provide adequate within-building spill containment. In the event of an accident or major spillage, **the building should be capable of containing 125% of the volume of the largest container**. The pesticide storage area should be located away from direct sunlight, freezing temperatures and extreme heat. Temperatures in the storage area must be kept between 40F and 100F. The area should be well ventilated either by windows or a fan to avoid the build up of fumes. Pesticides should be stored in accordance with their label requirements in their original container with the label clearly visible.

Separation of pesticides by hazard and function is essential. It is important to review the Material Safety Data Sheet or to inspect the pesticide label for flammable components in the pesticide, such as benzene or petroleum distillates, to determine if the pesticides to be stored are flammable. Flammable pesticides should be stored separately from non-flammable pesticides, in a steel fire proof cabinet. If storing flammable pesticides, steel cabinets must be fire-rated and meet OSHA and NFPA Code 30 specifications.

Storage cabinets should have secondary containment systems. Leaks should be detectable. Absorbent materials, such as Speedy-Dry should be readily accessible to clean up any spills or leaks. Whenever the storage area is not in active use it should be secured against unauthorized entry.

The time limit for the storage of Universal Waste Pesticides is one year from the time the waste is first collected. The volume limit for "small quantity universal waste handlers" is 5,000 kilograms, or 1,350 gallons. However, most municipal collection programs will be limited by the capacity of the storage units. Local fire officials should be consulted to determine if the storage plan meets the fire code. Consult DFA for more details on pesticide storage.

Packaging and Transportation Offsite

Packaging for over-the-road transport must be done by the licensed hazardous waste transporter in order to meet federal DOT standards and the requirements of the receiving facility. For more information about prices, please call the Pesticide Bureau at (617) 626-1773.

Participant Education Plan

The Sponsor should also have a plan for the promotion of the Collection Program and means to educate participants about appropriate **packaging, labeling, handling and transportation procedures.** Included in the plan should be information about how to clean up any potential spillages and the scope of pesticides to be collected. The plan should state the location, driving directions, hours, days and months of the collection event. Participants who transport their unwanted pesticides to a Collection Site must be instructed in advance about proper handling and packaging.

Handling, Packaging and Transportation

Original labels should be kept with the container. When handling pesticides, the use of personal protective equipment is recommended. At a minimum, gloves (rubber, nitrile or neoprene) and long sleeve shirts should be worn. Rubber boots, a hat, goggles and a face mask are also recommended.

dry materials

The bag should be placed upright in a sturdy cardboard box in the back of the vehicle (not the passenger compartment).

If the bag is damaged or torn or if the integrity of the bag is, or is suspected to be, in anyway compromised the original bag should be placed inside of a clear, oversized, leak proof plastic garbage bag. The bag should be closed with a twist tie.

The bag should then be placed upright in a sturdy cardboard box in the back of the vehicle (not the passenger compartment) and secured with bundled up newspapers.

liquid materials

The container should be placed upright in a sturdy leakproof cardboard box in the back of the vehicle (not the passenger compartment).

If the container is leaking or its integrity is in anyway compromised or suspected of being compromised, the container should be carefully placed in an oversized, leak proof plastic bucket or similar vessel.

The container should be placed upright in a sturdy leakproof cardboard box in the back of the vehicle (not the passenger compartment).

Sponsors should be able to assist participants in getting rid of their unwanted pesticides with the goal of reducing the need for such a collection through increasing public awareness. This can be achieved by educating the program participants about the benefits of environmentally responsible approaches to pest management such as Integrated Pest Management (IPM). For more information about IPM educational information, call DFA.

Summary Report

The Sponsor **must** submit to DFA no later than three months after the first collection event and subsequently on an annual basis, one year from the date of the first collection event, a summary report describing the types and volumes of pesticides collected at each Site, the number of participants, the costs incurred, and any recommendations for future waste pesticide collection programs.

Combat Home Page

Ant and roach problems? Check back with us soon for...

...greatsuggestions on how to rid your home of ants and roaches, *once and for all!*

E-mail us your ideas and comments for this site!

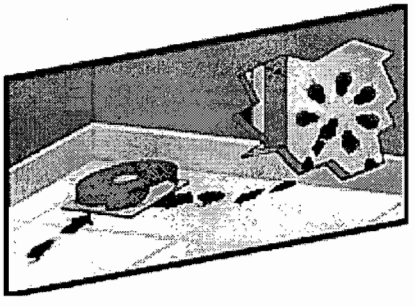
Представляем инсектицид Combat SuperBait

- эффективное средство для уничтожения тараканов и прочих мелких насекомых, занимающее первое место среди американских средств по уничтожению тараканов.

Новости сайта
12 сентября 2000 - выложен План рекламной поддержки Combat на **российском** телевидении.
4 августа 2000 - обновлен Калькулятор - немного изменен алгоритм работы, в результате чего подсчет теперь происходит куда правильнее.
3 августа 2000 - мы открылись!!! Покритиковать дизайн, высказать пожелания или задать вопросы можно, направив письмо сюда.

Гидраметилон
- патентованный инсектицид, лежащий в основе эффективности Combat SuperBait (Hydramethylon - [Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinon(3-[4-(trifluoromethyl)phenyl] 1-(2-[4-(trifluoromethyl)phenyl]ethenyl)-2-prophenylidene)hydrazon])

--- Подробнее ---



Действие
Combat SuperBait работает по **"Принципу Домино"**. Тараканы заползают в диск и съедают приманку, содержащую запатентованный инсектицид замедленного действия. Съевшие приманку тараканы возвращаются в гнездо, где погибают. Большинство насекомых поедают трупы своих сородичей. Таким образом, погибшие тараканы заражают других тараканов. Каждый из них в свою очередь становится источником заражения. Используемый инсектицид настолько активен, что трупы **трех поколений** тараканов являются источниками заражения для других тараканов.

--- Подробнее ---

Фасовка
CombatSuperBait расфасовывается в диски патентованной системы "Пин-Вил" (Pin-Wheel). Один диск содержит 1.5 грамма активного вещества.
Диски упаковываются в коробки по 4 и 6 штук.
С помощью Combat SuperBait защита Вашей квартиры от тараканов обойдется Вам в **50-70 гривень в год** .

--- Подробнее ---

Изготовитель
Combat SuperBait - продукция американской фирмы The Clorox Company.
Основанные на Гидраметилоне инсектициды продаются в Америке под торговыми марками Combat SuperBait и Black Flag и по совокупной продаже занимают на рынке США лидирующую позицию, опередив таких конкурентов, как **Raid** и **Bengal**.

--- Подробнее ---

Достоинства Combat SuperBait

- действует по принципу цепной реакции
- эффективен для уничтожения всех видов тараканов, а также других мелких насекомых
- содержит уникальный инсектицид,

Недостатки Combat SuperBait

поражающий даже тех тараканов, на которых не действуют традиционные средства
- сохраняет эффективность в течение 3 месяцев
- прост в обращении
- безопасен для людей и домашних животных
- эффект становится заметен в течение 2-3 недель

--- Подробнее ---

В Украине
официальным партнером The Clorox Compapy являестя компания Арикол. Ввозимый на рынок Украины Combat SuperBait произведен на заводе Clorox в Южной Корее, стране Samsung, LG и Hyundai. Продукция этого завода поставляется во многие страны, в том числе и в Соединенные Штаты Америки.
Регистрационное удостоверение Госкомсанэпиднадзора РФ N 27/17 от 29 октября 1996 г.

--- Подробнее ---

MAXFORCE®
PROFESSIONAL INSECT CONTROL™
Providing INNOVATIVE PEST MANAGEMENT

MAXFORCE CHEMISTRY

Fipronil, the newest active ingredient on the US market, is now available in Maxforce FC bait stations. Fipronil offers the pest control industry a new chemistry with a unique mode of action. Maxforce used this new chemistry to create bait stations that offer both long-term control and faster results than demonstrated by other ant and cockroach bait products.

Fipronil is a highly active, broad-spectrum insecticide from the phenyl pyrazole family. Scientists discovered fipronil and identified its insecticidal properties in 1987. Used at low doses, the active ingredient is highly effective against a broad range of insect pests, including ants and roaches.

Fipronil's mode of action sets it apart from most commercial insecticides currently on the market. Fipronil disrupts the insect's central nervous system by blocking the passage of chloride ions through the GABA receptor, an inhibitor of the central nervous system. This causes hyperexcitation of contaminated insects' nerves and muscles. While many classes of insecticides affect the central nervous system, no other class has this specific effect.

Like hydramethylnon, there is no known resistance to fipronil.

Faster Speed of Kill

Field test results of Maxforce FC show significantly faster control of German cockroaches, American cockroaches, and Ants. Secondary kill still achieves population elimination, only faster.

German Roaches	American Roaches	Pharaoh Ants
Two Days, **75% Control** • Starts to Kill in 8 hours • 75% control in 2 days • 95% control in one week	Three Days, **85% Control** • Starts to kill in 12 hours • 85% control in 3 days • 94% control in one week	One Day, **70% Control** • Starts to kill in 6 hours • 70% in 1 day • 90% in 4 days • 98% is 8 days

How Fipronil Works - The Domino Effect™, Only Faster

Fipronil controls target insects with a single feeding. It is effective in the control of roaches

MAXFORCE®
PROFESSIONAL INSECT CONTROL™
Providing INNOVATIVE PEST MANAGEMENT

MAXFORCE CHEMISTRY

Hydramethylnon's powerful delayed-action makes it an ideal active ingredient for bait products. While traditional insecticides such as organophosphates, carbamates and pyrethroids affect the nervous system and quickly produce hyperexcitation and convulsions, hydramethylnon works gradually as a metabolic poison.

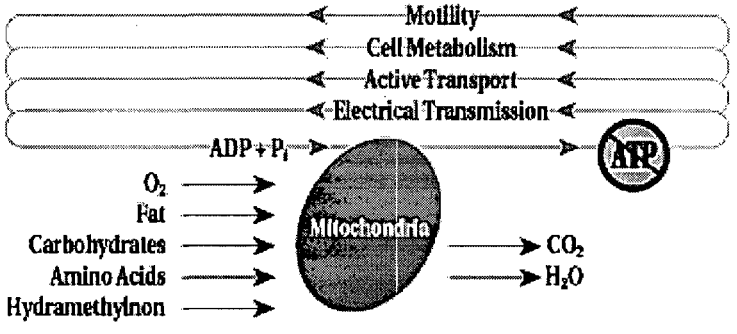
After a single feeding by target insects, there are no immediate symptoms of poisoning. Within a few hours, however, the insects become lethargic and stop eating. This condition progresses until the insects die within 24 to 72 hours.

Hydramethylnon causes death by inhibiting the formation of ATP (Adenosine Triphosphate). ATP provides the energy necessary for completing most biological processes. Without the formation of ATP, insects simply run out of gas.

The Killing Power of Hydramethylnon

Hydramethylnon is most active against energetic insects, and its speed of kill increases with an increase in temperature and insect activity. Insects have shown no signs of resistance to hydramethylnon.

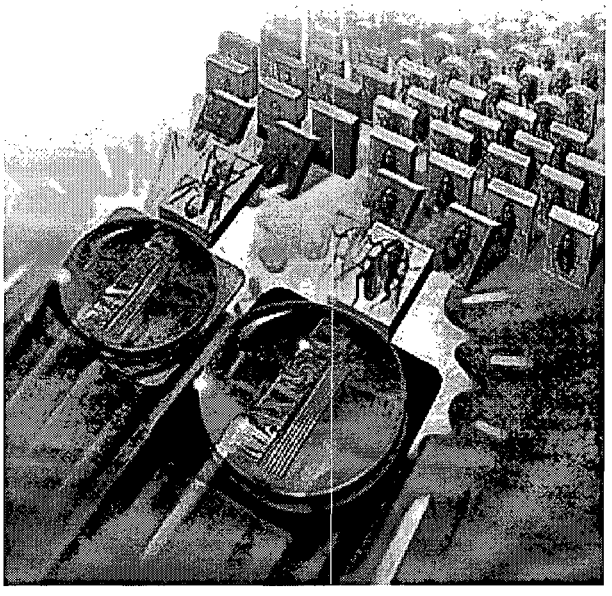
Years of research demonstrate that hydramethylnon is one of the most effective active ingredients for roach and ant baits. Here's why:



Efficacy

Hydramethylnon controls target insects with a single feeding. It is effective in the control of roaches and ants because both insects serve as carriers of the active ingredient to harborages and colonies.

and ants because both insects serve as carriers of the active ingredient to harborages and colonies.



This new active ingredient-Fipronil- provides a unique mode of action. It works through both ingestion and contact knocking down ants and roaches* that eat or simply touch the bait. Either way, one contaminated roach kills many others where they live or breed. The Domino Effect™ still achieves colony elimination, but with faster visible results.

* Contact data based on American Roach Tests.

Bait Acceptance

The Maxforce FC formulations are simply irresistible to target roaches and ants. Each bait is formulated with a unique blend of inert food ingredients designed to maximize attractiveness for the diverse feeding habits of target ants and cockroaches.

Fipronil is non-repellent as well. Roaches and ants have been observed standing on deposits of technical fipronil, with no signs of being repelled.

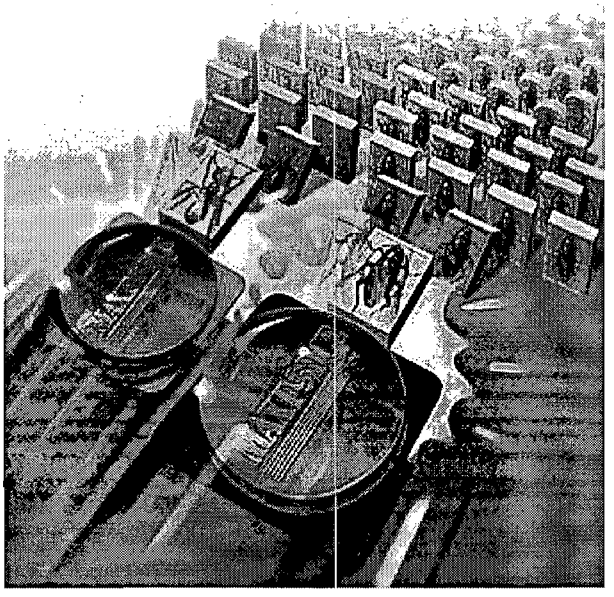
Stability of Maxforce Bait Formulations

Maxforce FC bait stations have a shelf life of approximately 2 years in a closed container. Once they are applied, they will last at least one year or until the bait is consumed.

Low Toxicity to Mammals

While fipronil is very effective against target insects, it has low toxicity to non-target animals. A summary of toxicological information follows:

A summary of toxicological information:



Cockroaches are coprophagous, which means they eat their own feces and the feces of other roaches. They are also cannibalistic, which means they feed on each other. After consuming a lethal dose of bait, cockroaches return to the harborage where they excrete feces containing hydramethylnon. As other cockroaches consume the contaminated feces, they too receive a lethal dose. When the roaches die, other roaches may consume their carcass and die as well. Tests have documented that this can result in one cockroach causing the death of up to 44 other cockroaches.

Ants carry hydramethylnon bait back to the colony where the larvae digest the solid bait and regurgitate it as a liquid to feed the queen(s) and the rest of the colony. The delayed-action of hydramethylnon works well with this behavior because it allows foraging workers to return to the colony with the bait before they are killed.

Bait Acceptance

This is the most important feature in any bait. In test after test, insects are unable to detect the hydramethylnon in the bait. When mixed with inert ingredients that attract insects, it is the perfect active ingredient for use in a bait because it does not repel target insects.

Stability of MAXFORCE® Bait Formulations

Product	Shelf Life (in closed container)	Residual Once Applied
Gel and Granular	Approximately 2 years	In shade: at least 1 year, or until bait is consumed In direct sunlight: 1 week

Low Toxicity to Mammals

While hydramethylnon is very effective against target insects, it has low toxicity to non-

target animals. The MAXFORCE® active ingredient, hydramethylnon, has a high LD50 value of 1300 mg/kg. *(The higher the LD50 value, the lower the toxicity.)*

Ready-to-use bait formulations of hydramethylnon are practically non-toxic by ingestion. *(The oral LD50 value of MAXFORCE® baits is greater than 5000 mg/kg.)* For example, a 35 pound dog would have to eat the bait in 14 syringes of MAXFORCE® gel, or approximately 600 small roach or ant bait stations, to receive a lethal dose.

Hydramethylnon also has a very low vapor pressure resulting in low volatility, which significantly reduces the risk of airborne residues.

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Species	Condition	Effect Level
Rat	Acute oral LD50	97 mg/kg
Rat	Acute dermal LD50	>2000 mg/kg
Rat	Acute inhalation LC50	0.39 - 0.68 mg/l
Rabbit	Acute dermal LD50	354 mg/kg
Rabbit	Skin and eye irritation	Non-irritant
Mouse	Acute oral LD50	95 mg/kg
Guinea Pig	Skin sensitization	Non-sensitizer

Fipronil is not volatile, therefore there are not airborne active ingredients released when using Maxforce FC Bait Stations. This reduces chemical exposure to applicators, customers and the environment in general.

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Pampers.com

We're right behind you.
Every step of the way.

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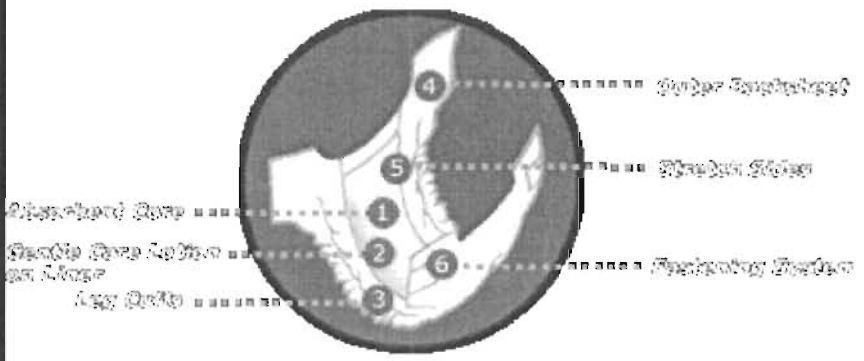
What We're Made Of

A diaper is a huge part of your baby's wardrobe. Sometim it's the only thing your baby will wear. So it's good to know what goes into Pampers - besides a whole lot of care.



1 Absorbent Core
Absorbs fluid, helps keep baby's skin dry and locks wetne away from your little one's skin.

2 Gentle Care Lotion on Liner
Protects your baby's skin to help keep it soft and smooth.

3 Leg Cuffs
Provides a snug fit to help prevent leaks.

4 Outer Backsheet
Allows air to flow in to baby's skin through soft, breathable outer cover.

5 Stretch Sides
Allows the waist to stretch for a comfortable, secure fit.

6 Fastening System
Keeps the diaper where it should be. On your baby's botto Character strip is where the tapes should be placed for a proper fit.

Shells
Polypropylene plastic
Liner overspray is cellulose fiber
Absorbent core is not within
Scrap sent to incinerator.

- e-mail newsletter

Tobramycin and Dexamethasone

DESCRIPTION

Tobramycin and dexamethasone ophthalmic suspension and ointment are sterile, multiple dose antibiotic and steroid combinations for topical ophthalmic use:

Tobramycin: *Empirical Formula:* $C_{18}H_{37}N_5O_9$ *Chemical Name: O*-3-Amino-3-deoxy-α-D-glucopyranosyl-(1□4)-*O*-[2,6-diamino-2,3,6-trideoxy-α-D-*ribo*-hexopyransol-(1□6)]-2-deoxy-L-streptamine.

Dexamethasone: *Empirical Formula:* $C_{22}H_{29}FO_5$ *Chemical Name:* 9-Fluoro-11β,17,21-trihydroxy-16α-methylpregna-1,4-dien-3,20-dione.

Each ml of Tobradex Suspension Contains: *Actives:* Tobramycin 0.3% (3 mg) and dexamethasone 0.1% (1 mg). *Preservative:* Benzalkonium chloride 0.01%. *Inactives:* Tyloxapol, edetate disodium, sodium chloride, hydroxyethyl cellulose, sodium sulfate, sulfuric acid and/or sodium hydroxide (to adjust pH) and purified water.

Each Gram of Tobradex Ointment Contains: *Actives:* Tobramycin 0.3% (3 mg) and dexamethasone 0.1% (1 mg). *Preservative:* Chlorobutanol 0.5%. *Inactives:* Mineral Oil and White Petrolatum.

CATEGORIES, BRAND NAMES

CATEGORIES: Burns, ophthalmic; Conjunctivitis, infectious; Dermatosis, corticosteroid-responsive with secondary infection; Foreign body, ophthalmic; Inflammation, cornea; Inflammation, ophthalmic; Trauma, ophthalmic; Uveitis; Pregnancy Category C; FDA Approved 1988 Aug; Top 200 Drugs

FDA Drug Classes: Aminoglycosides; Ocular Anti-Infective/Anti-Inflammatory

BRAND NAMES:

BRAND NAMES: *Dicon*; **Tobradex**
(Foreign Brand names outside U.S. in italics)

FOREIGN BRAND AVAILABILITY:
Dicon (Korea)

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Vaccines for Children Program
CASA (Clinic Assessment Program)
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National Immunization Hotline
English
(800)232-2522
Spanish
(800)232-0233

Questions and Answers about Thimerosal

Q 1. What is Thimerosal?

A. Thimerosal is a very effective preservative that contains mercury and has been used in some vaccines and other products since the 1930s. Thimerosal is the most widely used preservative in vaccines. The FDA estimates that it is used in more than 30 licensed vaccines and biologics currently marketed in the U.S.

Q 2. Why is Thimerosal used in vaccines?

A. Thimerosal is used as an extra safeguard against contamination. It may be used during the manufacturing process or added to the final container to prevent contamination after multi-dose vials are opened.

Thimerosal is very effective in helping to prevent a vaccine from spoiling and inactivating bacteria used to formulate several vaccines, and in preventing bacterial contamination of the final product. Some but not all of the vaccines recommended routinely for children in the United States contain thimerosal. Disease outbreaks have occurred following contamination of multi-dose vaccine vials in the United States and from other countries. For example, in April, 1995, three infants died in India from toxic shock syndrome after they received contaminated measles vaccine at one health center. While use of thimerosal as a preservative does not eliminate the possibility of bacterial contamination, it can greatly reduce its possibility.

Q 3. If thimerosal has been used in vaccines for many years, why is it a concern now? What recommendations have the Public Health Service and American Academy of Pediatrics taken with respect to thimerosal in vaccines?

A. Although mercury is found in the environment, in food and in household products, exposure to mercury is of concern and, when possible, should be avoided. In recent years, various federal agencies have been addressing the health risks of mercury. One type of mercury, called methyl mercury, is found in seafood and has received particular attention because high doses have been associated with health effects, particularly infants whose mothers

were exposed to high doses during pregnancy. Several federal agencies including the Environmental Protection Agency, Agency for Toxic Substance and Disease Registry, and the Food and Drug Administration have developed guidelines for intake of methyl mercury.

Thimerosal contains a related mercury compound called ethyl mercury. Other than the occurrence of local hypersensitivity reactions, no harmful effects have been reported from thimerosal at doses found in vaccines. However, a recent review conducted by the Food and Drug Administration suggested that some infants, depending on which vaccines they receive and the timing of those vaccines, may be exposed to levels of ethyl mercury that could build up to exceed one of the federal guidelines established for the intake of methyl mercury. It is important to note that the mercury exposure from vaccines is within the safety margin incorporated into the guidelines.

The Public Health Service agencies, the American Academy of Pediatrics, and vaccine manufacturers agree that thimerosal should be reduced or eliminated in vaccines to make already safe vaccines even safer. The Food and Drug Administration has committed to expediting the review of new vaccines that do not contain thimerosal.

Q 4. Can all vaccines be made Thimerosal-free, or within accepted guidelines? If so, how quickly?

A. In August 1999 the FDA licensed a thimerosal preservative-free hepatitis B vaccine, and other thimerosal-free vaccines are currently under review. In addition, clinicians can use the inherent flexibility in the current immunization schedule to fully vaccinate children and meet even the most conservative guidelines for cumulative mercury exposure. Given the availability of vaccines that do not contain thimerosal as a preservative, and the absence of any recognized harm from exposure to thimerosal in vaccines, hepatitis B, DTaP, and Hib vaccines that contain thimerosal as a preservative can continue to be used in the routine infant schedule beginning at age 2 months along with monovalent or combination vaccines that do not contain thimerosal as a preservative.

Reported failures by some health care providers to vaccinate newborns at high risk for perinatal hepatitis B virus (HBV) transmission at birth suggest that some institutions may have misinterpreted or improperly implemented the recommendations to postpone hepatitis B vaccination only for newborns who are not at high risk. Chronic hepatitis B virus infection develops in approximately 90% of infants infected at birth; among chronically infected infants, the risk for premature death from hepatitis B-related liver cancer or cirrhosis is approximately 25%. With the availability of hepatitis B vaccine that does not contain thimerosal as a

preservative, all hospitals and pediatric care providers should ensure that newborn infants receive hepatitis B vaccine as recommended. If the supply of single-antigen hepatitis B vaccines that do not contain thimerosal is limited, the priority for its use should be to vaccinate newborn infants.

Q 5. Why isn't the federal government eliminating thimerosal from vaccines if there is concern?

A. Making vaccines safer and more effective is a constant goal for the federal government. There is a significant safety margin incorporated into all federal mercury exposure guidelines. Furthermore, other than local hypersensitivity reactions, there is no evidence of any harm caused by the level of exposure that children may have encountered under the existing immunization schedule. Today, we are discussing a minimal risk from thimerosal found in vaccines versus the large and devastating risk of childhood diseases like bacterial meningitis and whooping cough if parents and physicians fail to vaccinate children appropriately. Missed vaccinations put children at real risk of disease.

Removing thimerosal from all vaccines will take time. Although several vaccines are available without thimerosal as a preservative, each product that currently uses thimerosal must be reformulated and undergo testing to ensure that safety and efficacy have not been altered.

Q 6. How much mercury would a 6-month-old child get in the last six months from vaccines? How dangerous is that?

A. Regardless of which vaccines a child has received, the decision choice to vaccinate is a sound one. The mercury exposure from vaccines is well within the safety margins included in any guideline established by federal agencies and there is no evidence that children have been harmed by the amount of mercury found in vaccines. However, Public Health Service agencies are working toward further increasing the margin of safety. It is important that we limit childrens' exposure to mercury, but parents should feel confident in the safety of vaccines and continue to vaccinate their children according to the recommended schedule.

Q 7. If there are vaccines that are mercury-free, why shouldn't parents just ask for those?

A. Although vaccines that do not contain thimerosal as a preservative are available, they may not always be readily available from your health care provider. Some vaccines, such as influenza, are not yet available without thimerosal. The American Academy of Pediatrics, the Advisory Committee on Immunization Practices for CDC and the Surgeon General all recommend that parents do not let

their child miss a vaccination when safe and effective vaccines are available. Today, we are discussing a minimal risk from exposure to thimerosal found in some vaccines versus a larger and devastating risk of childhood diseases like bacterial meningitis and whooping cough if parents and physicians fail to vaccinate children appropriately.

The American Academy of Pediatrics, the Advisory Committee on Immunization Practices for CDC and the U.S. Surgeon General want parents to be fully informed about childhood vaccines and if you have questions or concerns, we encourage you to speak to your child's health care provider.

Q 8. I've heard that children may be getting toxic levels of mercury from vaccines. Is that true?

A. No. Everyone is exposed to mercury, it is in the environment and found in some foods (particularly seafood) and in some household products. As part of an ongoing assessment of mercury in the environment and in products, many agencies have developed guidelines for acceptable levels of mercury, levels defined to be many times below any amount known to cause harm. Some children, depending on which vaccines they receive and the timing of those vaccines, are exposed to cumulative levels of mercury close to the safety ranges of guidelines. It's important to understand that these highest acceptable levels include a "safety cushion" to take into account all the variables that people face in their exposures to mercury. No children are getting toxic levels of mercury from vaccines.

Q 9. I understand some people are sensitive to thimerosal and must avoid it. Do they have problems with thimerosal-containing vaccines?

A. Some individuals experience local skin reactions such as redness and swelling that may suggest a delayed type hypersensitivity reaction following injection with products containing thimerosal. While one study found that most patients do not develop reactions to thimerosal given as a component of vaccines even when they have had patch or intradermal tests for thimerosal that indicated hypersensitivity, a prior history of hypersensitivity to thimerosal in a vaccine is considered a contraindication to further vaccination with thimerosal-containing vaccines.

Q10. What is mercury?

A. Mercury is a metal, a chemical element found everywhere. As such, it is neither created, nor destroyed -- the same amount of mercury has existed since the earth was formed.

Two major forms of mercury exist in nature, an inorganic form (the mercury used in thermometers) and the organic form. Humans and wildlife are exposed to both, but the metallic mercury is quickly released from the body. The organic form tends to accumulate in humans, and particularly in large predator fish. Humans are usually exposed to organic mercury from eating fish which have accumulated it in their muscle tissue. Very high levels of mercury are toxic. Because mercury is everywhere, it is not possible to prevent all exposure to mercury. Federal agencies, including the Agency for Toxic Substances and Disease Registries and the Food Administration and Environmental Protection Agency have established guidelines for levels of mercury exposure considered safe. In addition, uses and releases of mercury have been reduced very substantially in recent decades in the U.S. and most other industrialized countries.

Q11. Who is most vulnerable to mercury?

A. Two groups are most vulnerable to methyl mercury: the fetus and pregnant women. Premature babies are more vulnerable because they tend to be very small and their brain is not as developed as a full term baby. Children may be at higher risk of mercury exposure than are adults because they eat more per pound of body weight and because they may be inherently more sensitive than adults since their nervous systems are still developing. The guidelines for mercury exposure are based on amount of mercury per weight. This helps estimate reference level of exposure according to the person's weight.

Q12: What happens if your exposure exceeds the recommended levels?

A. The nervous system is very sensitive to all forms of mercury. Methyl mercury and metal vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.

Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation.

It is important to remember that there is a significant safety margin incorporated into all acceptable mercury exposure limits. There are no data or evidence of any harm caused by the level of exposure that some children may have encountered in following the existing immunization schedule.

Q13: How can mercury affect children?

A. Very young children are more sensitive to mercury than adults. Mercury in the mother's body passes to the fetus and can pass to a nursing infant through breast milk. However, the benefits of breast feeding may be greater than the possible adverse effects of mercury in breast milk.

If a pregnant woman ingests mercury at high levels, harmful effects that may be passed from the mother to the developing fetus include brain damage, mental retardation, and lack of coordination, blindness, seizures, and an inability to speak. Children poisoned by mercury may develop problems of their nervous and digestive systems and kidney damage.

Q 14. Why are chemicals and other substances added to vaccines?

A. Many foods and medicines have chemicals added to them to prevent the growth of germs and reduce spoilage. Chemicals are added to vaccines for similar reasons, to inactivate a virus or bacteria and to stabilize it, helping to preserve the vaccine and prevent it from losing its potency over time.

Some additives are used in the production of vaccines. Vaccines may include suspending fluid (e.g., sterile water, saline, or fluids containing protein); preservatives and stabilizers (e.g., albumin, phenols, and glycine); and adjuvants or enhancers that help the vaccine improve its immunogenicity (ability to protect against disease).

Q15. How can I find out what chemical additives are in specific vaccines?

A. Ask your health care provider or pharmacist for a copy of the vaccine package insert. The package insert lists ingredients in the vaccine and discusses any known adverse reactions.

Q 16. What could happen if parents ignored recommendations to vaccinate children appropriately?

A. Children would be at very real risk from illnesses that can be prevented with safe and effective vaccinations. High rates of vaccination led to declines of 95% to 100% in the occurrence of vaccine preventable diseases in the United States. Despite this, the pathogens responsible for most vaccine preventable diseases still circulate and rates of disease would increase if vaccine coverage dropped. For example, if vaccination coverage among infants dropped from 95% to 70%, an additional 2,500 cases of pertussis would be expected to occur. Moreover, the risk of death from

pertussis is greatest in young children. A second severe vaccine preventable disease among young children is *Haemophilus influenzae* type b (Hib). Before vaccine was introduced, this pathogen was the leading cause of meningitis and other severe invasive infections among children; now cases of invasive Hib disease have virtually disappeared. If vaccination for Hib declined to 70%, 2,000 excess cases would occur with 1,200 cases of meningitis, resulting in about 100 deaths and 180 children who would suffer mental retardation and hearing loss.

Q17: How can parents learn more about children's immunizations?

A. To learn more about children's immunizations, vaccinations, or baby shots from a CDC information specialist, please call CDC's National Immunization Information Hotline: 1-800-232-2522, for English, 1-800-232-0233, for Spanish.

January 17, 2000

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This page last reviewed March 28, 2000

Centers for Disease Control and Prevention
National Immunization Program

EPA United States Environmental Protection Agency
Office of Air Quality Planning & Standards OAQPS
TTNWeb Technology Transfer Network
UATW Unified Air Toxics Website

ANTIMONY AND COMPOUNDS

Hazard Summary

CAUTION: Unless otherwise noted, the quantitative information on these fact sheets are from "EPA Health Effects Notebook for Hazardous Air Pollutants-Draft", EPA-452/D-95-00, PB95-503579, December 1994." Please conduct a current literature search and check the appropriate current online database for the most recent quantitative information.

- Acute (short-term) exposure to antimony by inhalation in humans results in **effects on the skin and eyes**, while oral exposure in humans has resulted in gastrointestinal effects.
- **Respiratory effects,** such as inflammation of the lungs, chronic bronchitis, and chronic emphysema, are the primary effects noted from chronic (long-term) exposure to antimony in humans via inhalation. Other effects in humans include **cardiovascular effects (increased blood pressure, altered EKG readings, and heart muscle damage) and gastrointestinal disorders.**
- The U.S. Environmental Protection Agency (EPA) has not established a Reference Concentration (RfC) for antimony.
- The Reference Dose (RfD) for antimony is 0.0004 mg/kg/d[a]. EPA estimates that consumption of this dose or less over a lifetime would not likely result in the occurrence of chronic noncancer effects.[b]
- A limited study reported developmental effects, such as an increased incidence of spontaneous abortions, and reproductive effects, including disturbances in the menstrual cycle, in women exposed to antimony in the workplace through inhalation.
- Human studies are inconclusive regarding antimony exposure and cancer. Animal studies have reported **lung tumors in rats** exposed to antimony trioxide via inhalation. EPA has not classified antimony for carcinogenicity.

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[a] Milligrams per kilogram per day is one way to measure the amount of the contaminant that is consumed in food.

[b] The RfD is not a direct estimator of risk but rather a reference point to gauge the potential effects. Exceedance of the RfD does not imply that an adverse health effect would necessarily occur. As the amount and frequency of exposures exceeding the RfD increase, the probability of adverse health effects also increases.

Please Note: The main sources of information for this fact sheet are EPA's Integrated Risk Information System (IRIS), which contains information on oral chronic toxicity and the RfD, and the Agency for Toxic Substances and Disease Registry's (ATSDR's) *Toxicological Profile for Antimony*. Other secondary sources include the Hazardous Substances Data Bank (HSDB), a database of summaries of

peer-reviewed literature, and the Registry of Toxic Effects of Chemical Substances (RTECS), a database of toxic effects that are not peer reviewed.

Environmental/Occupational Exposure

- Antimony is found at very low levels throughout the environment. (1)
- The concentration of antimony in ambient air ranges from less than 1 ng/m^3(1) to about 170 ng/m^3. However, near factories that convert antimony ores into metal, or make antimony oxide, concentrations may be greater than 1,000 ng/m^3. (1)
- Soil usually contains very low concentrations of antimony (less than 1 ppm). However, higher concentrations have been detected at hazardous waste sites and at antimony-processing sites. (1)
- Food contains small amounts of antimony: the average concentration of antimony in meats, vegetables, and seafood is 0.2 to 1.1 ppb. (1)
- Persons who work in industries that process antimony ore and metal, or make antimony oxide, may be exposed to antimony by breathing dust or by skin contact. (1)

Assessing Personal Exposure

- Antimony can be measured in the urine, feces, and blood. (1)

Health Hazard Information

Acute Effects:

- The only effects reported from acute (short-term) exposure to antimony by inhalation in humans are effects on the skin and eyes. Skin effects consist of a condition known as antimony spots, which is a rash consisting of pustules around sweat and sebaceous glands, while effects on the eye include ocular conjunctivitis. Oral exposure to antimony in humans has resulted in gastrointestinal effects. (1,2)
- Animal studies have reported effects on the lungs, cardiovascular system, and liver from acute exposure to high levels of antimony by inhalation. (1)
- Antimony is considered to have high acute toxicity based on short-term tests such as the LD_{50} test in rats, mice, and guinea pigs. (3)
- EPA's Office of Air Quality Planning and Standards, for a hazard ranking under Section 112(g) of the Clean Air Act Amendments, considers antimony pentafluoride to be a "high concern" pollutant based on severe acute toxicity. (4)

Chronic Effects (Noncancer):

- The primary effects from chronic (long-term) exposure to antimony in humans are respiratory effects that include antimony pneumoconiosis (inflammation of the lungs due to irritation caused by the inhalation of dust), alterations in pulmonary function, chronic bronchitis, chronic emphysema, inactive tuberculosis, pleural adhesions, and irritation. (1,2)
- Other effects noted in humans chronically exposed to antimony by inhalation are cardiovascular effects (increased blood pressure, altered EKG readings and heart muscle damage) and gastrointestinal disorders. (1,2)

- Animal studies have reported effects on the respiratory and cardiovascular systems and kidney from chronic inhalation exposure. Oral animal studies have reported effects on the blood, liver, central nervous system (CNS), and gastrointestinal effects. (1)
- EPA has not established an RfC for antimony. (5)
- The RfD for antimony is 0.0004 mg/kg/d based on longevity, blood glucose, and cholesterol in rats. (5)
- EPA has low confidence in the study on which the RfD was based because only one species was used, only one dose level was used, no no-observed-adverse-effect level (NOAEL) was determined, and gross pathology and histopathology were not well described; low confidence in the database due to lack of adequate oral exposure investigations; and, consequently, low confidence in the RfD. (5)
- EPA's Office of Air Quality Planning and Standards, for a hazard ranking under Section 112(g) of the Clean Air Act Amendments, has evaluated antimony potassium tartrate and antimony trisulfide for chronic toxicity and has given them composite scores of 38 and 46, respectively (scores range from 1 to 100, with 100 being the most toxic). These scores are nonlinear and are the product of two ratings: a rating based on the minimal-effect-dose and a rating based on the type of effect. (4)
- EPA's Office of Air Quality Planning and Standards, for a hazard ranking under Section 112(g) of the Clean Air Act Amendments, considers antimony trisulfide to be a "high concern" pollutant based on severe chronic toxicity. (4)

Reproductive/Developmental Effects:

- An increased incidence of spontaneous abortions, as compared with a control group, was reported in women working at an antimony plant. Disturbances in the menstrual cycle were reported in women exposed to various antimony compounds in a metallurgical plant. However, the study that reported these findings was unclear about concurrent exposure to other chemicals, nor did it provide the characteristics of the controls used. (1,2)
- Animal studies have reported a decrease in the number of offspring born to rats exposed to antimony prior to conception and throughout gestation. Reproductive effects, including metaplasia in the uterus and disturbances in the ovum-maturing process, were reported in a rat study, following inhalation exposure: (1)

Cancer Risk:

- In one human study, inhalation exposure to antimony did not affect the incidence of cancer in workers employed for 9 to 31 years. (1)
- Lung tumors have been observed in rats exposed to antimony trioxide by inhalation. (1,2,5)
- Two oral studies reported no change in the incidence of cancer in rats fed antimony for a lifetime. However, the usefulness of these studies is limited because only one dose was used. (1)
- EPA has not classified antimony for carcinogenicity. (5)

Physical Properties

- Antimony is a silvery-white metal that is found in the earth's crust. Antimony ores are mined and then either changed to antimony metal or combined with oxygen to form antimony oxide. (1)
- Antimony oxide is a white powder that is insoluble in water. (1)
- Antimony metal is a very brittle, moderately hard metal. (1)

- The chemical symbol for antimony is Sb, and it has an atomic weight of 121.75 g/mol. (1)

Uses

- Antimony is alloyed with other metals such as lead to increase its hardness and strength; its primary use is in antimonial lead, which is used in grid metal for lead acid storage batteries. (1)
- Other uses of antimony alloys are for solder, sheet and pipe, bearing metals, castings, and type metal. (1)
- Antimony oxides (primarily antimony trioxide) are used as fire retardants for plastics, textiles, rubber, adhesives, pigments, and paper. (1)

Conversion Factors:

To convert from ppm to mg/m^3: mg/m^3 = (ppm) × (molecular weight of the compound)/(24.45). For antimony: 1 ppm = 4.97 mg/m^3.
To convert from $\mu g/m^3$ to mg/m^3: mg/m^3 = ($\mu g/m^3$) × (1 mg/1,000 μg).

Health Data from Inhalation Exposure

Concentration (mg/m^3)	Health numbers[a]	Regulatory, advisory numbers[b]	Reference
1,000.0			
-- -- -- -- 100.0			
-- -- -- -- 10.0			
-- -- -- -- 1.0			
-- -- -- -- 0.1		• OSHA PEL, ACGIH TLV, and NIOSH REL (0.5 mg/m^3)	6

ACGIH TLV--American Conference of Governmental and Industrial Hygienists' threshold limit value expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effects.
NIOSH REL--National Institute of Occupational Safety and Health's recommended exposure limit; NIOSH-recommended exposure limit for an 8- or 10-h time-weighted-average exposure and/or ceiling.
OSHA PEL--Occupational Safety and Health Administration's permissible exposure limit expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effect averaged over a normal 8-h workday or a 40-h workweek.

[a] Health numbers are toxicological numbers from animal testing or risk assessment values developed by EPA.

[b] Regulatory numbers are values that have been incorporated in Government regulations, while advisory numbers are nonregulatory values provided by the Government or other groups as advice.

References

1. Agency for Toxic Substances and Disease Registry (ATSDR). *Toxicological Profile for Antimony* (Draft). U.S. Public Health Service, U.S. Department of Health and Human Services, Altanta, GA. 1992.
2. U.S. Department of Health and Human Services. Hazardous Substances Data Bank (HSDB, online database). National Toxicology Information Program, National Library of Medicine, Bethesda, MD. 1993.
3. U.S. Department of Health and Human Services. Registry of Toxic Effects of Chemical Substances (RTECS, online database). National Toxicology Information Program, National Library of Medicine, Bethesda, MD. 1993.
4. U.S. Environmental Protection Agency. *Technical Background Document to Support Rulemaking Pursuant to the Clean Air Act--Section 112(g). Ranking of Pollutants with Respect to Hazard to Human Health*. EPA450/3-92-010. Emissions Standards Division, Office of Air Quality Planning and Standards, Research Triangle Park, NC. 1994.
5. U.S. Environmental Protection Agency. *Integrated Risk Information System (IRIS) on Antimony*. Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Office of Research and Development, Cincinnati, OH. 1993.
6. E.J. Calabrese and E.M. Kenyon. *Air Toxics and Risk Assessment*. Lewis Publishers, Chelsea, MI. 1991.

1. *One nanogram equals a billionth of a gram.

Jackson, Donna S

djack@eastman.com

From: Jackson, Donna S
Sent: Monday, February 26, 2001 4:26 PM
To: 'william.leffler@dept.state.fl.us'
Cc: Odham, Fredia B
Subject: polymers

RE: Eastman polymers CG902 , CG001, DN001

I have been advised by Rhonda Carpenter in our Environmental area that it would be Eastman's standard practice to either landfill or incinerate these polymers.

See Section 13 of MSDS for DN001 for disposal statement.

MATERIAL SAFETY DATA SHEET

000002550/F/USA
Revision Date: 09/29/1999

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: "EASTAR" DN001 Copolyester

Product Identification Number(s): DN001

Manufacturer/Supplier: Eastman Chemical Company, Kingsport, Tennessee 37662

MSDS Prepared by: Eastman Product Safety and Stewardship, Eastman Chemical Company, Kingsport, TN 37662

For Emergency Health, Safety & Environmental Information, Call 800-EASTMAN

For Emergency Transportation Information, Call CHEMTREC at 800-424-9300 or call 800-EASTMAN

For Other Information, Call your Eastman representative or the Eastman operator at 423-229-2000 (USA)

Chemical Name: not applicable

Synonym(s): not applicable

Molecular Formula: not applicable

Molecular Weight: not applicable

Product Use: plastic

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2. COMPOSITION/INFORMATION ON INGREDIENTS (Typical composition is given and it may vary. A certificate of analysis can be provided.)

Weight % - Component - (CAS Registry Number)

100 copolyester (025038-91-9 or 025640-14-6) (varies with formulation)

---

3. HAZARDS IDENTIFICATION

CAUTION!
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS

HMIS Hazard Ratings: Health - 1, Flammability - 1, Chemical Reactivity - 0

NFPA Hazard Ratings: Health - 1, Flammability - 1, Instability - 0

NOTE: HMIS and NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately

with the safe handling of this material, all the information contained in this MSDS must be considered.

---

4. FIRST-AID MEASURES

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Eyes: If molten material contacts the eye, immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Skin: If burned by contact with molten material, cool as quickly as possible. Do not peel material from skin. Get medical attention.

Ingestion: Material is not expected to be absorbed from the gastrointestinal tract so that induction of vomiting should not be necessary.

Note to Physicians: Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

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5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, dry chemical

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products: carbon dioxide, carbon monoxide

Unusual Fire and Explosion Hazards: Powdered material may form explosive dust-air mixtures.

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6. ACCIDENTAL RELEASE MEASURES

Shovel up and place in a container for salvage or disposal.

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7. HANDLING AND STORAGE

Personal Precautionary Measures: No special precautionary measures should be needed under anticipated conditions of use.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials. Minimize dust generation and accumulation. Refer to NFPA Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries."

Storage: Keep container closed.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV): not established

OSHA (USA) Permissible Exposure Limit (PEL, 1989 Table Z-1-A values or section-specific standards): not established

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory protection may be needed in special circumstances such as poorly ventilated spaces, mechanical generation of dusts, heating, drying, etc.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: dust. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998.

Eye Protection: It is a good industrial hygiene practice to minimize eye contact.

Skin Protection: When material is heated, wear gloves to protect against thermal burns.

Recommended Decontamination Facilities: eye bath, washing facilities

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9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical Form: solid (pellet)
- Color: colorless
- Odor: slight

- Odor Threshold: not applicable
- Specific Gravity (water = 1): >1
- Vapor Pressure: negligible
- Vapor Density (Air = 1): not applicable
- Evaporation Rate: not applicable
- Boiling Point: not available
- Softening Point: >100°C (>212°F)
- Viscosity at Ambient Temperature: not available
- Solubility in Water at Ambient Temperature: negligible
- pH: not applicable
- Octanol/Water Partition Coefficient: not applicable
- Flash Point: not applicable, combustible solid
- Lower Flammable Limit: not available
- Upper Flammable Limit: not available
- Autoignition Temperature (ASTM E659): 454°C (849°F)
- Sensitivity to Mechanical Impact: not available
- Sensitivity to Static Discharge: not available

---

10. STABILITY AND REACTIVITY

Stability: stable

Incompatibility: Material can react with strong oxidizing agents.

Hazardous Polymerization: will not occur

---

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

Inhalation: Low hazard for usual industrial handling or commercial handling by trained personnel.

Eyes: Molten material will produce thermal burns.

Skin: Molten material will produce thermal burns.

Ingestion: Expected to be a low ingestion hazard.

Acute Toxicity Data:

Oral LD-50 (rat): >3200 mg/kg
Oral LD-50 (mouse): >3200 mg/kg
Inhalation LC-50: not available
Dermal LD-50 (guinea pig): >1000 mg/kg
Skin irritation (guinea pig): slight
Repeated skin application (guinea pig): no irritation
Skin sensitization (guinea pig): none
Eye irritation (rabbit): slight

Definitions for the following section(s): LOEL = lowest-observed-effect level, NOAEL = no observed-adverse-effect level, NOEL = no-observed-effect level.

Repeat Toxicity Data:

Oral study (11 days, male rat): NOEL = 730 mg/kg/day (highest dose tested)

---

12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publicly owned treatment works.

Acute Aquatic Effects Data:

96-h LC-50 (fathead minnow): >100 mg/L (highest dose tested)
96-h LC-50 (daphnid): >100 mg/L (highest dose tested)
96-h LC-50 (ramshorn snail): >100 mg/L (highest dose tested)
96-h LC-50 (flatworm): >100 mg/L (highest dose tested)

7-Day Plant Germination Effects - No-adverse-effect concentration:

Ryegrass: >100 mg/L (highest dose tested)
Radish: >100 mg/L (highest dose tested)
Lettuce: >100 mg/L (highest dose tested)

7-Day Plant Seedling Effects - No-adverse-effect concentration:

Ryegrass: >100 mg/L (highest dose tested)
Radish: >100 mg/L (highest dose tested)

Lettuce: >100 mg/L (highest dose tested)

---

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

---

14. TRANSPORT INFORMATION

- DOT (USA) Status: not regulated

- Air - International Civil Aviation Organization (ICAO)
- ICAO Status: not regulated

- Sea - International Maritime Dangerous Goods (IMDG)
- IMDG Status: not regulated

---

15. REGULATORY INFORMATION

- This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- OSHA Classification: nonhazardous

- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause cancer: none at levels subject to the act
- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause adverse reproductive effects: none known to Eastman

- This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.
- WHMIS (Canada) Status: noncontrolled
- WHMIS (Canada) Hazard Classification: not applicable

- Carcinogenicity Classification (components present at 0.1% or more):

  - International Agency for Research on Cancer (IARC): not listed
  - American Conference of Governmental Industrial Hygienists (ACGIH): not listed
  - National Toxicology Program (NTP): not listed
  - Occupational Safety and Health Administration (OSHA): not listed

- Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: none
- SARA (U.S.A.) Sections 311 and 312 hazard classification(s): not applicable

- US Toxic Substances Control Act (TSCA): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

- Japanese Handbook of Existing and New Chemical Substances: This product is listed in the Handbook or has been approved in Japan by new substance notification.

---

16. OTHER INFORMATION

Label Statements:

CAUTION!
MOLTEN MATERIAL WILL PRODUCE THERMAL BURNS

Minimize dust generation and accumulation.

FIRST AID: If burned by contact with molten material, cool as quickly as possible. Do not peel from skin. Get medical attention. If molten material contacts the eye, immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Note to Physicians: Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

The symbol ">" in the left margin denotes a revision in this section.

==========Electronic Edition==========

RACHEL'S ENVIRONMENT & HEALTH WEEKLY #444
---June 1, 1995---
News and resources for environmental justice.
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Environmental Research Foundation
P.O. Box 5036, Annapolis, MD 21403
Fax (410) 263-8944; Internet: erf@rachel.clark.net
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===Previous Issue==========Next Issue===

FIBER GLASS: A CARCINOGEN THAT'S EVERYWHERE

An industrial process for making glass fibers was first patented in Russia in 1840. [1, pg.292] At the Columbian Exposition in Chicago in 1893, Edward Libbey, an American, exhibited lamp shades, a dress, and other articles woven from glass fibers. In 1915, the Allied Forces blockaded Germany, creating an asbestos shortage which resulted in commercial production of fiber glass in the U.S., as an asbestos substitute. (Asbestos is a naturally-occurring fibrous material that can be woven into cloth, does not burn readily, has excellent properties for thermal insulation, and therefore came into commercial use during this century. [2, pgs.390-392] Fiber glass has many of the same characteristics as asbestos.)

In 1938, the Owens Corning Fiberglas Company was formed, and three years later, in 1941, evidence of pulmonary [lung] disease was reported by Walter J. Siebert, who investigated the health of workers in cooperation with Owens Corning. [1, pg.292] That same year another investigator reported finding "no hazard to the lungs" of workers exposed to glass fibers in the air. Scientific disagreement of this sort has characterized the study of fiber glass ever since; meanwhile fiber glass production has increased steadily.

That same year (1941), the U.S. Patent Office issued patents for 353 glass wool products. Glass wool, fiber glass, fiberglas, fibrous glass, and glass fibers are all names for the same thing: thin, needle-shaped rods of glass, which nature does not make but humans do.

Fiber glass is now used for thermal insulation of industrial buildings and homes; as acoustic insulation; as fireproofing; as a reinforcing material in plastics, cement, and textiles; in automotive components; in gaskets and seals; in filters for air and fluids; and for many other miscellaneous uses. More than 30,000 commercial products now contain fiber glass.

As asbestos has been phased out because of health concerns, fiber glass production in the U.S. has been rising. In 1975, U.S. production of fiber glass was 247.88 million kilograms (545.3 million pounds); by 1984 it had risen to 632.88 million kilograms (1392.3 million pounds). [1, pg.302] If that rate of growth (10.4% per year) held steady, then production of fiber glass in the U.S. in 1995 would be 4365 million pounds.

Fiber glass is now causing serious health concerns among U.S. officials and health researchers. As we reported in RHWN #74, in a series of papers published from 1969 to 1977, Dr. Mearl F. Stanton of the National Cancer Institute found that glass fibers less then 3 micrometers in diameter and greater than 20 micrometers in length are "potent carcinogens" in rats; and, he said in 1974, "it is unlikely that different mechanisms are operative in man." A micrometer is a millionth of a meter (and a meter is about three

feet). Since that time, studies have continued to appear, showing that fibers of this size not only cause cancer in laboratory animals, but also cause changes in the activity and chemical composition of cells, leading to changes in the genetic structure and in the cellular immune system. Although these cell changes may be more common (and possibly more important) than cancer, it is the cancer-causing potential of glass fibers that has attracted most attention.

In 1970, Dr. Stanton announced that "it is certain that in the pleura of the rat, fibrous glass of small diameter is a potent carcinogen." The pleura is the outer casing of the lungs; cancer of the pleura in humans is called mesothelioma and it is caused by asbestos fibers. Stanton continued his research and showed that when glass fibers are manufactured as small as asbestos fibers, glass causes cancer in laboratory animals just as asbestos does. [4] Asbestos is a potent human carcinogen, which will have killed an estimated 300,000 American workers by the end of this century. [5] The finding that fiber glass causes diseases similar to asbestos was chilling news in the early 1970s, and an additional 25 years of research has not made the problem seem less serious. Workers in fiber glass manufacturing plants are exposed to concentrations of fibers far lower than the concentrations to which asbestos workers were exposed, yet several industry-sponsored epidemiological studies of fiber glass workers in the U.S., Canada, and Europe have reported statistically significant increases in lung cancer. [6]

The International Agency for Research on Cancer (IARC), of the World Health Organization, listed fiber glass as a "probable [human] carcinogen" in 1987. In 1990, the members of the U.S. National Toxicology Program (NTP) --representatives of 10 federal health agencies --concluded unanimously that fiber glass "may reasonably be anticipated to be a carcinogen" in humans. [3] NTP members were preparing to list fiber glass that way in the SEVENTH ANNUAL (1992) REPORT ON CARCINOGENS, the NTP's annual listing of cancer-causing substances, which is mandated by Public Law 95-622. But industry intervened politically.

Four major manufacturers of fiber glass insulation campaigned for three years to prevent their product from being labeled a carcinogen by NTP (see RHWN #367). They managed to delay the publication of the NTP's SEVENTH ANNUAL REPORT ON CARCINOGENS for more than two years, but on June 24, 1994, the Secretary of Health and Human Services (HHS), Donna E. Shalala, signed the REPORT and sent it to Congress, thus making it official policy of the U.S. government that fiber glass is "reasonably anticipated to be a carcinogen." In the U.S., fiber glass must now be labeled a carcinogen.

Announcing this decision, government officials tried to play down its significance. Bill Grigg, a spokesperson for the U.S. Public Health Service (a subdivision of Health and Human Services) told the WASHINGTON POST, "There are no human data I'm aware of that would indicate there's any problem that would involve any consumer or worker." [7] To make such a statement, Mr. Grigg had to ignore at least six epidemiological studies showing statistically-significant increases in lung cancer among production workers in fiber glass factories. [6] Indeed, according to researchers in the Occupational Safety and Health Administration (OSHA, another division of Health and Human Services) fiber for fiber, fiber glass is a more potent carcinogen than asbestos. [8, pg.580]

Fiber glass --a material that nature does not make --is now measurable everywhere in the air. The air in cities, rural areas, [1, pgs.311-314] and remote mountain tops [4] now contains measurable concentrations of fiber glass. If the dose-response curve is a straight line (that is to say, if half as much fiber glass causes half as much cancer) and if there is no threshold dose (no dose below which the cancer hazard disappears), then exposing the Earth's 5.7 billion human inhabitants to low concentrations of fiber glass will inevitably take its toll by causing excess cancers in some portion of the population.

According to OSHA researchers, an 8-hour exposure to 0.043 glass fibers per cubic centimeter of air is sufficient to cause lung cancer in one-in-every-thousand exposed workers during a 45-year working

lifetime. [8, pg.580] In rural areas, the concentration of fiber glass in outdoor air is reported to be 0.00004 fibers per cubic centimeter, about 1000 times below the amount thought to endanger one-in-every-thousand fiber glass workers. [1, pg.314] But people in rural areas breathe the air 24 hours a day, not 8 hours. Furthermore, a human lifetime is 70 years, not the 45 years assumed for a "work lifetime." Moreover, one-in-a-thousand is not adequate protection for the general public; U.S. Environmental Protection Agency uses one-in-100,000 or one-in-a-million as a standard for public exposures. (And, finally, in urban air, there's 10 to 40 times as much fiber glass as in rural air.) Therefore, the amount of fiber glass in the outdoor air in the U.S. and Europe (and presumably elsewhere) already seems higher than prudent public health policies would permit. Assuming a straight-line dose-response curve and no threshold, we believe there is ample reason to be concerned about the human health hazards posed by fiber glass in the general environment. (And this says nothing about the hazards to wildlife.)

It has been 25 years since researchers at the National Cancer Institute concluded that fiber glass is a potent carcinogen in experimental animals. During that time, additional research has confirmed those findings again and again. [8] During the same period, the amount of fiber glass manufactured has increased rapidly year after year. Ninety percent of American homes now contain fiber glass insulation. All of this fiber glass will eventually be released into the environment unless special (and very expensive) precautions are taken to prevent its release. We believe the likelihood of Americans taking such precautions is nil. Billions of pounds of fiber glass now in buildings will eventually be dumped into landfills, from which it will leak out slowly as time passes. Elevated concentrations of fiber glass are already measurable in the air above landfills today. [4]

In 1991, PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, a standard reference book on work-place safety and health, said about fiber glass, "...it is prudent for industrial hygienists to treat these materials with the same precautions as asbestos." [1, pg. 324] How do we treat asbestos? In the U.S., all new uses of asbestos have been banned. A ban of fiber glass is long overdue.

--Peter Montague

==========

[1] Jaswant Singh and Michael A. Coffman, "Man-Made Mineral Fibers," in George D. Clayton and Florence E. Clayton, editors, PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY FOURTH EDITION, VOLUME 1, PART B (New York: John Wiley & Sons, 1991), pgs. 289-327.

[2] Michael A. Coffman and Jaswant Singh, "Asbestos Management in Buildings," in George D. Clayton and Florence E. Clayton, editors, PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY FOURTH EDITION, VOLUME 1, PART B (New York: John Wiley & Sons, 1991), pgs. 387-420.

[3] The annual list of carcinogens is drawn up by an inter-agency Working Group for the Annual Reports on Carcinogens, which includes representatives from the Agency for Toxic Substances and Disease Registry (ATSDR); the Centers for Disease Control (CDC); the National Institute for Occupational Safety and Health (NIOSH); the Consumer Product Safety Commission (CPSC); the U.S. Environmental Protection Agency (EPA); the Food and Drug Administration (FDA); the National Cancer Institute (NCI); the National Institute of Environmental Health Sciences (NIEHS); the National Library of Medicine (NLM); and the Occupational Safety and Health Administration (OSHA).

[4] Reported in Katherine and Peter Montague, "Fiber Glass," ENVIRONMENT Vol. 16 (September 1974), pgs. 6-9.

[5] Philip J. Landrigan, "Commentary: Environmental Disease--A Preventable Epidemic," AMERICAN JOURNAL OF PUBLIC HEALTH Vol. 82 (July 1992), pg. 941.

[6] See Peter F. Infante and others, "Fibrous Glass and Cancer," AMERICAN JOURNAL OF INDUSTRIAL MEDICINE Vol. 26 (1994), pgs. 559-584, which reviews the following studies, among others: L. Simonato and others, "The International Agency for Research on Cancer Historical Cohort of MMMF Production Workers in Seven European Countries: Extension of the Follow-Up," ANNALS OF OCCUPATIONAL HYGIENE Vol. 31, No. 4B (1987), pgs. 603-623; Philip E. Enterline and others, "Mortality Update of a Cohort of U.S. Man-Made Mineral Fibre Workers," ANNALS OF OCCUPATIONAL HYGIENE Vol. 31, No. 4B (1987), pgs. 625-656; Harry S. Shannon and others, "Mortality Experience of Ontario Glass Fibre Workers--Extended Follow-Up," ANNALS OF OCCUPATIONAL HYGIENE Vol. 31, No. 4B (1987), pgs. 657-662; and John R. Goldsmith, "Comparative Epidemiology of Men Exposed to Asbestos and Man-Made Mineral Fibers," AMERICAN JOURNAL OF INDUSTRIAL MEDICINE Vol. 10 (1986), pgs. 543-552; G.M. Marsh and others, "Mortality Among a Cohort of US Man-Made Mineral Fiber Workers: 1985 Follow-Up," JOURNAL OF OCCUPATIONAL MEDICINE Vol. 32 (1990), pgs. 594-604; P. Boffetta and others, "Lung Cancer Mortality Among Workers in the European Production of Man-Made Mineral Fibers--A Poisson Regression Analysis," SCANDINAVIAN JOURNAL OF WORK, ENVIRONMENT, AND HEALTH Vol. 18 (1992), pgs. 279-286.

[7] Frank Swoboda and Maryann Haggerty, "U.S. Suspects Figerglass as Carcinogen, Calls Insulation Safe," WASHINGTON POST July 2, 1994, pg. C1.

[8] Peter F. Infante and others, "Fibrous Glass and Cancer," AMERICAN JOURNAL OF INDUSTRIAL MEDICINE Vol. 26 (1994), pgs. 559-584.

Special thanks to the advocacy organization, Victims of Fiberglass (VOF), for keeping us informed about these issues over the years. VOF publishes an excellent newsletter, FIBERGLASS ROOTS OF CANCER; contact Bob Horowitz, Victims of Fiberglass, P.O. Box 894, Bryte, CA 95605-0894; phone (916) 371-0656.

Descriptor terms: fiber glass; fiberglass; fiberglas; fibrous glass; glass wool; mmmf; man-made mineral fibers; carconigens; cancer; lung cancer; studies; epidemiology; energy conservation; insulation; asbestos; iarc; international agency for research on cancer; who; world health organization; national toxicology program; ntp; victims of fiberglass; health and human services; occupational safety and health administration; hhs; osha;

Next issue

Memorandum

State of Florida
Department of Environmental Protection

TO: Clair Fancy

THRU: Bruce Mitchell

FROM: William Leffler, PE

DATE: May 4, 2001

SUBJECT **Montenay Bay, Inc. Segregated Waste Stream Permit 0050031-002AV**

This is a request to burn transshipped mixed waste from a remote waste recovery facility.

Apparently Onyx Specialty Waste Services, Inc. has contracted with Chemical Conservation Corp. (CCC) (formerly Perma-Fix of Orlando, Inc.) to dispose of waste remaining after CCC has exercised its first right if salvage. The material profile is extremely broad and would include up to 14 tons per month of any TSDF Consolidated Waste that was not otherwise regulated as hazardous. The Material Profile Sheet lists typical properties in eleven categories that may each constitute as much as 50 percent of a load. No attempt has been made to quantify the constituents of the load such that their relative concentrations would total 100 percent. There is no assurance that net month's load will have any of the physical or chemical characteristics indicated in this months laboratory analysis.

The designation "TSDF Consolidated Waste" arises from solid waste regulations at 40 CFR 9, 264 and 265. It is a waste from a RCRA treatment or disposal facility which has been "picked" cleaned of hazardous or toxic materials. TSDF indicates it is from a transfer storage or destruction facility and the use of the word "consolidated" indicates that it is a blend of several waste streams.

It is my opinion that the Department should not give Montenay *carte blanche* authority to determine which materials are suitable for incineration in an incinerator designed, intended for and permitted for municipal solid waste. Based on the recent history of requests, and the significant deviation between the departments concept of acceptable fuels and those proposed by Montenay, it may be necessary to limit approval to single truckload batches and desirable to require an inspector to examine the load before it is incinerated.

On the positive side, the analysis is recent, it can probably be traced to the roll off container from which the sample was taken. The analytical data is TCLP representing the groundwater contamination potential rather than mass concentrations affecting air pollution.
I fear that a blanket approval of this material based only on the identity of the supplier, without an eyeball inspection for such things as labels on empty containers and other clues as to material origin, is reckless, especially when the material comes from a RCRA treatment site.

5-4-2001
Bill,
Please review and let's discuss fact-finding on the 16th.
Thanks,
Bruce

MONTENAY BAY LLC

ONYX

RECEIVED

MAY 04 2001

BUREAU OF AIR REGULATION

MBLLC/DEP-01-081

May 2, 2001

Mr. Clair Fancy
Florida DEP, Bureau of Air Regulation
Twin Towers Office Building
Mail Station 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: Waste Approval Consideration
Title V FINAL Permit No.: 0050031-002-AV

Dear Mr. Fancy:

Enclosed, please find a packet of material describing a waste stream for which we are seeking approval

For tracking purposes, this approval request is for Chemical Conservation Corp/TSDF Consolidation. We feel that this material meets conditions under A.5.1.6 and A.5.1.8.

If I may be of any further assistance, please feel free to contact me at (850) 785-7933, x206.

Sincerely,

Chalmous Beechem
Operations Manager

6510 Bayline drive - Panama City, Florida 32404 - **Tel.: (850) 785-7933 - Fax: (850) 784-1779**

Montenay / Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF).

Material Profile Form # (Shaded areas are for MSWS use only.) Initiation Date: / / Page 1 of 3.

Customer Code: Generator Code: Billing Code: Approval Code(s):

Montenay Initiator: Montenay Location(s). Waste Processing Code(s):

1.0 GENERATOR INFORMATION

1. Generator Company Name: Chemical conservation corporation / permafix
2. Address: 10100 Rocket Blvd 3. City: orlando 4. State: FL 5. Zip: 32824
6. Contact Name: Joe Druetta / Michelle Knapp
7. Tel #: 407-859-4441 8. Fax #: 407-855-2812 9. E-Mail ID #: pmalloy @permafixorlando.com
10. Generator EPA ID #: FLD980559728 (If multiple locations exist please attach relevant information)

BILLING INFORMATION

2.0 CUSTOMER BILLING INFORAMTION:

1. Company Name: Permafix Chemical conservation corp
2. Address: 10100 Rocket Blvd
City: orlando
3. State: FL 4. Zip 32824
5. Billing Contact Name: Patricia Malloy
6. Billing Contact Title: Customer Service manager
7. Tel #(s) (407) 859-4441
8. Fax #(s) (407) 855-2812
9. E-Mail ID #: pmalloy @ Permafixorlando.com
10. Federal Tax ID # for Billing Purposes: 31-1017466

PICK UP LOCATION

3.0 PICK UP LOCATIONS:

☑ If same as in Section 1.0 please check here

1. Company Name:
2. Shipping Address:
3. City: 4. State: 5. Zip:
6. Shipping Contact(s):
7. Tel # (s) ( )
8. Fax # (s) ( )
9. E-Mail ID #: @
10. If multiple locations please attach a list

4.0: THIRD PARTY AUTHORIZATION: (If appropriate please complete below)

I _____ as an authorized representative of _____ (Generator Company)

authorize _____ of _____ (Service Company / Broker) to act as a third party or agent of the Generator. This is an authorization to complete all required paperwork and to supply all necessary backup Documentation to accurately profile the generator waste for disposal at the appropriate Montenay facility.

5.0 MATERIAL PROFILE FORM CHANGE AUTHORIZATION: (If appropriate please complete below)

I, as the generator, authorize Onyx Specialty Waste Services, Inc. to make corrections to this Material Profile Form. I understand that a fully corrected copy of the Material Profile Form will be returned to me for my records.
If authorization is or is not granted please check the appropriate box and initial. ☑ Yes ☐ No JM MYS Initials

6.0 REGULATORY WASTE INFORMATION:

A.	☑ Yes	☐ No	This waste is R.C.R.A. Non Hazardous		
B.	☐ Yes	☑ No	Regulated or Licensed Radioactive Waste		
C.	☐ Yes	☑ No	Medical / Infectious or Chemotherapeutic Waste		
D.	☐ Yes	☑ No	OSHA Carcinogens (outline in waste constituents)		
E.	☐ Yes	☑ No	Regulated Benzene NESHAP Waste		
F.	☐ Yes	☑ No	Asbestos Containing Waste		
G.	☐ Yes	☑ No	Dioxin or Furan bearing Waste		
H	☐ Yes	☑ No	Any type of PCB Waste		
I.	☐ Yes	☑ No	Explosives / Shock Sensitive		
J.	☐ Yes	☑ No	Polymerizable Material		
K.	☐ Yes	☑ No	Air / Water Reactive		
L.	☐ Yes	☑ No	Oxidizer / Reducer		
M.	☐ Yes	☑ No	Total Cyanide	____	ppm
N.	☐ Yes	☑ No	Total Sulfide	____	ppm
O.	Other applicable				

Montenay / Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # _____ Page 2 of 3.

7.0 Material or Waste Specific Information: (Attach additional pages and MSDS)

1. Material or Waste Name: NON REGULATED MATERIAL
2. Process of Material or Waste generation: TSDF CONSOLIDATION
3. Total Quantity of Material / Waste: 14 (Circle) (Tons / pallets / drums / other: Explain _____
4. Frequency of shipment: Daily ☐ Weekly ☒ Monthly ☐ Yearly ☐ One time ☐

8.0 COMPOSITION & PROPERTIES OF MATERIAL / WASTE

Chemical Name / Component / Formula	Material / Waste Analysis (Wt. %)	Material / Waste Ranges (Wt. %)
1. oily absorbants		0 - 50
2. PPE, rags		0 - 50
3. plastic		0 - 50
4. wood		0 - 50
5. dirt		0 - 20
6. paint filters, air filters paper/oil		0 - 50
7. soaps/surfactants		0 - 50
8. oil, grease		0 - 50
9. metal cont. < 5 gal		0 - 5
10. resin		0 - 50
aerosol cans (punctured)		0 - 5

(Total must be greater than or equal to 100 %)

☐ See attached sheets and MSDS for chemical description, chemical constituents, alternate names / synonyms and chemical formulae.

9.0 *MATERIAL / WASTE PROPERTIES AT ROOM TEMPERATURE:*

1. Physical State and % of each state ☐ Liquid ___% ☐ Sludge / Semi-solid ___% ☑ Solid 100 % ☐ Powder ___% ☐ Gas ___%
2. Odor VARIES (Describe) 3. Color VARIES (Describe) 4. No. of Phases: _____ Viscosity ☐ High ☐ Med ☐ Low
6. Flash Point (Liquid & Non-Liquids) ☐ < 100°F ☐ 100° - 139°F ☐ 140° - 199°F ☐ ≥ 200°F. Check if material is solid ☑
7. ☐ pH (Aqueous Liquids) or ☐ pH (Non aqueous) ☐ ≤ 2.0 ☐ > 2.0 ≤ 5.0 ☐ >5.0 ≤ 8.9 ☐ >9.0 ≤ 12.49 ☐ ≥ 12.5
8. Corrosivity ☐ ≤ 6.35 mm/yr or ☐ > 6.35 mm/yr 9. Melting Point of Solids < 130°F. Compared to _____
10. Boiling Point of Liquids ☐ < 130°F. _____ °F. 11. Ignition Temp. _____ °F. 12. TOC (Total Organic Carbon) ☐ < 1% ☐ 1-20% ☐ > 20%
13. BROMINE ☐ None or Ø % 14. IODINE ☐ None or Ø %. 15. FLUORINE ☐ None or Ø %. 16. CHLORINE ☐ None or Ø %.
17. VOC (Volatile Organic Compounds) Ø % 18. Higher Heating Value (BTUs/LB) _____ ☐ Estimated ☐ Exact 19. Ash: _____ %
20. SULFUR _____ %. 21. NITROGEN _____ %. 22. Specific Gravity _____ or Bulk Density _____ Lb./Gal.
23. Free liquids present ☐ Yes ☑ No. 24. Free liquids are fully absorbed ☑ Yes ☐ No. Absorbent type _____ and _____ %
25. Analytical is attached ☐ Yes ☐ No. TCLP ☐ Total Metals ☐ Flash Pt ☐ BTU/lb ☐ Wt % Halogen / Sulfur ☐

Montenay / Onyx Specialty Waste Services, Inc. (OSWS), Material Profile Form (MPF)

Material Profile Form # _____ Page 3 of 3.

10.0 Packaging and Shipping Information (outline the average container weights if applicable by the check-box)

☐ Consumer Packaged Returns		☐ Finished product bulk		☐ Fiber drums.		☑ Roll-offs.	
☐ Consumer packaged > 500 lbs		☐ Intermediate waste		☐ Poly drums		☐ Dump-trailers	
☐ Consumer packaged truckload.		☐ Production Debris		☐ Steel drums		☐ Vac truck	
☐ Raw material inert or active (100%)		☐ Mixed Powders		☐ Gaylords		☐ Walking trailer	
☐ Plant Trash		☐ Paper waste					

11.0 ELEMENTAL ANALYSIS OF MATERIAL / WASTE (TCLP and TOTAL METALS)

11.1 Permit Compliance Metals: (both Ash and Air permits) Units ☐ mg/Kg (parts per million or PPM – AND-
Units ☐ mg/ l TCLP for the RCRA 8 metals.

Aluminum_____mg/kg
Antimony_____mg/kg
Arsenic_____mg/kg_____mg/l
Barium_____mg/kg_____mg/l
Beryllium_____mg/kg
Molybdenum_____mg/kg
Chromium_____mg/kg_____mg/l
Chromium VI_____mg/kg
Copper_____mg/kg
Lead_____mg/kg_____mg/l
Mercury_____mg/kg_____mg/l
Nickel_____mg/ikg
Selenium_____mg/kg_____mg/l
Silver_____mg/kg_____mg/l
Zinc_____mg/kg
Cadmium_____mg/kg_____mg/l

If none are present please check here. None ☒

11.2 Additional Materials of concern to MSWS: Please verify if present and if so, give quantity and unti of measure.
Titanium_____%, Silicon_____%, Aluminum & Zirconium Salts_____%, Free Cyanides_____ppm, Free Sulfides_____ppm, Free Ammonia_____ppm, Cresols_____Total, Formaldehyde_____, Phenol_____.

If none are present please check here. None ☒

11.3 Please check the appropriate box (☐) if the waste contains any of the following:

Aerosols ☑	Oil Contamination ☑	Teflon / PTFE ☐	FIFRA Regulated Pesticides ☐	Isocyanates ☑	Sharps ☑		
Organic Solvent Contamination ☐	DEA Materials ☐	DOT Regulated Material ☑	Acrylates ☐				
Nicotine or salts ☐	Contaminated Empty Containers ☑	Fiberglass Waste ☐	Carbon and Carbon Filtration waste ☐				
Saccharin or salts ☐	Un-contaminated Empty Containers ☐	Leather Waste ☐	Paint / Varnish Contaminated waste ☑				

If none are present please check here. None ☐

12.0 GENERATOR CERTIFICATION (This section must be signed prior to the completion of any review)

I certify, as the generator, or, authorized representative of the generator, that the Material or Waste described in this Material Profile Form is NON-HAZARDOUS by all Federal, State and Local regulations. Furthermore, this information is complete and accurate to the best of my knowledge, no information about the Material or Waste composition or the known or potential hazards have been willfully omitted.

Generator Signature: _____

Name & Title (Printed or Typed): JOE DRUCKE PLANT MANAGER

Environmental Conservation Laboratories, Inc.
10207 General Drive
Orlando, Florida 32824-8529
407 / 826-5314
Fax 407 / 850-6945
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E83182

CLIENT : Chemical Conservation Corp.
ADDRESS: 10100 Rocket Blvd.
Orlando, FL 32824

REPORT # : ORL15290
DATE SUBMITTED: March 23, 2001
DATE REPORTED : April 9, 2001

ATTENTION: Beth Myers

SAMPLE IDENTIFICATION

Sample submitted and
identified by client as:

PROJECT #: 03-23-01

Chemical Conservation

03/23/01

#1 - Debris-Rags,Plastic

PROJECT MANAGER Marcia C. Terlep

ENCO LABORATORIES
REPORT # : ORL15290
DATE REPORTED: April 9, 2001
REFERENCE : 03-23-01
PROJECT NAME : Chemical Conservation

RESULTS OF ANALYSIS

EPA METHOD 1311/8260 - TCLP VOAS BY GC/MS	Debris-Rags,Plastic	LAB BLANK	Units
Benzene	200 U D1	2.0 U	µg/L
Carbon tetrachloride	200 U D1	2.0 U	µg/L
Chlorobenzene	200 U D1	2.0 U	µg/L
Chloroform	200 U D1	2.0 U	µg/L
1,2-Dichloroethane	200 U D1	2.0 U	µg/L
1,1-Dichloroethene	200 U D1	2.0 U	µg/L
2-Butanone	1000 U D1	10 U	µg/L
Tetrachloroethene	200 U D1	2.0 U	µg/L
Trichloroethene	200 U D1	2.0 U	µg/L
Vinyl Chloride	200 U D1	2.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Dibromofluoromethane	97	101	52-149
D8-Toluene	96	102	70-132
Bromofluorobenzene	94	95	60-135
Date Analyzed	04/02/01	04/02/01	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:100 dilution.

ENCO LABORATORIES
REPORT # : ORL15290
DATE REPORTED: April 9, 2001
REFERENCE : 03-23-01
PROJECT NAME : Chemical Conservation

RESULTS OF ANALYSIS

EPA METHOD 1311/8270 - TCLP SVOAS BY GC/MS	Debris-Rags,Plastic	LAB BLANK	Units
Total Cresol	150 U	30 U	µg/L
1,4-Dichlorobenzene	100 U	10 U	µg/L
2,4-Dinitrotoluene	100 U	10 U	µg/L
Hexachlorobenzene	100 U	10 U	µg/L
Hexachlorobutadiene	100 U	10 U	µg/L
Hexachloroethane	100 U	10 U	µg/L
Nitrobenzene	100 U	10 U	µg/L
Pentachlorophenol	100 U	10 U	µg/L
Pyridine	100 U	10 U	µg/L
2,4,5-Trichlorophenol	100 U	10 U	µg/L
2,4,6-Trichlorophenol	100 U	10 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Nitrobenzene -D5	53	71	39-131
2-Fluorobiphenyl	58	74	44-131
Terphenyl -D14	71	90	47-160
Phenol -D5	54	72	12-122
2-Fluorophenol	46	71	30-114
2,4,6-Tribromophenol	75	78	55-159
Date Prepared	03/30/01	03/30/01	
Date Analyzed	04/06/01	04/06/01	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : ORL15290
DATE REPORTED: April 9, 2001
REFERENCE : 03-23-01
PROJECT NAME : Chemical Conservation

RESULTS OF ANALYSIS

TCLP METALS	METHOD	Debris-Rags,Plastic	LAB BLANK	Units
TCLP Arsenic	1311/7060	0.050 U	0.010 U	mg/L
Date Analyzed		03/30/01	03/30/01	
TCLP Barium	1311/7080	2.0 U	0.50 U	mg/L
Date Analyzed		04/03/01	04/03/01	
TCLP Cadmium	1311/7130	0.10 U	0.020 U	mg/L
Date Analyzed		04/02/01	04/02/01	
TCLP Chromium	1311/7190	0.50 U	0.10 U	mg/L
Date Analyzed		04/04/01	04/04/01	
TCLP Lead	1311/7420	0.50 U	0.10 U	mg/L
Date Analyzed		04/02/01	04/02/01	
TCLP Mercury	1311/7470	0.025 U	0.00050 U	mg/L
Date Analyzed		04/03/01	04/03/01	
TCLP Selenium	1311/7740	0.050 U	0.010 U	mg/L
Date Analyzed		04/03/01	04/03/01	
TCLP Silver	1311/7760	0.20 U	0.040 U	mg/L
Date Analyzed		04/02/01	04/02/01	

MISCELLANEOUS	METHOD	Debris-Rags,Plastic	LAB BLANK	Units
BTU	ASTM/D240-85	6500	100 U	BTU/Lb
Date Analyzed		03/28/01	03/28/01	
Percent Solids	SM2540G	80	NA	%
Date Analyzed		03/26/01		

NA = Not applicable
U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : ORL15290
DATE REPORTED: April 9, 2001
REFERENCE : 03-23-01
PROJECT NAME : Chemical Conservation

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 1311/8260				
1,1-Dichloroethene	95/105/ 98	36-185	10	34
Benzene	97/104/ 98	65-143	7	25
Trichloroethene	98/100/ 96	51-152	2	28
Toluene	99/103/ 94	62-144	4	24
Chlorobenzene	103/112/104	64-140	8	23
EPA Method 1311/8270				
Phenol	60/ 59/ 65	23-102	2	44
2-Chlorophenol	64/ 63/ 72	42-124	2	41
1,4-Dichlorobenzene	64/ 62/ 69	23-127	3	43
N-Nitrosodi-N-Propylamine	60/ 60/ 68	35-122	<1	43
1,2,4-Trichlorobenzene	65/ 67/ 72	47-129	3	43
4-Chloro-3-methylphenol	68/ 68/ 74	40-139	<1	25
Acenaphthene	71/ 67/ 77	49-122	6	28
4-Nitrophenol	75/ 73/ 79	10-159	3	52
2,4-Dinitrotoluene	79/ 75/ 80	48-139	5	21
Pentachlorophenol	74/ 71/ 77	25-149	4	42
Pyrene	80/ 79/ 82	50-146	1	32

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

ENCO LABORATORIES
REPORT # : ORL15290
DATE REPORTED: April 9, 2001
REFERENCE : 03-23-01
PROJECT NAME : Chemical Conservation

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
TCLP METALS				
Arsenic, 1311/7060	107/107/ 97	56-125	<1	15
Barium, 1311/7080	115/113/116	68-120	2	12
Cadmium, 1311/7130	101/105/106	80-110	4	10
Chromium, 1311/7190	115/115/111	80-115	<1	10
Lead, 1311/7420	97/ 95/ 95	80-110	2	10
Mercury, 1311/7470	102/103/102	75-125	<1	12
Selenium, 1311/7740	95/ 98/103	50-135	3	15
Silver, 1311/7760	100/ 98/ 96	80-115	2	10

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

Mitchell, Bruce

To: Fancy, Clair
Cc: Sheplak, Scott
Subject: Blurb on Bay County RRF for requests to burn segregated waste streams.

5/10/2001

For the Bay County Resource Recovery Facility and over the last three months, we have received several requests to burn various segregated waste streams. Many of the waste streams fit within the initial Title V Operation Permit's approved fuels and were deemed acceptable. However, we have rejected three of the proposed segregated waste streams because of the design of the incinerator units, the potential pollutant emissions, and the lack of controls for certain pollutants that might be emitted. Montenay Bay, Inc., operates the facility and is being asked to incinerate various segregated waste streams found by an affiliate company called Onyx Specialty Waste Services, Inc. It appears that these types of requests will be recurring on a regular basis.

Table of Contents

Section I. Facility Information.

Subsection A. Facility Description.

The Bay Resource Management Center began commercial operation on May 1, 1987. It converts a maximum of 490 tons per day of non-recycled solid waste into saleable energy. The facility includes two municipal waste combustors (MWCs) that are both coupled to a common generator with a nameplate rating of 15 MW of electricity.

Based on the initial Title V permit application received June 10, 1996, this facility is a major source of hazardous air pollutants (HAPs).

The use of 'Permitting Notes' throughout this permit are for informational purposes, only, and are not permit conditions.

Subsection B. Summary of Emissions Unit ID Nos. and Brief Descriptions.

E.U. ID No.	Brief Description
-001	Municipal Waste Combustion Unit No. 1 (North)
-002	Municipal Waste Combustion Unit No. 2 (South)

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

<u>These documents are provided to the permittee for information purposes only:</u>
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History/ID Number Changes

<u>These documents are on file with permitting authority:</u>
Initial Title V Permit Application received June 10, 1996.
Letter from U.S.EPA received October 4, 1999, approving the derating of the MWC units.
DRAFT Title V Air Operation Permit clerked October 20, 1999.
Letter from the Bay County Board of County Commissioners received October 28, 1999, requesting changes to the Specific Conditions of the DRAFT Permit.
E-mail memorandum from U.S.EPA received January 26, 2000, providing informal comments.
PROPOSED Title V Air Operation Permit posted on the Internet on March 31, 2000.
E-mail memorandum from U.S.EPA received April 17, 2000, providing informal comments on the PROPOSED permit.
Letter dated July 28, 2000 from U.S.EPA providing comments on the PROPOSED permit.

Section II. Facility-wide Conditions.

The following Conditions apply facility-wide:

1. APPENDIX TV-3, TITLE V CONDITIONS, is a part of this permit.
{Permitting note: APPENDIX TV-3, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}

2. Not federally enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. No person shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.
[Rules 62-296.320(4)(b)1. & 4., F.A.C.]

4. Prevention of Accidental Releases (Section 112(r) of CAA).
a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable ; and
b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

5. Insignificant Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.
[Rules 62-213.440(1), 62-213.430(6) and 62-4.040(1)(b), F.A.C.]

6. General Pollutant Emission Limiting Standards. Volatile Organic Compounds Emissions or Organic Solvents Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

{Permitting Note: The Department has not ordered any control devices or systems under the referenced rule}.
[Rule 62-296.320(1)(a), F.A.C.]

7.0. Not federally enforceable. Reasonable Precautions. All fugitive dust generated at the site shall be adequately controlled. The following techniques shall be used to control unconfined particulate matter emissions on an as needed basis:

7.1. Paved and Unpaved Roads. Trucks delivering MSW, trucks removing ash, passenger vehicles, and other plant equipment use 0.112 miles of paved roads and 0.08 miles of unpaved roads at the facility. To minimize emissions from the paved roadways, a road sweeper shall be utilized to clean the areas twice per month. The unpaved areas shall be used infrequently by vehicles travelling from the tipping floor to the rear of the facility without exiting plant property.

7.2. Residue Handling. The residual material (ash) remaining after the solid waste is combusted shall be loaded via conveyor into trucks and hauled to the landfill. The ash shall be handled wet in order to minimize emissions. All ash shall be combined inside the boiler building and sent to the quench tank where it shall be submerged in water. A drag conveyor shall lift the material from the quench tank up an incline to allow standing water to drain. The material shall be then discharged into a roll-off container that is loaded onto a truck. The roll-off containers shall be covered before the trucks exit the site.

[Rule 62-296.320(4)(c)2., F.A.C.; AO03-165754 and AO03-16575, Specific Condition No. 27; and, Title V Permit Application]

8. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
[Rule 62-213.440, F.A.C.]

9. The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Northwest District office:

Department of Environmental Protection
Northwest District
160 Government Center
Pensacola, Florida 32501-5794
Telephone: 850/444-8364
Fax: 850/444-8417

10. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air & EPCRA Enforcement Branch, Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303
Telephone: 404/562-9155
Fax: 404/562-9163 or 404/562-9164

11. Statement of Compliance. The permittee shall submit a statement of compliance with all terms and conditions of the permit. {See condition 51., APPENDIX TV-3, TITLE V CONDITIONS}
[Rule 62-213.440(3), F.A.C.]

Section III. Emissions Unit(s) and Conditions.

Subsection A. This section addresses the following emissions units.

E.U. ID No.	Brief Description
-001	Municipal Waste Combustion Unit No. 1 (North)
-002	Municipal Waste Combustion Unit No. 2 (South)

These two Municipal Waste Combustor (MWC) emissions units are identical in configuration. The manufacturer is O'Connor Combustor. The electric generator nameplate rating is 15 MW. Particulate matter emissions are controlled by an electrostatic precipitator at each MWC. Sulfur dioxide emissions are controlled by the low sulfur content of fuels. Stack height is 125 feet. The emissions units' initial startup date was May 1, 1987.

{Permitting note(s): These emissions units are regulated under NSPS - 40 CFR 60, Subpart E, Standards of Performance for Incinerators, adopted and incorporated by reference in Rule 62-204.800(7)5., F.A.C.; Rule 212.400(5), F.A.C., Prevention of Significant Deterioration (PSD)(Permit No. PSD-FL-129); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination.}

The following conditions apply to the emissions unit(s) listed above:

General.

A.1. Definitions. For the purposes of Rule 62-204.800(7), F.A.C., the definitions contained in the various provisions of 40 CFR 60, shall apply except that the term "Administrator" when used in 40 CFR 60, shall mean the Secretary or the Secretary's designee.
[40 CFR 60.2; Rule 62-204.800(7)(a), F.A.C.]

A.2. Circumvention. No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[40 CFR 60.12]

Essential Potential to Emit (PTE) Parameters

A.3.1. Capacity.
(a) The maximum charging rate of each of the two MWC's shall not exceed 245 tons of municipal solid waste (MSW) per day (a total of 490 tons per day for the facility). The maximum heat input rate shall not exceed 91.875 MMBtu per hour, assuming a heating value of 4,500 Btu per pound. Steam flow rate shall not exceed an average of 65,333 lbs/hr over any 24-hour rolling average period for each unit. Steam flow shall not exceed an average of 66,667 lbs/hr over any 4-hour block arithmetic averaging period for each unit. A seven-day average, as of 8 a.m., Monday, shall be maintained as a weekly record. To determine compliance with the maximum charging capacity, the steam flow meter shall be calibrated, maintained, and operated to measure steam flow in pounds per hour on a continuous basis, and record the

output of the monitor. The normal operating range of the of the MWCs shall be 80% to 100% of the design rated capacity.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, PSD-FL-129]

A.3.2.0. Operational Requirements.

A.3.2.1. Compliance Plan.

After the physical modifications are completed, the maximum charging rate of each municipal waste combustor shall be 245 tons of municipal solid waste per day (a total of 490 tons per day for the facility); 91.875 MMBtu heat input per hour, assuming a heating value of 4500 Btu per pound; and a steam production rate of 65,333 lbs/hr.

A.3.2.2. A demonstration test shall be performed to verify the hourly steam flow rate at full load and establish the maximum demonstrated MWC unit load. As approved, Bay County is required to submit a protocol for testing which includes: (1) testing occurring over a 72-hour period; (2) testing conducted in accordance with the applicable requirements of 40 CFR 60.8 (performance tests); and (3) and opportunity for a Department and/or an U.S. EPA observer to be present at the demonstration test. Bay County shall achieve final compliance with all operating restrictions and monitoring requirements for the derated units by December 19, 2000.

A.3.2.3. The owner or operator shall install, calibrate, maintain, and operate a steam flow meter, measure steam flow in pounds per hour on a continuous basis, and record the output of the monitor.

A.3.2.4. Steam flow shall be calculated in 24-hour rolling averaging periods, calculated from six consecutive 4-hour block arithmetic averaging periods for each unit.

A.3.2.5. Steam flow shall not exceed an average of 65,333 lbs/hr over any 24-hour rolling average period for each unit (provided the demonstrated full load steam flow rate/maximum demonstrated MWC unit load is less than or equal to 65,333 lbs/hr; otherwise, the full load steam flow rate determined from the demonstration test will be used).

A.3.2.6. Steam flow shall not exceed an average of 66,667 lbs/hr over any 4-hour block arithmetic averaging period for each unit.

A.3.2.7. The monitoring data must be maintained for periodic inspections by the Department and U.S. EPA, Region 4.

A.3.2.8. Any 24-hour average steam flow in excess of 65,333 lbs/hr for each unit (or the full load steam flow rate determined from the demonstration test) must be reported within seven calendar days to the Department and the U.S. EPA, Region 4.

A.3.2.9. Any 4-hour block arithmetic average steam flow rate in excess of 66,667 lbs/hr for each unit must be reported within seven calendar days to the Department and U.S. EPA, Region 4.

[Rules 62-4.070(3) and 62-213.440(1), F.A.C.]

A.4. Emissions Unit Operating Rate Limitation After Testing. See Specific Condition **A.39.**
[Rule 62-297.310(2), F.A.C.]

A.5.0.0. Methods of Operation.

A.5.1.0. Fuels.

A.5.1.1. The only fuels allowed to be burned in the MWCs are municipal solid waste and wood waste, with distillate fuel oil as an auxiliary fuel. Other wastes shall not be burned without written prior approval from the Department. The wood waste utilization rate shall not exceed 160 tons per day for the facility. Wood waste shall be used when sufficient MSW is not available to maintain a steady heat rate. [PSD-FL-129]

A.5.1.2. The primary fuel for the facility is municipal solid waste (MSW), including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), Florida Statutes (1995).
[Rule 62-4.070(3), F.A.C.]

A.5.1.3. Unauthorized Fuel. Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described in Specific Conditions **A.5.1.6.**, **A.5.1.7.**, and **A.5.1.8.**, below. However, the facility

(a) shall not burn:
  (1) those materials that are prohibited by state or federal law;
  (2) those materials that are prohibited by this permit;
  (3) lead acid batteries;
  (4) hazardous waste;
  (5) nuclear waste;
  (6) radioactive waste;
  (7) sewage sludge;
  (8) explosives;
  (9) beryllium-containing waste, as defined in 40 CFR 61, Subpart C.
(b) and shall not knowingly burn:
  (1) untreated biomedical waste;
  (2) segregated loads of biological waste.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.4. The fuel may be received either as a mixture or as a single-item stream (segregated load) of discarded materials. If the facility intends to use an authorized fuel that is segregated non-MSW material, the fuel shall be either:

(a) well mixed with MSW on the tipping floor; or
(b) alternately charged with MSW in the hopper.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.5. The facility operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility, and subject to a percentage weight limitation, below (Specific Conditions **A.5.1.7.** and **A.5.1.8.**). For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogeneous composition of waste material, as determined by visual observation.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.6. Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:

(a) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
(b) Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
(c) Wood pallets, clean wood, and land clearing debris;
(d) Packaging materials and containers;
(e) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or
(f) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.7. Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30-day average.
[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.1.8. Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e., the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30-day average.

(a) Construction and demolition debris.
(b) Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.
(c) Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.
(d) Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.
(e) Waste materials that:
    (i) are generated in the manufacture of items in categories (c) or (d), above and are functionally or commercially useless (expired, rejected or spent); or
    (ii) are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.
(f) Waste materials that contain oil from:

(i) the routine cleanup of industrial or commercial establishments and machinery; or
(ii) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.

(g) Used oil and used oil filters. Used oil containing a PCB concentration equal or greater than 50 ppm shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).

(h) Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to prior approval of the Department.

[Rules 62-4.070(3), 62-213.410, and 62-213.440, F.A.C.]

A.5.2.0. Auxiliary Fuel Burners. These devices shall be used at startup during the introduction of MSW fuel until design furnace gas temperature is achieved. They shall be fueled only with distillate fuel oil or natural gas. If the annual capacity value for distillate fuel oil or natural gas is greater than 10%, as determined by 40 CFR 60.43b(e), the facility shall be subject to 40 CFR 60.44b, Standards for Nitrogen Oxides.
[Rules 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; and, PSD-FL-129]

A.5.3.0. Operating Temperature. The furnace mean temperature at the fully mixed zones of the combustors shall not be less than 1,800 ^{o} F. This corresponds to a minimum flue gas temperature of 673 ^{o} F, as determined from a March 7, 1991 testing and modeling report.
[Rules 62-4.070(3), 62-4.160(2), 62-210.200, and 62-213.440(1), F.A.C.; and, PSD-FL-129]

A.6. Hours of Operation. These emissions units are allowed to operate continuously, i.e., 8,760 hours/year.
[Rule 62-210.200(PTE), F.A.C.; and, PSD-FL-129]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.7. Visible Emissions. The emission limit for opacity exhibited by the gases discharged to the atmosphere is 15 percent (6-minute average).
[PSD-FL-129]

A.8. Particulate Matter. The emission limit for particulate matter (PM) contained in the gases discharged to the atmosphere is 0.03 gr/dscf, corrected to 12 percent carbon dioxide.
[40 CFR 60.52; and, PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.9. PM and PM_{10}. Flue gas emissions for PM and PM_{10} shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
6.8	13.5	59.1

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.10. Sulfur Dioxide. Flue gas emissions for sulfur dioxide shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
35.8	71.5	313.2

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.11. Nitrogen Oxides. Flue gas emissions for nitrogen oxides shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
26.9	53.9	236.1

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.12. Carbon Monoxide. Flue gas emissions for carbon monoxide shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
92.8	185.6	812.9

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.13. Volatile Organic Compounds (VOCs). Flue gas emissions for VOCs shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
7.1	14.2	62.2

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.14. Lead. Flue gas emissions for lead shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
0.10	0.20	0.876

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.15. Mercury. Flue gas emissions for mercury shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
0.18	0.36	1.58

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.16. Fluoride. Flue gas emissions for fluoride shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
0.15	0.30	1.31

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.17. Beryllium. Flue gas emissions for beryllium shall not exceed the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
5×10^{-6}	1×10^{-5}	4.4×10^{-5}

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.18. Hydrogen Chloride. Projected emissions for PSD and inventory purposes are the following:

Per unit	Facility	Facility
Lbs/hr	Lbs/hr	Tons per year
61.7	123.3	540.0

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

A.19. Sulfuric Acid Mist. Projected emissions for PSD and inventory purposes are the following:

Per unit	Facility	Facility

Lbs/hr	Lbs/hr	Tons per year
1.5	3.0	13.1

[PSD-FL-129]
{Permitting note: The averaging time for this condition is based on the run time of the specified test method.}

Excess Emissions

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of an NSPS, NESHAP, or Acid Rain program provision.}

A.20. The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
[40 CFR 60.11(c)]

A.21. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
[40 CFR 60.11(d)]

A.22. Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

A.23. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

A.24. Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
[40 CFR 60.8(c)]

A.25. Tests shall be conducted in accordance with EPA Methods 1, 2, 3, and 4.
[PSD-FL-129]

A.26. *Annual emissions tests* for visible emissions, particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, lead, mercury, and beryllium are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that each emissions unit is capable of compliance at the permitted maximum operating rate. Results shall be submitted to the Department within 45 days of testing. The Department shall be notified at least 15 days prior to testing to allow witnessing.
[PSD-FL-129]

A.27. Visible Emissions. Compliance with the standards for opacity shall be determined by testing on an *annual basis* using EPA Method 9. See Specific Condition **A.45.**
[PSD-FL-129]

A.28. Particulate Matter. Compliance with the standards for particulate matter shall be determined by testing on an *annual basis* using EPA Method 5. The minimum sampling volume shall be 30 dry standard cubic feet.
[PSD-FL-129; and, 40 CFR 60.54(b)(2)]

A.29. Sulfur Dioxide. Compliance with the standards for sulfur dioxide shall be determined by testing on an *annual basis* using EPA Method 6, 6C, or 8.
[PSD-FL-129]

A.30. Nitrogen Oxides. Compliance with the standards for nitrogen oxides shall be determined by testing on an *annual basis* using EPA Method 7, 7A, 7C, 7D, or 7E.
[PSD-FL-129]

A.31. For fluoride emissions, the permittee is required to show continuing compliance with the standards of the Department. Periodic testing may be required if Department inspections show a need for such tests. The test results must provide reasonable assurance that each emissions unit is capable of compliance at the permitted maximum operating rate.
[PSD-FL-129]

A.32. Carbon Monoxide. EPA Method 10 shall be used to determine compliance on an annual basis.
[PSD-FL-129]

A.33. Volatile Organic Compounds. EPA Method 25 or 25A shall be used to determine compliance on an annual basis.
[PSD-FL-129]

A.34. Lead. Compliance with the standards for lead shall be determined by testing using EPA Method 12 on an annual basis.
[PSD-FL-129]

A.35. Mercury. Compliance with the standards for mercury shall be determined by testing using EPA Method 101A on an annual basis.
[PSD-FL-129]

A.36. Fluorides. EPA Method 13B shall be used to ensure compliance on a once per five-year basis for permit renewal.
[PSD-FL-129]

A.37. Beryllium. EPA Method 104 shall be used to ensure compliance on an annual basis.
[PSD-FL-129]

A.38. Required Number of Test Runs. For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.
[Rule 62-297.310(1), F.A.C.]

A.39. Operating Rate During Testing. Testing of emissions shall be conducted with the emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rules 62-297.310(2) & (2)(b), F.A.C.]

A.40. Calculation of Emission Rate. The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

A.41. Applicable Test Procedures.
(a) Required Sampling Time.
1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per

year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

{Permitting note: Specific Condition **A.28.** specifies a minimum sample volume of 30 dry standard cubic feet.}

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, attached as part of this permit.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

A.42. Required Stack Sampling Facilities. When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

A.43. Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 - September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
   a. Visible emissions, if there is an applicable standard;
   b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; or 100 tons per year or more of any other regulated air pollutant; and
   c. Each NESHAP pollutant, if there is an applicable emission standard.
5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.; and, SIP approved]

Compliance With Standards and Maintenance Requirements

A.44. Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined in accordance with performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

[40 CFR 60.11(a)]

A.45. Compliance with opacity standards in 40 CFR 60 shall be determined by conducting observations in accordance with Reference Method 9 in Appendix A of 40 CFR 60, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5). See Specific Condition **A.27.**

[40 CFR 60.11(b)]

A.46. The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of EPA Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he or she shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40

CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which EPA Method 9 data indicates noncompliance, the EPA Method 9 data will be used to determine opacity compliance.
[40 CFR 60.11(e)(5)]

Monitoring Requirements

A.47. Devices shall be maintained to continuously monitor and record steam production, furnace exit gas temperature (FEGT) and flue gas temperature at the exit of the control equipment. An FEGT to combustion zone correlation shall be established to relate furnace temperature at the temperature monitor location to furnace temperature in the overfire air fully mixed zone.
[PSD-FL-129]

A.48. The furnace heat load shall be maintained between 80% and 100% of the design rated capacity during normal operations. The lower limit may be extended provided compliance with the carbon monoxide emissions limit and the FEGT within this permit at the extended turndown rate are achieved.
[PSD-FL-129]

Continuous Emissions Monitoring

A.49.0. Continuous emissions monitors (CEMs) for opacity, oxygen, and carbon monoxide shall be calibrated, maintained, and operated for each unit. This shall be in accordance with 40 CFR 60, Subpart A, Section 60.13.

A.49.1. In the event of a replacement of a major component of a CEM, a performance specification test, in accordance with 40 CFR 60, Appendix B, shall be conducted within 60 days of such replacement.

A.49.2. CEMs data shall be recorded during periods of startup, shutdown, and malfunction, but shall be excluded from emissions averaging calculations for carbon monoxide and opacity.

A.49.3. A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

A.49.4. The procedures under 40 CFR 60.13 shall be followed for evaluation and operation of all CEMs.

A.49.5. Opacity monitoring system data shall be reduced to 6-minute averages, based on 36 or more data points, and gaseous CEMs data shall be reduced to 1-hour averages, based on 4 or more data points, in accordance with 40 CFR 60.13(h).

A.49.6. Carbon monoxide emissions, corrected to 7% oxygen, shall be recorded. A wet oxygen monitor may be used for carbon monoxide emission correction. A wet oxygen reading shall be corrected to a dry basis using a moisture correction determined annually using EPA Method 4. A carbon monoxide value of 400 ppmvd shall indicate good combustion.

A.49.7. For purposes of reports required under this permit, excess emissions are defined as any calculated average emission concentration, as determined pursuant to Specific Conditions **A.47.** and **A.48.**, which exceeds the applicable emission limits in Specific Conditions **A.7.** through **A.17.**

A.49.8. Quality Assurance Procedures of 40 CFR 60 Appendix F applicable to these CEMs shall be adhered to. These shall include, but not be limited to:

Calibration Drift Assessment – The permittee shall keep all required records, and make them available for Department inspection. The permittee shall report as soon as possible by telephone any instances of Out-of-Control Periods due to calibration drift criteria.

Data Accuracy Assessment -- The permittee shall keep all required records, and make them available for Department inspection. The permittee shall report as soon as possible by telephone any instances of Out-of-Control Periods due to excessive inaccuracy.

Reporting Requirements – The permittee shall submit a Data Assessment Report for each quarterly audit on each CEM.
[PSD-FL-129]

A.50. For the purposes of 40 CFR 60.13, all continuous monitoring systems (CMS) required under applicable subparts shall be subject to the provisions of 40 CFR 60.13 upon promulgation of performance specifications for continuous monitoring systems under Appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, Appendix F of 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.
[40 CFR 60.13(a)]

A.51. If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, Appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in Appendix B of 40 CFR 60. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.
(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 60.8 and as described in 40 CFR 60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS

performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 60.8 is conducted.
[40 CFR 60.13(c)(1)]

A.52. (1) Owners and operators of all continuous emission monitoring systems (CEMS) installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.
(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.
[40 CFR 60.13(d)(1) and (2)]

A.53. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems (CMS) shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
(2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
[40 CFR 60.13(e)(1) and (2)]

A.54. All continuous monitoring systems (CMS) or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of Appendix B of 40 CFR 60 shall be used.
[40 CFR 60.13(f)]

A.55. When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems (CMS) on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure

the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.
[40 CFR 60.13(g)]

A.56. Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).
[40 CFR 60.13(h)]

A.57. Determination of Process Variables.
(a) Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5), F.A.C.]

Recordkeeping and Reporting Requirements

A.58. All reporting required by 40 CFR 60.7, 60.13, and 60.53 shall be adhered to.
[AO03-165754 and AO03-165755, Specific Condition No. 24]

A.59. The owner or operator of the facility shall submit excess emissions reports for every calendar quarter within 30 days after the quarter. If there are no excess emissions during a quarter, the report will so state.
[PSD-FL-129]

A.60. Any change in the method of operation, fuels, equipment, or operating hours shall be submitted for approval to the Department's Northwest District Office.
[PSD-FL-129]

A.61. The owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
[40 CFR 60.7(a)(4)]

A.62. The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or, any periods during which a continuous monitoring system or monitoring device is inoperative.
[40 CFR 60.7(b)]

A.63. Each owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form [see 40 CFR 60.7(d)] to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or, the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or, the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:
(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
[40 CFR 60.7(c)(1), (2), (3), and (4)]

A.64. The summary report form shall contain the information and be in the format shown in Figure 1 (attached) unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.
(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.
(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.
[40 CFR 60.7(d)(1) and (2)]

{See attached Figure 1: Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance} (electronic file name: figure1.doc)

A.65. (1) Notwithstanding the frequency of reporting requirements specified in 40 CFR 60.7(c), an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in 40 CFR 60, Subpart A, and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in 40 CFR 60.7(e)(2).

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in 40 CFR 60.7(e)(1) and (e)(2).
[40 CFR 60.7(e)(1)]

A.66. Any owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and, all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least **5 (five)** years following the date of such measurements, maintenance, reports, and records.
[40 CFR 60.7(f); and, Rule 62-213.440(1)(b)2.b., F.A.C.]

A.67. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700(6), F.A.C.]

A.68. The owner or operator shall submit to the Department a written report of emissions in excess of emission limiting standards for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Facility for a period of five years.
[Rule 62-213.440, F.A.C.]

A.69. Test Reports.
(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
(b) The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.

18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.
[Rule 62-297.310(8), F.A.C.]

A.70. Monitoring of Operations.
The owner or operator of any incinerator subject to the provisions of 40 CFR 60.53 shall record the daily charging rates and hours of operation.
[40 CFR 60.53]

A.71. Additional Daily Recordkeeping Requirements.
The owner or operator of the facility shall maintain daily records of: (a) the total tons of waste charged to each municipal waste combustor, (b) the charging rates of wood waste, (c) the charging rates of waste tires, (d) the charging rates of non-MSW material listed in Specific Condition **A.5.1.8.**, and (e) the fuel oil and natural gas quantities utilized during startup and shutdown of operations.
[Rule 62-213.440(1), F.A.C.]

Periodic Monitoring

A.72. The existing COMs will be used for purposes of periodic monitoring of PM emissions. If the opacity standard is exceeded, a PM performance test may be required. The stack test shall comply with all of the testing and reporting requirements contained in the preceding specific conditions, and where practicable, shall be performed while operating at conditions representative of opacity levels which triggered the test.
[Rule 62-213.440(1)(b)1.b., F.A.C.]

Appendix I-1. List of Insignificant Emissions Units and/or Activities.

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

	Brief Description of Emissions Units and/or Activities
1	Plant Grounds Maintenance (small engines)
2	Maintenance and Repair Activities (cleaning, painting, etc.)
3	Main Steam Pressure Relief Valves
4	Office Activities (vacuum cleaning, refrigerators, etc.)
5	Chemical Storage Tanks (sulfuric acid: 1500 gallons; propane: 125 gallons, etc.)
6	Testing and Monitoring Equipment (CEMs, stack sampling calibration gases, etc.)
7	Fire/Safety Diesel Pump
8	HVAC Equipment
9	Various Vents/Exhausts (boiler feed pump relief valve, etc.)
10	Air Compressors
11	Waste Accumulation (10 gallon closed containers)
12	Fuel Oil Storage Tanks (4000 gallon, 1000 gallon, and 250 gallon)
13	Laboratory Vents
14	Air Compressors
15	Cooling Tower
16	Transportation/Conveying and Hauling of Waste and Ash
17	Road Emissions