

8424 4th St. N. Suite G  
St. Petersburg, FL 33702  
(727) 579-0403  
Fax (727) 579-0205

**TomJohn Engineering, Inc.**

**RECEIVED**

February 22, 2001

APR 23 2001

Mr. Art Lyall, P.E.  
FL Dept of Environmental Protection  
2295 Victoria Avenue Suite 364  
Ft. Myers, Florida 33901-3881

BUREAU OF AIR REGULATION

**RECEIVED**

MAR 16 2001

**D.E.P. - South District**

re: Alpha General Services, Inc

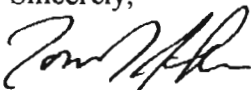
Dear Mr. Lyall:

As environmental engineer of record for the referenced facility, and in conjunction with Alpha General Services, Incorporated, we are submitting the enclosed set of four applications for an FDEP Title V Air Construction Permit Application for the Alpha General Services facility located in Highlands County. Additional copies of the application are available upon request.

The facility is currently a Synthetic Minor Source; upon issuance of this permit the facility will become a Major Source under Title V. The applications contain original signatures and seal, and are accompanied by a check for \$1000.00 as the processing fee for a construction/modification permit for a source emissions increase of more than 5 but less than 25 tons per year. This is in addition to the current permitted emission level.

Thank you for your assistance in this project. Should you have any questions or if I can provide any additional information, please contact me at my office.

Sincerely,

  
Tom T. John, P.E.

Enclosures: as stated

TTJ:dj

Tom John Engineering  
8424 4<sup>th</sup> Street N. Suite K  
St. Petersburg, FL 33702  
(727) 579 - 0403

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## **Title V**

# **Air Construction Permit Application**

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Alpha General Services, Inc  
Highlands County  
Sebring, Florida

**February 22, 2001**

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### **Application for Air Construction Permit Title V Source**

#### **Alpha General Services, Incorporated**

#### **Construction Permit Application**

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##### **II Facility Information**

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##### **Reinforced Fiberglass Composites**

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Facility Layout

Attachment 2 ..... Process Flow Diagram, Process  
Description and Emissions Estimates

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Attachment 4 ..... Additional Applicable Requirements  
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## Application Information



# Department of Environmental Protection

## Division of Air Resources Management

### APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

#### L APPLICATION INFORMATION

##### Identification of Facility

1. Facility Owner/Company Name: Alpha General Services, Incorporated	
2. Site Name: Alpha General Services, Incorporated	
3. Facility Identification Number: 0550036 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: 1578 Alpha Road City: Sebring County: Highlands Zip Code: 33870	
5. Relocatable Facility? [ ] Yes [ X ] No	6. Existing Permitted Facility? [ X ] Yes [ ] No

##### Application Contact

1. Name and Title of Application Contact: Tom T. John, P.E.	
2. Application Contact Mailing Address: Organization/Firm: Tom John Engineering, Inc. Street Address: 8424 4 <sup>th</sup> Street North Suite K City: St. Petersburg State: Florida Zip Code: 33702	
3. Application Contact Telephone Numbers: Telephone: (727) 579 - 0403 Fax: (727) 579 - 0205	

##### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

## **Purpose of Application**

### **Air Operation Permit Application NOT APPLICABLE**

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- ☐ Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: \_\_\_\_\_

- ☐ Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: \_\_\_\_\_

Operation permit number to be revised: \_\_\_\_\_

- ☐ Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: \_\_\_\_\_

- ☐ Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: \_\_\_\_\_

Reason for revision: \_\_\_\_\_

### **Air Construction Permit Application**

This Application for Air Permit is submitted to obtain: (Check one)

- ☒ Air construction permit to construct or modify one or more emissions units.
- ☐ Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- ☐ Air construction permit for one or more existing, but unpermitted, emissions units.

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: Mr. Paul H. Poore, President
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Alpha General Services, Incorporated Street Address: 1578 Alpha Road City: Sebring State: Florida Zip Code: 33870
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: ( 863 ) 382 - 1544 Fax: ( 863 ) 382 - 0567
4. Owner/Authorized Representative or Responsible Official Statement:  <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ X ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  <div style="display: flex; justify-content: space-between;"><div>Signature <u>Paul H. Poore</u></div><div>Date <u>3-12-01</u></div></div>

\* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: Tom T. John, P.E Registration Number: 33157
2. Professional Engineer Mailing Address: Organization/Firm: Tom John Engineering, Inc Street Address: 8424 4 <sup>th</sup> Street North, Suite K City: St. Petersburg State: Florida Zip Code: 33702
3. Professional Engineer Telephone Numbers: Telephone: ( 727 ) 579 - 0403 Fax: ( 727 ) 579 - 0205

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:*

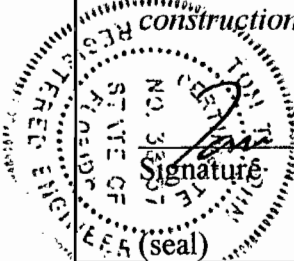
*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here [ NA ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ X ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ X ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*



22 February 2007  
Date

\* Attach any exception to certification statement.



**Scope of Application**

<b>Emissions Unit ID</b>	<b>Description of Emissions Unit</b>	<b>Permit Type</b>	<b>Processing Fee</b>
001	Fiberglass reinforced septic tanks and related products - resin application, mold care, and related assembly and cleanup activities - increase in permitted emissions above current levels	AC1E	\$1000.00

**Application Processing Fee**

Check one: ☒ Attached - Amount: \$ 1000.00    ☐ Not Applicable

**Construction/Modification Information****1. Description of Proposed Project or Alterations:**

This project is for an increase in permitted emissions and the concomitant increase in material usages for a manufacturer of fiberglass reinforced septic tanks and related products. The styrene emissions will make the facility subject to Title III and Title V, CAAA (1990).

**2. Projected or Actual Date of Commencement of Construction:**

permit receipt

**3. Projected Date of Completion of Construction:**

one year from permit receipt

**Application Comment**

Activities and record keeping will be in accordance with permit conditions as required to provide reasonable assurance of compliance with emission limitations.

## Facility Information

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

#### Facility Location and Type

1. Facility UTM Coordinates: Zone: 17                                      East (km): 458.583                                      North (km): 3040.48			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 027/29/18                                      Longitude (DD/MM/SS): 081/25/09			
3. Governmental Facility Code: 0	4. Facility Status Code: C	5. Facility Major Group SIC Code: 30	6. Facility SIC(s):  3089
7. Facility Comment (limit to 500 characters):  The construction application requests and increase in the allowable VOC emissions (principally styrene). These emissions will make the facility subject to CAAA (1990) Title III and Title V.			

#### Facility Contact

1. Name and Title of Facility Contact: Paul H. Poore, President
2. Facility Contact Mailing Address: Organization/Firm: Alpha General Services, Incorporated Street Address: 1578 Alpha Road City: Sebring State: Florida Zip Code: 33870
3. Facility Contact Telephone Numbers: Telephone: ( 863 ) 382-1544                                      Fax: (863) 382-0567

**Facility Regulatory Classifications****Check all that apply:**

1. <input type="checkbox"/> Small Business Stationary Source?	<input checked="" type="checkbox"/> Unknown
2. <input type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters): Monthly record keeping of materials used and calculation of emissions is proposed as demonstration of compliance with presumptive MACT and permit conditions.	

**List of Applicable Regulations**

62-296.320(1), F.A.C.	General VOC Standards
62-296.320(2), F.A.C.	Objectionable Odor Prohibition
62-296.320(4)(b), F.A.C.	General Visible Emission Standard
62-296.320(4)(c), F.A.C.	Unconfined Emissions of Particulate Matter
62-297, F.A.C.	Testing, Reporting and Record Keeping
Title V Core List, following	

[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

**Federal:***(description)*

40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR 61, Subpart M: National Emission Standard for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

**State:***(description)***CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95**

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62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application.

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

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62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review.

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

**CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE,  
effective 12-31-95**

62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.

62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to  
Administrative Proceeding.

**CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 03-21-96**

62-210.300, F.A.C.: Permits Required.

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62-210.300(2), F.A.C.: Air Operation Permits.

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62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.350, F.A.C.: Public Notice and Comment.

62-210.350(3), F.A.C.: Additional Public Notice Requirements for Facilities Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.650, F.A.C.: Circumvention.

62-210.900, F.A.C.: Forms and Instructions.

62-210.900(1) Application for Air Permit - Long Form, Form and Instructions.

62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.

**CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 03-20-96**

62-213.205, F.A.C.: Annual Emissions Fee.

62-213.400, F.A.C.: Permits and Permit Revisions Required.

62-213.410, F.A.C.: Changes Without Permit Revision.

62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.

62-213.420, F.A.C.: Permit Applications.

62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.

62-213.440, F.A.C.: Permit Content.

62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.

62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form, Form and Instructions.

**CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective 11-30-94**

**CHAPTER 62-257, F.A.C.: ASBESTOS NOTIFICATION AND FEE, effective 03/24/96**

**CHAPTER 62-281, F.A.C.: MOTOR VEHICLE AIR CONDITIONING REFRIGERANT RECOVERY AND RECYCLING, effective 03-07-96**

**CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-13-96**

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

62-296.320(3), F.A.C.: Industrial, Commercial, and Municipal Open Burning Prohibited.

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.

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## B. FACILITY POLLUTANTS

MAR 20 1999

**List of Pollutants Emitted**

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year*		
Individual HAP (styrene, H163)	M	Not Applicable	36	other	styrene is anticipated to be dominant volatile HAP species
total HAP	M	Not Applicable	36	other	includes styrene and other volatile HAP species
total VOC	B	Not Applicable	36	other	includes all volatile HAP species

\*Requested increase of 25 TPY over current Facility permitted levels

MAR 29 1974

### List of Pollutants Emitted

[illegible]DEP Form No. 62-210.900(1) - Form  
Effective: 2/11/99

## B. FACILITY POLLUTANTS

### **List of Pollutants Emitted**

[illegible]

**\*Requested increase of 24 TPY over current Facility permitted levels**

## C. FACILITY SUPPLEMENTAL INFORMATION

### Supplemental Requirements

1. Area Map Showing Facility Location: [ X ] Attached, Document ID: <u>1</u> [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [ X ] Attached, Document ID: <u>1</u> [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [ X ] Attached, Document ID: <u>2</u> [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ X ] Attached, Document ID: <u>4</u> [ ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ X ] Attached, Document ID: <u>2</u> [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ X ] Attached, Document ID: <u>3, 5</u> [ ] Not Applicable
7. Supplemental Requirements Comment:  Applicant's discussion of presumptive MACT compliance is presented in Attachment 3 Representative Material Safety Data Sheets are presented in Attachment 5

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

8. List of Proposed Insignificant Activities: [ X ] Attached, Document ID: <u>4</u> [ ] Not Applicable
9. List of Equipment/Activities Regulated under Title VI: [ ] Attached, Document ID: _____ [ ] Equipment/Activities On site but Not Required to be Individually Listed [ X ] Not Applicable
10. Alternative Methods of Operation: [ ] Attached, Document ID: _____ [ X ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID: _____ [ X ] Not Applicable
12. Identification of Additional Applicable Requirements: [ X ] Attached, Document ID: <u>4</u> [ ] Not Applicable
13. Risk Management Plan Verification: [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) [ ] Plan to be submitted to CEPPO (Date required: _____) [ X ] Not Applicable
14. Compliance Report and Plan: [ ] Attached, Document ID: _____ [ X ] Not Applicable
15. Compliance Certification (Hard-copy Required): [ ] Attached, Document ID: _____ [ X ] Not Applicable

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## B. FACILITY POLLUTANTS

### **List of Pollutants Emitted**

[illegible]

**\*Requested increase of 24 TPY over current Facility permitted levels**

## C. FACILITY SUPPLEMENTAL INFORMATION

### Supplemental Requirements

1. Area Map Showing Facility Location: [ X ] Attached, Document ID: <u>1</u> [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [ X ] Attached, Document ID: <u>1</u> [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [ X ] Attached, Document ID: <u>2</u> [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ X ] Attached, Document ID: <u>4</u> [ ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ X ] Attached, Document ID: <u>2</u> [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ X ] Attached, Document ID: <u>3, 5</u> [ ] Not Applicable
7. Supplemental Requirements Comment:  Applicant's discussion of presumptive MACT compliance is presented in Attachment 3 Representative Material Safety Data Sheets are presented in Attachment 5

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

8. List of Proposed Insignificant Activities: [ X ] Attached, Document ID: <u>4</u> [ ] Not Applicable
9. List of Equipment/Activities Regulated under Title VI: [ ] Attached, Document ID: _____ [ ] Equipment/Activities On site but Not Required to be Individually Listed [ X ] Not Applicable
10. Alternative Methods of Operation: [ ] Attached, Document ID: _____ [ X ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID: _____ [ X ] Not Applicable
12. Identification of Additional Applicable Requirements: [ X ] Attached, Document ID: <u>4</u> [ ] Not Applicable
13. Risk Management Plan Verification: [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) [ ] Plan to be submitted to CEPPO (Date required: _____) [ X ] Not Applicable
14. Compliance Report and Plan: [ ] Attached, Document ID: _____ [ X ] Not Applicable
15. Compliance Certification (Hard-copy Required): [ ] Attached, Document ID: _____ [ X ] Not Applicable

## Emission Unit Information

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION**  
**(All Emissions Units)**

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one) <input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent). <input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions. <input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one) <input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. <input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Manufacture of fiberglass septic tanks and related structures utilizing styrene based resins; includes mold care, assembly and cleanup materials.			
4. Emissions Unit Identification Number: ID: 001		<input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown	
5. Emissions Unit Status Code: C	6. Initial Startup Date: Permit Receipt	7. Emissions Unit Major Group SIC Code: 30	8. Acid Rain Unit? <input checked="" type="checkbox"/> No
9. Emissions Unit Comment: (Limit to 500 Characters)  Currently facility operates under permit as synthetic minor source.			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

No controls for VOC emissions; see Attachment 2.

2. Control Device or Method Code(s): NA

**Emissions Unit Details**

1. Package Unit: **Not Applicable**

Manufacturer: Not Applicable

Model Number: Not Applicable

2. Generator Nameplate Rating: **Not Applicable** MW

3. Incinerator Information: **Not Applicable**

Dwell Temperature:

°F

Dwell Time:

seconds

Incinerator Afterburner Temperature:

°F



**B. EMISSIONS UNIT CAPACITY INFORMATION**  
(Regulated Emissions Units Only)

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate: <b>Not Applicable</b>			
2. Maximum Incineration Rate:		<b>Not Applicable</b> lb/hr	tons/day
3. Maximum Process or Throughput Rate: <b>Not Applicable</b>			
4. Maximum Production Rate: approximately 1500* tons/year of VOC based raw materials			
5. Requested Maximum Operating Schedule:			
	24	hours/day	7 days/week
	52	weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			
<p>*Annual material usages are a surrogate indicator of emissions, and should not be considered a permit limitation. See Attachment 2.</p>			

**C. EMISSIONS UNIT REGULATIONS**  
**(Regulated Emissions Units Only)**

**List of Applicable Regulations**

See Page 8 of Facility Information section	

**D. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Regulated Emissions Units Only)**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? See Attachment 1		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  Four exhaust fans proposed in (new) building #3, two existing exhaust fans in (existing) building #2			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: <b>Not Applicable</b>			
5. Discharge Type Code: V	6. Stack Height: approx. 7 ft. (est.) Above roof level	7. Exit Diameter: 4 feet	
8. Exit Temperature: 77°F	9. Actual Volumetric Flow 17,000 each (Est.)	10. Water Vapor: negligible %	
11. Maximum Dry Standard Flow Rate: Not Applicable		12. Nonstack Emission Point Height: Not Applicable feet	
13. Emission Point UTM Coordinates: Not Applicable Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  Doors will remain closed during VOC generating activities whenever feasible to minimize potential for objectionable odor complaints.			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
**(All Emissions Units)**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Styrene based resin and catalyst, mechanically (non atomized) spray applied to forms and molds.		
2. Source Classification Code (SCC): 3-08-007-20 Open contact molding, Resin/Laminate application, spray layup	3. SCC Units: Tons applied	
4. Maximum Hourly Not Applicable	5. Maximum Annual Rate: 1500*	6. Estimated Annual Activity Factor: Not Applicable
7. Maximum % Sulfur: Not Applicable	8. Maximum % Ash: Not Applicable	9. Million Btu per SCC Unit: Not Applicable
10. Segment Comment (limit to 200 characters): * Individual limitations on resin usage are not required. Potentially all material used could be resin. Monthly record keeping is proposed as demonstration of compliance with emission limitations.		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type ) (limit to 500 characters): Mold care, product assembly and acetone cleanup are included in this segment. Product is removed from the molds, trimmed and sanded as required, and assembled.		
2. Source Classification Code (SCC): 3-08-007-00	3. SCC Units: Tons of solvent	
4. Maximum Hourly Rate: Not Applicable	5. Maximum Annual Rate: 500*	6. Estimated Annual Activity Factor: Not Applicable
7. Maximum % Sulfur: Not Applicable	8. Maximum % Ash: Not Applicable	9. Million Btu per SCC Unit: Not Applicable
10. Segment Comment (limit to 200 characters): * Individual limitations on putties, fillers, solvents, coatings and adhesives usage are not required. Potentially all material used could be solvents under this category. Monthly record keeping is proposed as demonstration of compliance with emission limits.		

**F. EMISSIONS UNIT POLLUTANTS**  
**(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>individual HAP (styrene, H163)</b>	<b>not applicable</b>	<b>not applicable</b>	<b>NS</b>
<b>total HAP</b>	<b>not applicable</b>	<b>not applicable</b>	<b>NS</b>
<b>total VOC</b>	<b>not applicable</b>	<b>not applicable</b>	<b>NS</b>

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total VOC		2. Total Percent Efficiency of Control: <b>Not applicable</b>	
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>36</b> tons/yr			4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year			
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge			7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Total VOC limitation includes total volatile HAP species.			

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total VOC	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr 36 tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Total VOC limitation includes total volatile HAP species.	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total VOC		2. Total Percent Efficiency of Control: <b>Not applicable</b>	
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>49</b> tons/yr		4. Synthetically Limited ? Y	
5. Range of Estimated Fugitive Emissions: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <u>0.1</u> to <u>0.2</u> tons/year			
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge		7. Emissions Method Code: 5 (FDEP Guidance)	
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Total VOC limitation includes total volatile HAP species.			

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions:  lb/hour                      tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			



**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
(Regulated Emissions Units -  
Emissions-Limited and Preconstruction Review Pollutants Only)

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total HAP	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>36</b> tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total HAP	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>36</b> tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1 [ ] 2 [ ] 3 <u>2</u> to <u>2</u> tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:  lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total HAP (principally Styrene H-163)		2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>36</b> tons/yr		4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1      [   ] 2      [   ] 3      _____ to _____ tons/year		
6. Emission Factor: see attached spreadsheet Reference: PERGEN37		7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  		

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance (limit to 60 characters):  	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
(Regulated Emissions Units -  
Emissions-Limited and Preconstruction Review Pollutants Only)

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total HAP	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>49</b> tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1 [ ] 2 [ ] 3 <u>9</u> to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:  lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total HAP (principally Styrene H-163)	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>36</b> tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: individual HAP (principally Styrene H-163)	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>49</b> tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**H. VISIBLE EMISSIONS INFORMATION****(Only Regulated Emissions Units Subject to a VE Limitation)****Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: [ X ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: <20 % Exceptional Conditions: <20 % Maximum Period of Excess Opacity Allowed: 0 min/hour	
4. Method of Compliance: EPA Method 9 as required by Agency	
5. Visible Emissions Comment (limit to 200 characters):  The applicant requests that a 5% visible emission limit be imposed and considered as an indicator or satisfactory control of the minor particulate generation activities conducted on site.	

**I. CONTINUOUS MONITOR INFORMATION****(Only Regulated Emissions Units Subject to Continuous Monitoring)****Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_ **NOT APPLICABLE**

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**  
**(Regulated Emissions Units Only)**

**Supplemental Requirements**

1. Process Flow Diagram [ X ] Attached, Document ID: <u>2</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ X ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ X ] Attached, Document ID: <u>3, 4</u> [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ X ] Not Applicable
10. Supplemental Requirements Comment:



**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation [   ] Attached, Document ID: _____ [ X ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [   ] Attached, Document ID: _____ [ X ] Not Applicable
13. Identification of Additional Applicable Requirements [   ] Attached, Document ID: _____ [ X ] Not Applicable
14. Compliance Assurance Monitoring Plan [   ] Attached, Document ID: _____ [ X ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [   ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [   ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [   ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [   ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [   ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [   ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [ X ] Not Applicable

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION**  
**(All Emissions Units)**

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one) <input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent). <input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions. <input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one) <input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. <input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Manufacture of fiberglass septic tanks and related structures utilizing styrene based resins; includes mold care, assembly and cleanup materials.			
4. Emissions Unit Identification Number: ID: 001		<input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown	
5. Emissions Unit Status Code: C	6. Initial Startup Date: Permit Receipt	7. Emissions Unit Major Group SIC Code: 30	8. Acid Rain Unit? <input checked="" type="checkbox"/> No
9. Emissions Unit Comment: (Limit to 500 Characters)  Currently facility operates under permit as synthetic minor source.			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

No controls for VOC emissions; see Attachment 2.

2. Control Device or Method Code(s): NA

**Emissions Unit Details**

1. Package Unit: **Not Applicable**

Manufacturer: Not Applicable

Model Number: Not Applicable

2. Generator Nameplate Rating: **Not Applicable** MW

3. Incinerator Information: **Not Applicable**

Dwell Temperature:

°F

Dwell Time:

seconds

Incinerator Afterburner Temperature:

°F

**B. EMISSIONS UNIT CAPACITY INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate: <b>Not Applicable</b>			
2. Maximum Incineration Rate:		<b>Not Applicable</b> lb/hr	tons/day
3. Maximum Process or Throughput Rate: <b>Not Applicable</b>			
4. Maximum Production Rate: approximately 1500* tons/year of VOC based raw materials			
5. Requested Maximum Operating Schedule:			
24	hours/day	7	days/week
52	weeks/year	8760	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			
<p>*Annual material usages are a surrogate indicator of emissions, and should not be considered a permit limitation. See Attachment 2.</p>			

**C. EMISSIONS UNIT REGULATIONS**  
**(Regulated Emissions Units Only)**

**List of Applicable Regulations**

See Page 8 of Facility Information section	

**D. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Regulated Emissions Units Only)**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? See Attachment 1		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  Four exhaust fans proposed in (new) building #3, two existing exhaust fans in (existing) building #2			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: <b>Not Applicable</b>			
5. Discharge Type Code: V	6. Stack Height: approx. 7 ft. (est.) Above roof level	7. Exit Diameter: 4 feet	
8. Exit Temperature: 77°F	9. Actual Volumetric Flow 17,000 each (Est.)	10. Water Vapor: negligible %	
11. Maximum Dry Standard Flow Rate: Not Applicable		12. Nonstack Emission Point Height: Not Applicable feet	
13. Emission Point UTM Coordinates: Not Applicable Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  Doors will remain closed during VOC generating activities whenever feasible to minimize potential for objectionable odor complaints.			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
**(All Emissions Units)**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Styrene based resin and catalyst, mechanically (non atomized) spray applied to forms and molds.		
2. Source Classification Code (SCC): 3-08-007-20 Open contact molding, Resin/Laminate application, spray layup	3. SCC Units: Tons applied	
4. Maximum Hourly Not Applicable	5. Maximum Annual Rate: 1500*	6. Estimated Annual Activity Factor: Not Applicable
7. Maximum % Sulfur: Not Applicable	8. Maximum % Ash: Not Applicable	9. Million Btu per SCC Unit: Not Applicable
10. Segment Comment (limit to 200 characters): * Individual limitations on resin usage are not required. Potentially all material used could be resin. Monthly record keeping is proposed as demonstration of compliance with emission limitations.		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Mold care, product assembly and acetone cleanup are included in this segment. Product is		
2. Source Classification Code (SCC): 3-08-007-00	3. SCC Units: Tons of solvent	
4. Maximum Hourly Rate: Not Applicable	5. Maximum Annual Rate: 500*	6. Estimated Annual Activity Factor: Not Applicable
7. Maximum % Sulfur: Not Applicable	8. Maximum % Ash: Not Applicable	9. Million Btu per SCC Unit: Not Applicable
10. Segment Comment (limit to 200 characters): * Individual limitations on putties, fillers, solvents, coatings and adhesives usage are not required. Potentially all material used could be solvents under this category. Monthly record keeping is proposed as demonstration of compliance with emission limits.		

**F. EMISSIONS UNIT POLLUTANTS**  
**(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>individual HAP (styrene, H163)</b>	<b>not applicable</b>	<b>not applicable</b>	<b>NS</b>
<b>total HAP</b>	<b>not applicable</b>	<b>not applicable</b>	<b>NS</b>
<b>total VOC</b>	<b>not applicable</b>	<b>not applicable</b>	<b>NS</b>



**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total VOC	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>49</b> tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Total VOC limitation includes total volatile HAP species.	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:  lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
(Regulated Emissions Units -  
Emissions-Limited and Preconstruction Review Pollutants Only)

**Potential/Fugitive Emissions**

1. Pollutant Emitted: total HAP	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr 49 tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: [ X ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37 Process Knowledge	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: individual HAP (principally Styrene H-163)	2. Total Percent Efficiency of Control: <b>Not applicable</b>
3. Potential Emissions: <b>not applicable</b> Lb/hr <b>49</b> tons/yr	4. Synthetically Limited ? Y
5. Range of Estimated Fugitive Emissions: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year	
6. Emission Factor: see attached spreadsheet Reference: PERGEN37	7. Emissions Method Code: 5 (FDEP Guidance)
8. Calculation of Emissions (limit to 600 characters):  See attachment 2 for calculation procedure and sample spreadsheet	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_ Not Applicable

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**H. VISIBLE EMISSIONS INFORMATION****(Only Regulated Emissions Units Subject to a VE Limitation)****Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: [ X ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: <20 % Exceptional Conditions: <20 % Maximum Period of Excess Opacity Allowed: 0 min/hour	
4. Method of Compliance: EPA Method 9 as required by Agency	
5. Visible Emissions Comment (limit to 200 characters):  The applicant requests that a 5% visible emission limit be imposed and considered as an indicator or satisfactory control of the minor particulate generation activities conducted on site.	

**I. CONTINUOUS MONITOR INFORMATION****(Only Regulated Emissions Units Subject to Continuous Monitoring)****Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_ NOT APPLICABLE

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**  
(Regulated Emissions Units Only)

**Supplemental Requirements**

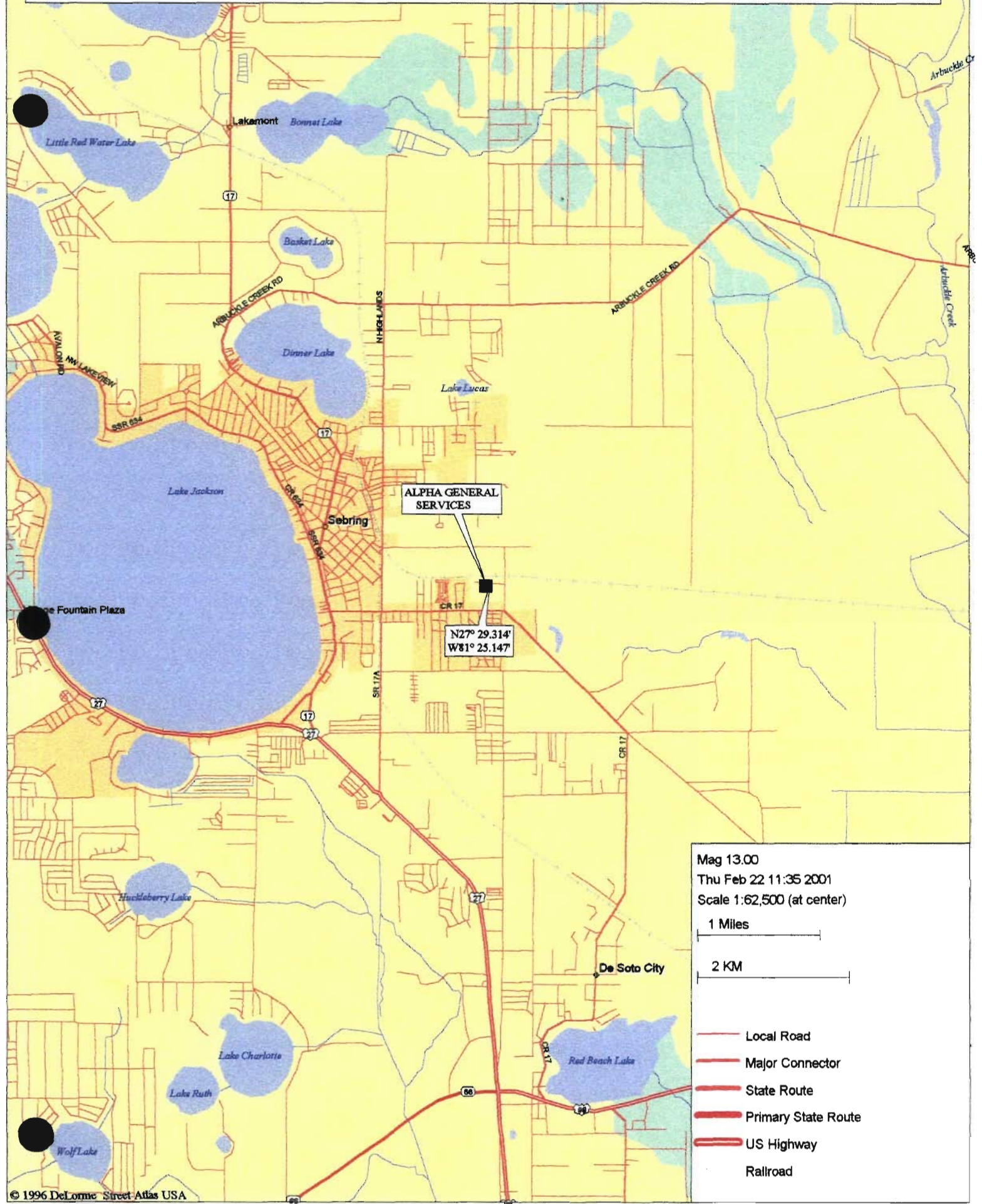
1. Process Flow Diagram [ X ] Attached, Document ID: <u>2</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ X ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ X ] Attached, Document ID: <u>3, 4</u> [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ X ] Not Applicable
10. Supplemental Requirements Comment:

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation [ ] Attached, Document ID: _____ [ X ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ X ] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ X ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [ X ] Not Applicable

## Site Location and Facility Layout

# ALPHA GENERAL SERVICES, INC.





ALPHA GENERAL SERVICES

N27° 29.314'  
W81° 25.147'

Mag 15.00  
Thu Feb 22 11:31 2001  
Scale 1:15,625 (at center)

1000 Feet

500 Meters

Local Road  
Major Connector  
Railroad  
Population Center  
Water

© 1996 DeLorme Street Atlas USA

© 1996 DeLorme Street Atlas USA

C-72-34-25-000-0340-0000  
SCIENCE LANDFILL INC.  
C/O EDWARDS AND ARCELL  
PALM BEACH, FL 33400  
TOWNSHIP 5-6  
CLAYTON LANDFILL

\_\_\_\_\_ G. S. C. L. RAILROAD R/W \_\_\_\_\_

\_\_\_\_\_

THE HILL

[illegible]

WATER PIPE SPECIFICATION WATER MAIN - 8" - AMBA C-900 PVC  
ASTM D1784  
DR35 CLASS 100

SERVICE - 2"  
POLYETHYLENE GDB- PRESSURE RATED  
(ASTM, J300, J304) SDR 7, 9, 11.5, 16 C=140  
AMBA AND NSF APPROVED

SERVICE BUSTES - TWICE DIAMETER OF THE SERVICE  
ASTM 1786  
SCHEDULE 40  
C=11.5

NOTE: EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL UTILITIES AFFECTED BY HIS WORK.

**INSTALLATION INSTRUCTIONS**

- THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ALL STEPS NECESSARY INCLUDING BORING AND DETERMINING TO INSURE THE INTEGRITY OF THE ALL EXISTING PAYMENTS, UTILITIES AND STRUCTURES AND BE RESPONSIBLE FOR REPLACEMENT OR REPAIR OF ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES.
- THE PIPE SHALL BE SLOPED IN COMPACTED CLEAR GRADE (AND REINFORCED) WITH ALL ORGANIC MATTER AND DEBRIS REMOVED.
- THE PIPE SHALL BE SET IN A BED OF 12" OF SAND OR GRAVEL AT LEAST 4" THICK AT EACH END OF THE PIPE.
- THE PIPE SHALL BE CLEAN AND SHOT TO BE PLACED IN APPROXIMATE 1/4" LAYERS AND TO BE COMPACTED BY ROLLERS OR TAMPS.
- THE PIPE SHALL BE INSTALLED PER MANUFACTURER SPECIFICATIONS, UNLESS THE MANUFACTURER SPECIFIED ANOTHER CLIMATE AND CLIMATE IS REQUIRED.
- ALL DISTURBANCE AREAS WITHIN THE COUNTY, STATE R/W AND ACCESS EASEMENTS ARE TO BE RESTORED AND SLOOED.
- THE CONNECTION TO CITY OF SPRING BURNING BAN DISTRIBUTION SYSTEM WILL BE DONE TO CITY OF SPRING UTILITIES STANDARDS.
- THE CONTRACTOR / UNDERGRADING CONTRACTORS WILL BE RESPONSIBLE FOR REPAIRING ALL UTILITIES, ROADS AND STRUCTURES AFFECTED BY THE PROJECT.

ALL TESTS WILL REQUIRE THE PRESENCE OF THE PRIMEIR, CONTRACTOR OR HIS DESIGNATED INSPECTOR.

1. THE DESIGNATED INSPECTOR FROM EACH PARTY WILL BE REQUIRED TO PRESENT THE FOLLOWING:

- THE INSPECTORATION SHALL TAKE PLACE AT PREARRANGED TO INCLUDE A MINIMUM WATER LINE UNDER ALL CONDITIONS.
- A MINIMUM 10' GALVANIZED PIPING SHALL BE USED TO CONDUCT THE TESTS AND BE PROPERLY CONNECTED.
- TEST SHALL PERFORMED PRIOR TO CONNECTION TO THE CITY OF BIRMINGHAM UTILITY WATER DISTRIBUTION SYSTEM.

WATER LINES

- WATER LINES SHALL BE FILLED UNDER A HYDROSTATIC PRESSURE OF 100 PSI FOR AT LEAST 2 HOURS.
- THE MAXIMUM LOSS ALLOWED WILL BE NO MORE THAN 5%.
- THE WATER LINE SHALL BE CHECKED FOR LEAKS AT ALL DESIGNATED POINTS OF WEAKS (JUNCTIONS OR PIPES) ON 2' CENTER LINE DATA AND TESTED FOR IMPELLOR COUNTY RECORD IN DEPARTMENT RECORDS. THE TESTS SHALL INCLUDE, BUT NOT LIMITED TO, BACKFLOWING, AIR AND CHLORINE RESIDUAL.

THE SUBCONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT TO PERFORM ALL TESTS.

DRIVEWAY REPAIRS (WHERE APPLICABLE)

- CONCRETE DRIVEWAYS AT SUB-PAVE, AND SIDWALKS, 10" MIN. THICK, 10' X 300' PER CONCRETE 10' X 300' MIN. WIDE.
- ASPHALT DRIVEWAYS AND SIDWALKS SHALL HAVE MIN. 4" THICK.
- SHALL NOT DRIVE OVER ANY OF COMPACTED SUBGRADE.

--NOTE: THE MAINLINE CONTRACTOR WILL RESTORE ALL PROPERTY TO ORIGINAL CONDITIONS.

MATERIALS LENGTHS HAVE BEEN ESTIMATED FROM AVAILABLE INFORMATION. THIS PLAN IS NOT A SURVEY. SOME LENGTHS MAY VARY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LENGTHS AND MATERIALS REQUIRED FOR CONSTRUCTION.

THE SUBSURFACE CONTRACTOR SHALL PROVIDE POLYMER CONCRETES AND/OR STRENGTHENERS OF ANY QUALITIES PER THE APPROVED MIXTURES BEFORE.

--SUB-GRADE CAN BE RE-PAVED.

### WATER LINE THRUST BLOCK DETAILS

Diagram 1 (Left): Shows a cross-section of a pile with a bearing area. Labels include "SEE TABLE FOR AREA", "UNDISTURBED EARTH", and "SEE TABLE FOR PROPOSED AREA REQUIRED".

Diagram 2 (Right): Shows a cross-section of a pile with a bearing area. Labels include "UNDISTURBED EARTH", "SEE TABLE FOR PROPOSED AREA REQUIRED", and "INCLUDED AREA".

NOTE: POLAR CONCRETE IN PLACE AFTER INSTALLATION OF FITTING

BEARING AREA TABLE (SQUARE FEET)

PIPE DIA.	PILE DIA.	1/2 PENETRATION	1/3 PEN.
12"	12"	1.0	1.0
12"	14"	1.2	1.2
12"	16"	1.4	1.4
12"	18"	1.6	1.6
12"	20"	1.8	1.8
12"	22"	2.0	2.0
12"	24"	2.2	2.2
12"	26"	2.4	2.4
12"	28"	2.6	2.6
12"	30"	2.8	2.8
12"	32"	3.0	3.0
12"	34"	3.2	3.2
12"	36"	3.4	3.4
12"	38"	3.6	3.6
12"	40"	3.8	3.8
12"	42"	4.0	4.0
12"	44"	4.2	4.2
12"	46"	4.4	4.4
12"	48"	4.6	4.6
12"	50"	4.8	4.8
12"	52"	5.0	5.0
12"	54"	5.2	5.2
12"	56"	5.4	5.4
12"	58"	5.6	5.6
12"	60"	5.8	5.8
12"	62"	6.0	6.0
12"	64"	6.2	6.2
12"	66"	6.4	6.4
12"	68"	6.6	6.6
12"	70"	6.8	6.8
12"	72"	7.0	7.0
12"	74"	7.2	7.2
12"	76"	7.4	7.4
12"	78"	7.6	7.6
12"	80"	7.8	7.8
12"	82"	8.0	8.0
12"	84"	8.2	8.2
12"	86"	8.4	8.4
12"	88"	8.6	8.6
12"	90"	8.8	8.8
12"	92"	9.0	9.0
12"	94"	9.2	9.2
12"	96"	9.4	9.4
12"	98"	9.6	9.6
12"	100"	9.8	9.8
12"	102"	10.0	10.0
12"	104"	10.2	10.2
12"	106"	10.4	10.4
12"	108"	10.6	10.6
12"	110"	10.8	10.8
12"	112"	11.0	11.0
12"	114"	11.2	11.2
12"	116"	11.4	11.4
12"	118"	11.6	11.6
12"	120"	11.8	11.8
12"	122"	12.0	12.0
12"	124"	12.2	12.2
12"	126"	12.4	12.4
12"	128"	12.6	12.6
12"	130"	12.8	12.8
12"	132"	13.0	13.0
12"	134"	13.2	13.2
12"	136"	13.4	13.4
12"	138"	13.6	13.6
12"	140"	13.8	13.8
12"	142"	14.0	14.0
12"	144"	14.2	14.2
12"	146"	14.4	14.4
12"	148"	14.6	14.6
12"	150"	14.8	14.8
12"	152"	15.0	15.0
12"	154"	15.2	15.2
12"	156"	15.4	15.4
12"	158"	15.6	15.6
12"	160"	15.8	15.8
12"	162"	16.0	16.0
12"	164"	16.2	16.2
12"	166"	16.4	16.4
12"	168"	16.6	16.6
12"	170"	16.8	16.8
12"	172"	17.0	17.0
12"	174"	17.2	17.2
12"	176"	17.4	17.4
12"	178"	17.6	17.6
12"	180"	17.8	17.8
12"	182"	18.0	18.0
12"	184"	18.2	18.2
12"	186"	18.4	18.4
12"	188"	18.6	18.6
12"	190"	18.8	18.8
12"	192"	19.0	19.0
12"			

10	2.2	2.2	1.8	2.2
15	2.2	2.2	2.2	2.2
20	2.2	2.2	2.2	2.2
25	2.2	2.2	2.2	2.2
30	2.2	2.2	2.2	2.2
35	2.2	2.2	2.2	2.2
40	2.2	2.2	2.2	2.2
45	2.2	2.2	2.2	2.2
50	2.2	2.2	2.2	2.2
55	2.2	2.2	2.2	2.2
60	2.2	2.2	2.2	2.2
65	2.2	2.2	2.2	2.2
70	2.2	2.2	2.2	2.2
75	2.2	2.2	2.2	2.2
80	2.2	2.2	2.2	2.2
85	2.2	2.2	2.2	2.2
90	2.2	2.2	2.2	2.2
95	2.2	2.2	2.2	2.2
100	2.2	2.2	2.2	2.2

THE FIGURES IN THIS TABLE ARE BASED ON 1000 POUNDS PER SQUARE FOOT SOLE BEARING AGAINST THE UNSTRENGTHENED BELLION BALL AND ARE TO REPRESENT THE MINIMUM VERTICAL PROJECT AREA OF THE THRUST BLOCK IN A PLANE PERPENDICULAR TO THE LINE DIRECTION OF THE INCLUDED ANGLE OF THE FITTING.

GENERAL NOTES

1. REPLACEMENT BASE MATERIAL OVER OTION SHALL BE TO THE TOP OF THE PIPE AS SHOWN.
2. ALL BACKFILL INCLUDING BASE MATERIAL SHALL BE REPLACED IN 6" MINIMUM LIFTS AND EACH LIFT COMPACTED TO 98% DENSITY AS PER ASTM D 1557.
3. ASPHALT CONCRETE PAVEMENT Joints SHALL BE MECHANICALLY JOINED.
4. SURFACE DRAINED PAVEMENTS SHALL BE LAPPED AND FEATHERED.
5. SURFACE MATERIAL SHALL BE 1" MINIMUM ASPHALT CONCRETE, TYPE B-1.
6. BACKFILL MATERIAL SHALL MEET FDOT STANDARD SPECIFICATIONS.

TYPICAL BAW-CUT DETAILS		
7-24-00	WATERLINE SUBMITTAL TO DEP	COH.


1" PVO

WARLINE

WARLINE X 1" SADDLE RPT  
W/1" RPT CORP. STOP

WATERLINE EXTENSION  
BUILDING ADDITIONS  
ALPHA SEPTIC INDUSTRIES IN  
**POLSTON ENGINEERING,**  
2925 KENILWORTH BLVD., P.O. BOX 698  
SEBRING, FLORIDA 33871-0698  
863-385-6664

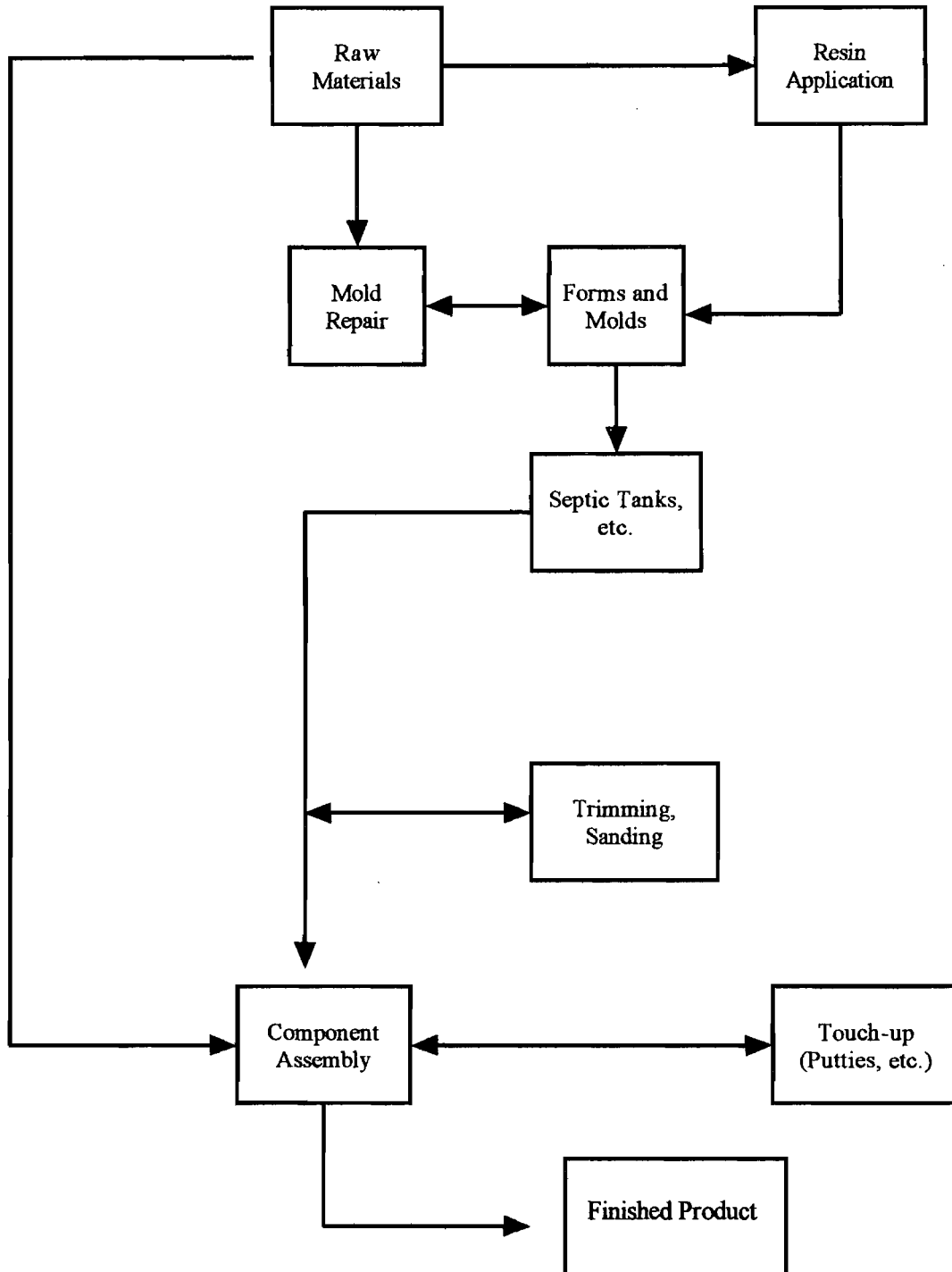
STATE OF FLORIDA BOARD OF PROFESSIONAL ENGINEERS  
BUSINESS CERTIFICATE OF AUTHORIZATION NUMBER 6884  
PROFESSIONAL ENGINEER: ROGER DALE POLSTON P.E. NUMBER: 33222  
PROFESSIONAL ENGINEER: MARVIN LUTHER WOLFE P.E. NUMBER: 46030  
SCALE: \_\_\_\_\_ WORK ORDER # \_\_\_\_\_ SHEET \_\_\_\_\_

1°=50'	00099	1	or	1	1418156
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# Process Flow Diagram, Process Description and Emissions Estimates

Attachment 2

# Process Flow Diagram



**ALPHA GENERAL SERVICES, INC.**

1578 Alpha Road, Sebring, FL

Tom John Engineering, Inc. St. Petersburg, FL

(727) 579 - 0403

## Process Description and Emission Estimates

### Process Description

ALPHA GENERAL SERVICES manufactures fiberglass in-ground septic tanks in a wide range of sizes and styles at their facility at 1578 Alpha Road in Sebring (Highlands County) under an existing non-Title V permit. This application is for the construction of an additional manufacturing building identified as Building 3 and requests an increase in emissions which will make the facility subject to Title III and Title V of the Clean Air Act Amendments (1990). The location of the facility, the adjacent areas, and the current and proposed building layout are shown in Attachment 1.

The main production area will be conducted in Building 3, which is approximately 150 feet long, 100 feet wide at maximum, and is estimated at 25 feet high at roof peak. Resin application is performed using non-atomized mechanical application (e.g. flowcoat spray guns) to the forms and molds. Infrequently, due to specific customer desires, a layer of gelcoat is applied by hand roller to the mold surface. These application points will be the primary source of the VOC emissions. The building will be exhausted through four (proposed) 48 inch diameter, 17000 cfm (rated) fans discharging 27 feet AGL (above ground level).

General assembly/mold building, mold preparation/repair, fiberglass mat and material cutting, materials receiving, and related activities will be conducted in the lamination areas or in adjacent areas. Additional operations consisting primarily of grinding, edge trimming and assembly will also be conducted in adjacent areas. These activities will be performed using hand held tools (trivial list activity) with integral vacuum bags as necessary to prevent the release of particulate emissions.

Expected facility total operating hours to meet the projected demand (at the emissions level requested for permitting) will be 24 hours per day, 7 days per week, 52 weeks per year (8760 hours/yr). Production demand will not be completely uniform throughout the year, and based on situation variables (product delivery schedule, preparation for trade shows, etc.) periods of higher and lower activity may be observed. For this reason, ALPHA GENERAL SERVICES believes that permit emission limits based on short term record keeping (e.g. "Lbs/hr") would be inherently inaccurate. ALPHA GENERAL SERVICES proposes monthly and rolling 12 month cumulative records as a demonstration of permit compliance, as will be discussed in a later section. The

facility therefore requests an unlimited daily facility operating schedule (8760 hours per year) and up to 24 hours per day, seven days per week for laminating/gelcoating and assembly activities, subject to a maximum tons/year chemical emission limit.

As indicated previously, in the manufacturing operation, potentially conducted at several locations within the building, styrene-based gelcoat is infrequently applied to the mold via hand roller layup techniques. Styrene-based resin is applied via non-atomized mechanical spray guns which integrate chopped fiberglass strands, which is applied to the surface of the mold. After sufficient layers of resin coated material are applied to the mold, hand rollers are used to force the resin into the surface, ensuring that air bubbles and dry spots are eliminated. Additional layers of resin coated glass strands may be applied as needed to achieve the required thickness, based on the final dimensions of the product. The resin infused material is allowed to polymerize and harden. Miscellaneous styrene-containing putties and fillers may be used prior to and after removal of the product from the mold in the laminating area or for final assembly.

Filters in the exhaust fan inlets will prevent the discharge of any particulate overspray from the lamination areas. The exhaust fans will continue to run for at least one hour after the major lamination operations have ceased, and doors and windows will be closed whenever feasible to ensure that VOC materials are captured and exhausted through the stacks with adequate dispersion.

When fully solidified, the product will be removed from the mold. The mold may require minor cleaning ("mold care") or repair ("tooling") and a mold release agent may be applied to facilitate removal of the next part from the mold. The product edges are trimmed by hand powered tools equipped with collectors as necessary; and the trimmed material is discarded. The trimming operation results in large fragments and particles too large to become airborne and result in fugitive emissions. Grinding of surface imperfections will be performed by hand tools equipped with bag collectors as necessary. No large scale sanding of the surfaces will occur; the smaller particulates generated both inside and outside the building will be controlled by the vacuum bag collectors in the hand tools, by portable "shop-vac" vacuum collectors as needed and normal "good housekeeping" procedures. These careful "good housekeeping practices" which provide control of fugitive particulates are necessary to prevent contamination of the molds and fiberglass surfaces, and will be given the appropriate consideration by employees and management.

Holes are cut as needed in the product to accommodate drain and filter lines and other items installed in the final assembly process. After passing a final quality control inspection, the product is prepared for shipping.

The main Clean Air Act Amendment (CAAA) Title III VOC/HAP species emitted from the fiberglassing operation is styrene, which forms the base for the polyester resins (and gelcoats if any) used in the product manufacture. In some gelcoat materials, (typically) 3% to perhaps 5% of the styrene may be replaced with methylmethacrylate (MMA); MMA would then be the CAAA Title III VOC species emitted in second highest quantity from the facility if significant quantities of gelcoat are ultimately used. Since MMA substitutes for styrene, the total VOC (and HAP) emissions would remain essentially unchanged with variations in MMA content.

The main cleanup material will be acetone, classified as "non photochemically active" by USEPA. Hazardous wastes will be removed from the facility by a licensed hauler as necessary.

This facility currently emits styrene, a HAP species, at levels less than the thresholds for Title III and Title V of the Clean Air Act Amendments of 1990, and will be considered a "synthetic minor" source for air permitting purposes. With the addition of the new building and the concomitant increase in usages and emissions, the facility will be considered as a "Major Source" under that permitting program.

## Emission Estimates

### Lamination/gelcoating activities

The general procedure for estimating VOC/OS emissions is:

$$\text{Material Usage Rate} \times \text{Species Concentration} \times \text{Emission Factor} = \\ \text{Species Emission Rate}$$

This relationship is shown in Figure 2.0, which is illustrative of the proposed facility monthly and rolling 12 month consecutive total spreadsheet proposed for the facility. The material usages shown represent the estimated maximum annual usages of materials anticipated to be utilized at the facility, but should not be considered as enforceable facility wide permit limits, as will be discussed further. Gelcoating activities, if conducted at the new building, will be included into the spreadsheet in an appropriate manner.

The component species and concentrations of Figure 2.0 are based on current materials and vendors, obtained from the Material Safety Data (MSD) sheets, representative sample of which are presented in Attachment 6. The complete set of MSD sheets will be available for inspection upon request by the Department.

The styrene emission factors utilized for emission calculations are taken from Table 2 for "Fiberglass composites manufacturing" from the FDEP guidance document, presented as Figure 2.2, following. These values were used in the calculations of Figure 2.0. Any hand layup of gelcoat or tooling performed would result in emission factors equal to or less than the values selected; minor contributions of styrene from such materials as putty and fillers may be conservatively assumed to have an emission factor no greater than the hand layup of resin.

The emission factors for styrene originally listed in AP42 are being revised, and no replacement has been published. As directed by FDEP guidance, the Annual Operating Report for 1999 and 2000 use the values from the air permit. Use of the FDEP interim guidance factors to estimate styrene emissions from the previous reports may result in an approximate 48 % increase, calculationaly, of the emissions when compared to the emissions calculated in prior years at the same material usage rates. This does not represent an increase in actual emissions for this source over the estimations that would have been developed using the original AP-42 values, but reflects



current thinking in how the emissions are determined. Other currently permitted (and unpermitted) sources of styrene emissions would be expected to increase, calculationaly, the styrene emission in the same manner. In this application, the permittee is requesting an increase of approximately 24 tons above the current permit levels, independent of the emission factors used for the earlier calculation.

Alpha General Services, Incorporated will utilize a materials tracking program, similar to the illustration of Figure 2.0, to generate timely status reports (e.g. monthly and rolling 12 month total) to ensure that operations at the facility are in compliance with the limitations imposed by the permit.

Miscellaneous solvent emissions will be minimized due to careful disbursement and general "good housekeeping" practices, including the use of solvent safety cans, etc. Fugitive sources, such as open product and waste containers, will be identified and eliminated where feasible.

The styrene content of the resin and gelcoat may vary depending on particular type, purpose, blend or supplier, and the species and concentrations of all other raw materials are subject to change. Despite these changes, the record keeping system proposed will track each individual species, e.g. styrene, at its actual concentration in each shipment (as identified from its accompanying MSD sheet), assign an appropriate emission factor, and determine the emissions of an individual raw material or source as well as total facility emission for demonstration of compliance with permit conditions.

It should be noted that the raw material usage rate is a surrogate measure of the VOC species emission rate, which is the product of the usage rate, the species concentration and the emission factor for a particular species in a particular operation. If the species concentration varies up or down, as is often the case, the usage rate may be adjusted accordingly to maintain compliance with a VOC emission limitation. Careful record keeping of all VOC-containing production-related materials used at the facility is proposed as a means of demonstrating compliance with permit imposed VOC species emissions limitations

Figure 2.0

# ALPHA SEPTIC SYSTEMS

## Materials Usage and Emissions Inventory

Period: ESTIMATED MAXIMUM ANNUAL

A. Raw Materials Usages and Species Compositions		cas#	100-42-5	131-11-3	78-93-3	
item	representative vendor/description	species	styrene	dimethyl phthalate	methylethyl ketone	general VOC
resin	Ashland	1085890	45.00%			
catalyst	Hi-Point 90	10859		47%	2%	
catalyst	Hi-Point PD-1	10859		67%	2%	
orange tooling	Polyguard	5000	54%			
moldcare	Polyguard	5000				100%
acetone		na				

B. Species Usages		total lbs	491366	12379	434	5000
item	description	species	styrene	dimethyl phthalate	methylethyl ketone	general VOC
resin	Ashland	524485	488651	0	0	0
catalyst	Hi-Point 90		0	5104	217	0
catalyst	Hi-Point PD-1		0	7275	217	0
orange tooling	Polyguard	1900	2715	0	0	0
moldcare	Polyguard		0	0	0	5000
acetone			na	na	na	na

526385 491366

C. Species and Total Emissions		total tons	39.25	0.01	0.22	2.50
		total lbs	78510	12	434	5000
item	description	species	styrene	dimethyl phthalate	methylethyl ketone	general VOC
resin	Ashland		78184	0	0	0
catalyst	Hi-Point 90		0	5	217	0
catalyst	Hi-Point PD-1		0	7	217	0
orange tooling	Polyguard		326	0	0	0
moldcare	Polyguard		0	0	0	5000
acetone			na	na	na	na

## D. Emission Factors and Summaries

Emission factors	
styrene, 45%, resin, mechanical spray	0.160
styrene, 54%, tooling	0.120
styrene, 54.3%, gelcoat, hand layup	0.160
reactive/low vapor pressure	0.001
gen VOC	1.000

Emission Summary		
	lbs	tons
styrene	78510	39.25
total HAP	78957	39.48
total VOC	83957	41.98

styrene emission factors obtained from FDEP memo

Figure 2.2

DARM-PER-32

SUBJECT: Guidance on the Use of Styrene Emission Factors for Certain Polyester Resin Plastics Product Fabrication Processes

DATE: March 1, 2000

On March 18, 1998, Section 4.4 of AP-42 was removed from the AP-42 web site (<http://www.epa.gov/ttn/chief/ap42c4.html>), because the emission factors presented in that section appear to underpredict styrene emissions from most polyester resin operations. A number of individual site tests and studies performed over the past few years have led to this conclusion. These recent reports address only the open molding processes of hand layup, spray-up, filament winding, and gel coating. At this time, the USEPA has no reason to question the validity of the emission factors presented in the old AP-42 section for continuous lamination, pultrusion, and closed molding operations. The USEPA is drafting a replacement AP-42 section based largely on two of these reports; the National Marine Manufacturers Association's (NMMA) "Baseline Characterization of Emissions from Fiberglass Boat Manufacturing" and the Composites Fabricators Association's (CFA) "CFA Emission Models for the Reinforced Plastics Industries."

The emission factors generated from these two documents, as well as emission factors from EPA/RTL, are shown in the USEPA Region 4 letter and "Summary of Emission Data Results" dated March 3, 1998. In this "Summary of Emission Data Results," USEPA Region 4 established (draft) minimum emission factors by averaging the NMMA results and the CFA results. In addition, the USEPA supplied an emission factor equation based on gel time, styrene content, air flow velocity, thickness of part, and standard deviation.

However, since EPA has not published "final" emission factors, this "Summary of Emission Data Results" has been used as a starting point to develop new "interim" styrene emission factors for certain polyester resin plastics product fabrication processes. We are going to define the "interim" styrene emission factors as shown in the following Table 1 and Table 2.

**Table 1. Interim Styrene Emission Factors for Boat Manufacturing**

	NVS <u>Monomer-35%</u>	NVS <u>Monomer-38%</u>	NVS <u>Monomer-42%</u>
Resin Non-Spray Layup	11	11	12
Resin Spray Layup	16	18	20
Gel Coat	48	51	54

NVS = non-vapor suppressed

Emission factors as a percent (%) of Available Monomer

**Table 2. Interim Styrene Emission Factors for Reinforced Plastics**

	NVS <u>Monomer-35%</u>	NVS <u>Monomer-38%</u>	NVS <u>Monomer-42%</u>
Resin Non-Spray Layup	13	15	16
Resin Spray Layup	19	25	30
Gel Coat	49	51	53

NVS = non-vapor suppressed

Emission factors as a percent (%) of Available Monomer

These interim emission factors for boat manufacturing were calculated by taking the low-rounded average of the NMMA emission factor range for each category as shown in Region 4's "Summary of Emission Data Results". Likewise, the interim emission factors for reinforced plastics manufacturing were calculated by taking the low-rounded (truncated) average of the CFA emission factor range for each category.

These interim styrene emission factors should be used instead of AP-42 for applicable construction permit and FESOP applications received on or after June 1, 1998. For permit applications received prior to June 1, 1998, you may continue to use the old AP-42 emission factors. As always, methods other than AP-42 factors or these interim factors may also be used to calculate emissions.

Annual Operating Reports (AORs) should be prepared using the same emission factors that their permit allowables are based upon, because use of the new emission

Guidance Memo  
Page 3

factors, when the current permit allowable is based on the old emission factors, is likely to show an exceedance of a permitted allowable in the ARMS database.

Don't forget that our air toxics program is now based upon only NESHAPS, rather than NESHAPS and modeling.

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Howard L. Rhodes, Director  
Division of Air Resources Management

# Applicant's MACT Compliance Discussion

## Additional Applicable Requirements and Trivial/Exempt Activities

## **ADDITIONAL APPLICABLE REQUIREMENTS**

Additional applicable requirements for this facility are detailed in the FDEP air Title V construction permit, to be issued. The Title V permit will describe the record keeping parameter requirements, the reporting requirements, and compliance testing requirements, as appropriate.

The facility will comply with the Specific Conditions and requirements of the Title V construction and subsequent operating permit, when issued.

Alpha General Services, Incorporated will comply with FDEP regulations stating that “no person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any source whatsoever...without taking reasonable precautions to prevent such emissions” and that “no person shall cause suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.”

Alpha General Services, Incorporated will continue to employ “good housekeeping” and other reasonable work practices to minimize the generation of odors and particulates, in particular from the fiberglass/topcoat cutting, sanding and shaping activities.



Removal of particulate matter from buildings or work areas to prevent a visible particulate plume of unconfined particulate greater than 20%.

Enclosure or covering of activities or equipment where necessary to prevent unconfined particulate emissions from having an opacity greater than 20%.

4. Material usages, material compositions, and methods of use will be documented in accordance with the specific conditions of the construction and operation permits. Materials used will be in compliance with the specifications identified in the permit. Emissions will be calculated by the methods specified in the permit, and will be demonstrated to be in compliance with the permit limitations.

#### **B. CONTROL DEVICE/WORK PRACTICE PLAN**

In order to comply with the permit general and specific conditions, all control devices (regulated and unregulated) will be properly maintained. Routine facility inspections will be performed to confirm the effectiveness of control devices (if present) and work practice standards in minimizing emissions. Repairs to equipment and modifications to work practice procedures will be made as necessary. Records of these repairs or modifications will be maintained on site for a minimum of 5 years and will be available for review by FDEP or the Agency's designated representatives. All required compliance testing and facility record keeping will be conducted in a timely manner and in conformance with the applicable permit specific conditions. In particular, filter media on the VOC and/or particulate exhaust fans will be changed routinely or as needed to maintain an adequate air flow to minimize potential odor complaints.

#### **C. COMPLIANCE TESTING**

Compliance testing, as appropriate and required by permit, will be conducted in accordance with EPA Methods as contained in 40CFR60 Appendix A and adopted by reference in Rule 62-297, FAC. This testing will be performed within 60 days of the receipt of notification or as specified by the Department. Submission of the test results, and an addendum to this application if necessary, will be filed within 45 days of the testing.

## **PROPOSED TRIVIAL AND EXEMPT ACTIVITIES**

Alpha General Services, Incorporated, currently proposes to perform or may perform at a future date many of the activities presented in Attachment A, provided by FDEP and following, which lists "trivial" and presumptively exempt activities and emission units. No specific mention is made of these activities in the permit application.

The main production resin is received into and stored in a 5,000 gallon bulk above ground tank. Due to the low vapor pressure of styrene, breathing and working losses are presumed to be negligible, and the tank is considered presumptively exempt from permitting. All other resins, gelcoats, paints and other VOC-based raw materials are received and stored in drums, totes or smaller containers, eliminating VOC breathing and working losses. Transfer losses are minimized by work practices as required (Rule 62-297.320). These activities are considered presumptively exempt from permitting.

Acetone is used in some applications as a solvent; acetone is no longer considered a VOC, and the use of this material in this activity is considered presumptively exempt from permitting.

Activities involving the cutting, shaping, or trimming of fiberglass parts, where not performed by hand held tools (trivial list activity), are conducted in an area under Good Work Practice Standards. Particulate emissions from these activities are minimized as discussed in Attachment 4, and the activities are considered exempt from permitting. A general opacity limit of <5% is proposed as an indicator of satisfactory control of particulates.

## ATTACHMENT A

### LIST OF ACTIVITIES THAT MAY BE TREATED AS "TRIVIAL"

The following types of activities and emissions units may be presumptively omitted from part 70 permit applications. Certain of these listed activities include qualifying statements intended to exclude many similar activities.

Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.

Air-conditioning units used for human comfort that do not have applicable requirements under title VI of the Act.

Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

Non-commercial food preparation.

Consumer use of office equipment and products, not including printers or businesses primarily involved in photographic reproduction.

Janitorial services and consumer use of janitorial products.

Internal combustion engines used for landscaping purposes.

Laundry activities, except for dry-cleaning and steam boilers.

Bathroom/toilet vent emissions.

Emergency (backup) electrical generators at residential locations.

Tobacco smoking rooms and areas.

Blacksmith forges.

Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit

modification<sup>1</sup>

Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.

Portable electrical generators that can be moved by hand from one location to another.<sup>2</sup>

Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.

Brazing, soldering and welding equipment, and cutting torches related to manufacturing and construction activities that do not result in emission of HAP metals.<sup>3</sup>

Air compressors and pneumatically operated equipment, including hand tools.

Batteries and battery charging stations, except at battery manufacturing plants.

Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP.<sup>4</sup>

Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.

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<sup>1</sup>Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise required.

<sup>2</sup>"Moved by hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.

<sup>3</sup>Brazing, soldering and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production level thresholds. Brazing, soldering, welding and cutting torches directly related to plant maintenance and upkeep and repair of maintenance shop activities that emit HAP metals are treated as trivial and listed separately in this appendix.

<sup>4</sup>Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

Equipment used to mix and package, soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.

Drop hammers or hydraulic presses for forging or metalworking.

Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.

Vents from continuous emissions monitors and other analyzers.

Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.

Equipment used for surface coating, painting, dipping or spraying operations, except those that will emit VOC or HAP.

CO<sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.

Consumer use of paper trimmers/binders.

Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.

Salt baths using nonvolatile slats that do not result in emissions of any regulated air pollutants.

Laser trimmers using dust collection to prevent fugitive emissions.

Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents.<sup>5</sup>

Routine calibration and maintenance of laboratory equipment or other analytical instruments.

Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

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<sup>5</sup>Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.

Hydraulic and hydrostatic testing equipment.

Environmental chambers not using hazardous air pollutant (HAP) gasses.

Shock chambers.

Humidity chambers.

Solar simulators.

Fugitive emission related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

Process water filtration systems and demineralizes.

Demineralized water tanks and demineralizer vents.

Boiler water treatment operations, not including cooling towers.

Oxygen scavenging (de-aeration) of water.

Ozone generators.

Fire suppression systems.

Emergency road flares.

Steam vents and safety relief valves.

Steam leaks.

Steam cleaning operations.

Steam sterilizers.

## Representative Material Safety Data Sheets

## MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 001  
Date Prepared: 01/05/96  
Date Printed: 03/16/96  
MSDS No: 0306898-002.001

AA 1192-23 G

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Material Identity

Product Name: AA 1192-23 G

General or Generic ID: UNSATURATED POLYESTER RESIN

#### Company

Ashland Chemical Co.  
P.O. Box 2219  
Columbus, OH 43216  
614-790-3333

#### Emergency Telephone Number:

1-800-ASHLAND (1-800-274-5263)  
24 hours everyday

Regulatory Information Number:  
1-800-325-3751

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
POLYESTER RESIN	Trade Secret	50.0- 55.0
STYRENE	100-42-5	45.0- 45.0

### 3. HAZARDS IDENTIFICATION

#### Potential Health Effects

##### Eye

Exposure causes eye irritation. Symptoms may include stinging, tearing, redness, and swelling.

##### Skin

Exposure causes skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking, skin burns and skin damage.

Skin absorption is possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use.

##### Swallowing

Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful.

This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage.

##### Inhalation

Exposure to vapor or mist is possible.

Exposure to aerosol and/or mist is possible when material is sprayed. Aerosol and mist may present a greater risk of injury because more material may be present in the air than from vapor alone.

Short-term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects; breathing large amounts may be harmful.

Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits.

Continued on next page



## MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 002

Date Prepared: 01/05/96

Date Printed: 03/16/96

MSDS No: 0306898-002.001

AA 1192-23 G

### Symptoms of Exposure

metallic taste  
gastrointestinal irritation (nausea, vomiting, diarrhea)  
irritation (nose, throat, respiratory tract)  
central nervous system (CNS) depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other CNS effects  
impaired coordination  
confusion  
liver damage

### Target Organ Effects

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible kidney effects, effects on hearing, respiratory tract damage, testis damage, liver damage. Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans, and may aggravate pre-existing disorders of these organs: central nervous system effects, effects on hearing, respiratory tract damage

### Developmental Information

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

### Cancer Information

The International Agency for Research on Cancer (IARC) has classified styrene in group 2B (possibly carcinogenic to humans). This classification is not based in any significant new evidence that styrene may be carcinogenic, but rather on a revised definition for group 2B and consideration of new data on styrene oxide. A number of lifetime animal studies with styrene including those conducted in the National Cancer Institute (NCI) bioassay program have not shown styrene to be carcinogenic.

### Other Health Effects

No data

### Primary Route(s) of Entry

Inhalation  
Skin absorption  
Skin contact  
Eye contact

## 4. FIRST AID MEASURES

### Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

### Skin

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Continued on next page

## MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 003

Date Prepared: 01/05/96

Date Printed: 03/16/96

MSDS No: 0306898-002.001

AA 1192-23 G

### Swallowing

Do not induce vomiting. This material is an aspiration hazard. If individual is drowsy or unconscious, place on left side with the head down. Seek medical attention. If possible, do not leave individual unattended.

### Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

### Note to Physicians

No data

## 5. FIRE FIGHTING MEASURES

### Flash Point

73.0 - 100.0 F (22.7 - 37.7 C)

### Explosive Limit

(for component) Lower 1.1 % Upper 6.1 %

### Autoignition Temperature

No data

### Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide  
various hydrocarbons

### Fire and Explosion Hazards

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

### Extinguishing Media

regular foam  
water fog  
carbon dioxide  
dry chemical

### Fire Fighting Instructions

Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

Polymerization will take place under fire conditions. If polymerization occurs in a closed container, there is a possibility it will rupture violently. Cool storage container with water, if exposed to fire.

### NEPA Rating

Health - 2, Flammability - 3, Reactivity - 1

Continued on next page

## MATERIAL SAFETY DATA SHEET

Shiland Chemical Co.

Page 004

Date Prepared: 01/05/96

Date Printed: 03/16/96

MSDS No: 0306898-002.001

A 1192-23 G

## ACCIDENTAL RELEASE MEASURES

## Small Spill

Absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to hood.

## Large Spill

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

## HANDLING AND STORAGE

## Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred.

## EXPOSURE CONTROLS/PERSONAL PROTECTION

## Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

## Skin Protection

Wear resistant gloves such as: polyvinyl alcohol  
Wear normal work clothing covering arms and legs.

## Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

## Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

## Exposure Guidelines

Component

POLYESTER RESIN

Exposure limits established

POLYURETHANE (100-42-5)

MSHA VPEL 50.000 ppm - TWA

MSHA VPEL 100.000 ppm - STEL

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 005  
Date Prepared: 01/05/96  
Date Printed: 03/16/96  
MSDS No: 0306898-002.001

AA 1192-23 G

ACGIH TLV 50.000 ppm - TWA (Skin)  
ACGIH TLV 100.000 ppm - STEL (Skin)

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

(for component) 293.4 F (145.2 C) @ 760 mmHg

Vapor Pressure

(for component) 4.500 mmHg @ 68.00 F

Specific Vapor Density

3.600 @ AIR=1

Specific Gravity

1.082 @ 77.00 F

Liquid Density

9.000 lbs/gal @ 77.00 F  
1.082 kg/l @ 25.00 C

Percent Volatiles

43.0 - 48.0 %

Evaporation Rate

SLOWER THAN ETHYL ETHER

Appearance

HAZY

State

LIQUID

Physical Form

HOMOGENEOUS SOLUTION

Color

GREEN

Odor

PUNGENT

pH

Not applicable

Viscosity

420.0 - 580.0 cps

Solubility in Water

NEGLIGIBLE

10. STABILITY AND REACTIVITY

Hazardous Polymerization

Product can undergo hazardous polymerization.

Avoid exposure to excessive heat, peroxides and polymerization catalysts.

Continued on next page

## MATERIAL SAFETY DATA SHEET

shland Chemical Co.

A 1192-23 G

Page 006

Date Prepared: 01/05/96

Date Printed: 03/16/96

MSDS No: 0306898-002.001

---

**azardous Decomposition**

May form: carbon dioxide and carbon monoxide  
various hydrocarbons

**hemical Stability**

Stable.

**ncompatibility**

Avoid contact with: strong alkalis  
strong mineral acids

---

**1. TOXICOLOGICAL INFORMATION**

No data

---

**2. ECOLOGICAL INFORMATION**

No data

---

**3. DISPOSAL CONSIDERATION****ste Management Information**

Contaminated absorbent may be deposited in a landfill in accordance with local,  
state and federal regulations.

Destroy by liquid incineration in accordance with applicable regulations.

---

**4. TRANSPORT INFORMATION****DOT Information - 49 CFR 172.101****DOT Description:**

RESIN SOLUTION, 3 (FLAMMABLE-LIQUID), UN1866, III

**Container/Mode:**

55 GAL DRUM/TRUCK PACKAGE

**NOS Component:**

None

**Q (Reportable Quantity) - 49 CFR 172.101**

Not applicable

---

**15. REGULATORY INFORMATION****JS Federal Regulations****TSCA (Toxic Substances Control Act) Status**

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

Continued on next page

# MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 007  
Date Prepared: 01/05/96  
Date Printed: 03/16/96  
MSDS No: 0306898-002.001

AA 1192-23 G

## CERCLA RQ - 40 CFR 302.4

Component	RQ (lbs)
STYRENE	1000

## SARA 302 Components - 40 CFR 355 Appendix A

None

## Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed(X) Fire(X) Reactive(X) Sudden Release of Pressure( )

## SARA 313 Components - 40 CFR 372.65

Section 313 Component(s)	CAS Number	Max %
STYRENE	100-42-5	44.93

## International Regulations

Inventory Status  
Not determined

## State and Local Regulations

### California Proposition 65

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the state of California to cause cancer.

ANILINE  
BENZENE  
1,4-DIOXANE

## New Jersey RTK Label Information

STYRENE MONOMER 100-42-5

## Pennsylvania RTK Label Information

BENZENE, ETHENYL- 100-42-5

## 16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

# MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 001  
Date Prepared: 01/05/96  
Date Printed: 01/13/96  
MSDS No: 0004335-007.001

## ACETONE

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Material Identity

Product Name: ACETONE  
General or Generic ID: KETONE

#### Company

Ashland Chemical Co.  
P.O. Box 2219  
Columbus, OH 43216  
614-790-3333

#### Emergency Telephone Number:

1-800-ASHLAND (1-800-274-5263)  
24 hours everyday

Regulatory Information Number:  
1-800-325-3751

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
ACETONE	67-64-1	100.0

### 3. HAZARDS IDENTIFICATION

#### Potential Health Effects

##### Eye

Exposure causes eye irritation. Symptoms may include stinging, tearing, redness, and swelling.

##### Skin

Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking, and skin burns. Skin absorption is possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use.

##### Swallowing

Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful. This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage.

##### Inhalation

Exposure to vapor or mist is possible. Short-term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects; breathing large amounts may be harmful. Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits.

##### Symptoms of Exposure

mouth and throat irritation, gastrointestinal irritation (nausea, vomiting, diarrhea), irritation (nose, throat, respiratory tract), cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), central nervous system (CNS) depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other CNS effects, high blood sugar, coma.

Continued on next page

## MATERIAL SAFETY DATA SHEET

and Chemical Co.

Page 002

Date Prepared: 01/05/96

Date Printed: 01/13/96

MSDS No: 0004335-007.001

### ACETONE

#### Target Organ Effects

This material (or a component) shortens the time of onset or worsens the liver and kidney damage induced by other chemicals. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible liver effects, mild, reversible kidney effects.

#### Developmental Information

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

#### Cancer Information

No data

#### Other Health Effects

No data

#### Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact, Eye contact.

### FIRST AID MEASURES

#### Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

#### Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

#### Swallowing

Do not induce vomiting. This material is an aspiration hazard. If individual is drowsy or unconscious, place on left side with the head down. Seek medical attention. If possible, do not leave individual unattended.

#### Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

#### Note to Physicians

This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion.

### 5. FIRE FIGHTING MEASURES

#### Flash Point

1.0 F (-17.2 C) TCC

Continued on next page



## MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 003  
Date Prepared: 01/05/96  
Date Printed: 01/13/96  
MSDS No: 0004335-007.001

### ACETONE

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#### Explosive Limit

(for product) Lower 2.6 % Upper 12.8 %

#### Autoignition Temperature

No data

#### Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide.

#### Fire and Explosion Hazards

Material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

#### Extinguishing Media

alcohol foam, carbon dioxide, dry chemical.

#### Fire Fighting Instructions

Water may be ineffective. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

#### NFPA Rating

Health - 1, Flammability - 3, Reactivity - 0

---

## 6. ACCIDENTAL RELEASE MEASURES

### Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

### Large Spill

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

---

## 7. HANDLING AND STORAGE

### Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition

Continued on next page

## MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 004

Date Prepared: 01/05/96

Date Printed: 01/13/96

MSDS No: 0004335-007.001

## ACETONE

sources. Published "autoignition" or "ignition" temperature values cannot be used for process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

## 3. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

## Skin Protection

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

## Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

## Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

## Exposure Guidelines

Component

ACETONE (67-64-1)

OSHA VPEL 750.000 ppm - TWA

OSHA VPEL 1000.000 ppm - STEL

ACGIH TLV 750.000 ppm - TWA

ACGIH TLV 1000.000 ppm - STEL

## 4. PHYSICAL AND CHEMICAL PROPERTIES

## Boiling Point

(for product) 133.0 F (56.1 C) @ 760 mmHg

## Vapor Pressure

No data

## Specific Vapor Density

2.000 @ AIR=1

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 005  
Date Prepared: 01/05/96  
Date Printed: 01/13/96  
MSDS No: 0004335-007.001

ACETONE

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Specific Gravity

.785 - .788 @ 77.00 F

Liquid Density

6.590 lbs/gal @ 68.00 F  
.791 kg/l @ 20.00 C

Percent Volatiles

100.0 %

Evaporation Rate

14.40 (N-BUTYL ACETATE )

Appearance

No data

State

LIQUID

Physical Form

NEAT

Color

CLEAR, APHA COLOR 5 MAX

Odor

No data

pH

Not applicable

---

10. STABILITY AND REACTIVITY

Hazardous Polymerization

Product will not undergo hazardous polymerization.

Hazardous Decomposition

May form:, carbon dioxide and carbon monoxide.

Chemical Stability

Stable.

Incompatibility

Avoid contact with:, acids, strong oxidizing agents.

---

11. TOXICOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 006  
Date Prepared: 01/05/96  
Date Printed: 01/13/96  
MSDS No: 0004335-007.001

ACETONE

---

12. ECOLOGICAL INFORMATION

---

13. DISPOSAL CONSIDERATION

Waste Management Information

Dispose of in accordance with all applicable local, state and federal regulations.

---

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

ACETONE, 3 (FLAMMABLE LIQUID), UN1090, II

Container/Mode:

55 GAL DRUM/TRUCK PACKAGE

NOS Component:

None

Reportable Quantity) - 49 CFR 172.101  
Not applicable

---

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4

Component

RQ (lbs)

ACETONE

5000

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed(X) Fire(X) Reactive( ) Sudden Release of  
Pressure( )

SARA 313 Components - 40 CFR 372.65

None

International Regulations

Inventory Status

DSL (CANADA) The intentional ingredients of this product are listed.

State and Local Regulations

Continued on next page

MATERIAL SAFETY DATA SHEET

Ashland Chemical Co.

Page 007  
Date Prepared: 01/05/96  
Date Printed: 01/13/96  
MSDS No: 0004335-007.001

ACETONE

---

California Proposition 65  
None

New Jersey RTK Label Information  
ACETONE

67-64-1

Pennsylvania RTK Label Information  
2-PROPANONE

67-64-1

---

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

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6-6-94

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WITCO MATERIAL SAFETY DATA SHEET

HI-POINT(R) 90

PAGE 1

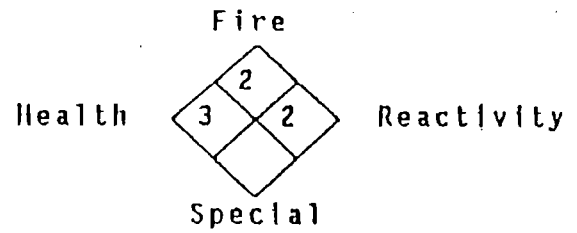
Product Code: 260 0104

2

CAS NO:1338-23-4

NEPA HAZARD RATING

- 4 - Extreme
- 3 - High
- 2 - Moderate
- 1 - Slight
- 0 - Insignificant



DIVISION AND LOCATION---SECTION I

Division: POLYMER ADDITIVES GROUP

Location: MARSHALL, TEXAS

P.O. BOX 1439, HWY 59 & BUSSEY RD, MARSHALL, TX, 75671

Emergency Telephone Number: (903) 938-5141 or Chemtrec (800) 424-9300

Transportation Emergency: CHEMTREC 1-(800) 424-9300 (U.S. and Canada)

CHEMICAL AND PHYSICAL PROPERTIES---SECTION II

Chemical Name:

methyl ethyl ketone peroxide

Formula: not applicable

Hazardous Decomposition Products:

carbon monoxide and carbon dioxide from burning.

Incompatibility (Keep away from):

strong acids, bases, promoters, accelerators, readily oxidizables, and metal salts.

Toxic and Hazardous Ingredients:

methyl ethyl ketone peroxide

%  
38 +/-2

CAS #  
1338-23-4

(9% active oxygen max.)

dimethylphthalate

47 +/-2

131-11-3

Form: liquid

Odor: slightly pungent

Appearance: clear

Color: water-white

Specific Gravity (water=1): 1.11

Boiling Point: no data available, decomposes over 68°C (155°F)

Melting Point: not applicable

Solubility in Water (by weight %): less than 1 at 25°C

Volatile (by weight %): less than 3

Evaporation Rate: not applicable

Vapor Pressure (mm Hg at 20°C): not applicable

Vapor Density (air=1): not applicable

pH (as is): no data available

Stability: Product is stable when stored at recommended temperatures

Viscosity SUS at 100°F: 101 SUS; 15-16 centistokes at 25°C (77°F)

Other physical properties:

self accelerating decomposition temperature (SADT): 4 gal: 71°C (160°F)  
1 gal: 75°C (166°F)

(Continued on next page)

# W I T C O M A T E R I A L S A F E T Y D A T A S H E E T

III-POINT(R) 90

PAGE 2

Product Code: 260 0104

## FIRE AND EXPLOSION DATA---SECTION III

### Special Fire Fighting Procedures:

Fight fire with large amounts of water from a safe distance. Keep containers cool with water spray. After a fire, wait until material has cooled to room temperature before starting clean-up. Wear protective equipment to prevent smoke inhalation.

### Unusual Fire and Explosion Hazards:

Potential explosion hazards. Once ignited, product will burn vigorously.

Flashpoint: (Method Used) Setaflash closed tester 82°C (180°F)

Flammable limits %: not applicable

### Extinguishing agents:

Waterspray or Waterfog or CO<sub>2</sub> or Foam

Closed containers exposed to fire may be cooled with water.

## HEALTH HAZARD DATA---SECTION IV

### Permissible concentrations (air):

methyl ethyl ketone peroxide: 0.7 ppm, 5 mg/m<sup>3</sup> ceiling (OSHA); 0.2 ppm, 1.5 mg/m<sup>3</sup> ceiling (ACGIH)

dimethylphthalate: 5 mg/m<sup>3</sup> (OSHA/ACGIH)

### Chronic effects of overexposure:

Specific symptoms and effects of over exposure not known, but will cause severe eye irritation; may cause blindness. Harmful if inhaled. Harmful or fatal if swallowed. Moderate skin irritant.

### Acute toxicological properties:

for methyl ethyl ketone peroxide: acute oral LD<sub>50</sub> = 1017 mg/kg (rat); eye (rabbit) severe irritant/corrosive

### Emergency First Aid Procedures:

Eyes: Immediately flush with large quantities of water on site for 20 to 30 minutes. Hold eyes open while flushing. Call a physician. Continue water flush up to one hour during transport to a medical facility.

Skin Contact: Wash with soap and water. If irritation occurs, see a physician.

Inhalation: Remove to fresh air. Consult a physician if discomfort persists.

If Swallowed: Administer large quantities of water if person is conscious.

Never give anything by mouth to an unconscious person.

Immediately contact a physician.

### ROUTES OF ENTRY:

Inhalation, skin/eye contact, ingestion

## SPECIAL PROTECTION INFORMATION---SECTION V

### Ventilation Type Required (Local, mechanical, special):

Local if necessary to maintain allowable PEL(permissible exposure limit) or TLV(threshold limit value)

### Respiratory Protection (Specify type):

Use NIOSH/MSHA certified respirator with organic vapor cartridge if vapor

(Continued on next page)

# WITCO MATERIAL SAFETY DATA SHEET

HI-POINT(R) 90

PAGE 3

Product Code: 260 0104

(Section V continued)

concentration exceeds permissible exposure limit

Protective Gloves:

neoprene type

Eye Protection:

chemical safety goggles

Other Protective Equipment:

as required to protect against skin contact

=====

## HANDLING OF SPILLS OR LEAKS---SECTION VI

=====

Procedures for Clean-Up:

Use appropriate protective clothing during clean-up.

Absorb spills with inert material such as perlite, vermiculite, or sand and then wet with water. Sweep up using non-sparking equipment and place in double polyethylene bags. Isolate leakers and contaminated containers to a safe place for disposal.

Waste Disposal:

Dispose of in accordance with all applicable federal, state and local regulations.

Dispose of waste at EPA-approved hazardous waste disposal facilities.

=====

## SPECIAL PRECAUTIONS---SECTION VII

=====

Precautions to be taken in handling and storage:

Store in original containers away from promoters and combustible material. Keep away from acids, heat, sparks, flames and direct sunlight. Keep closed to avoid contamination. Isolated storage is desirable.

Maximum Storage Temperature: 38°C (100°F)

=====

## TRANSPORTATION DATA---SECTION VIII

=====

D.O.T.: Regulated

U.S. D.O.T. Proper Shipping Name: Organic peroxide-Type D, liquid (methyl ethyl ketone peroxides, =<45%), 5.2, UN 3105, PG II, RQ, ERG 48, HI-Point 90

U.S. D.O.T. Hazard Class: Organic Peroxide

I.D. Number: UN 3105

Label(s) Required: Organic Peroxide

Reportable Quantity: 10 LB/4.54 KG (for 2-butanone peroxide (or methyl ethyl ketone peroxide))

Freight Classification: Chemicals, NOI, N.F.M.C. Item 43940 Sub 2

Special Transportation Notes:

none

(Continued on next page)



# W I T C O   M A T E R I A L   S A F E T Y   D A T A   S H E E T

III-POINT(R) 90

PAGE 4

Product Code: 260 0104

## =====

### ENVIRONMENTAL/SAFETY REGULATIONS---SECTION IX

## =====

#### Section 313 (Title III Superfund Amendment and Reauthorization Act):

This product contains the following chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (the corresponding CAS number and percent by weight are also provided):

dimethyl phthalate	CAS# 131-11-3	47%
methyl ethyl ketone	CAS# 78-93-3	2%

## =====

### COMMENTS

## =====

Never mix any promoter or accelerator with product as very rapid or explosive decomposition could occur. Do not store with food or drink.

#### STATE RIGHT TO KNOW SUBSTANCES:

CAS NUMBER	CHEMICAL NAME
131-11-3	Dimethyl phthalate
7722-84-1	Hydrogen peroxide
78-93-3	Methyl ethyl ketone
1338-23-4	Methyl ethyl ketone peroxide

#### Trade Secret Registry Numbers:

NJ 136411-5146P  
PA RTK Withheld

Prepared by: Roger N. Lewis

Title: R & D Director/Organic Peroxides

Original Date:                      Sent to:

Revision Date: 08/02/93

Supersedes                      : 10/30/91

Date Sent                      :

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

0211223-004  
7/12/95

(2)

## WITCO MATERIAL SAFETY DATA SHEET

HI-POINT(R) PD-1

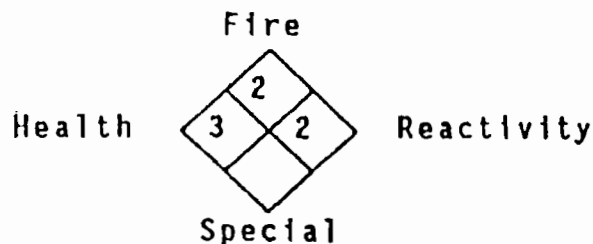
PAGE 1

Product Code: 260 0155

CAS NO:1338-23-4

## NFPA HAZARD RATING

- 4 - Extreme
- 3 - High
- 2 - Moderate
- 1 - Slight
- 0 - Insignificant



## DIVISION AND LOCATION---SECTION I

Division: POLYMER ADDITIVES GROUP

Location: MARSHALL, TEXAS

P.O. BOX 1439, HWY 59 &amp; BUSSEY RD, MARSHALL, TX, 75671

Emergency Telephone Number: (903) 938-5141 or Chemtrec (800) 424-9300

Transportation Emergency: CHEMTREC 1-(800) 424-9300 (U.S. and Canada)

## CHEMICAL AND PHYSICAL PROPERTIES---SECTION II

## Chemical Name:

methyl ethyl ketone peroxide

Formula: not applicable

## Hazardous Decomposition Products:

carbon monoxide and carbon dioxide from burning.

## Incompatibility (Keep away from):

strong acids, bases, promoters, accelerators, readily oxidizables, and metal salts.

## Toxic and Hazardous Ingredients:

methyl ethyl ketone peroxide

(5.4% active oxygen max.)

dimethylphthalate

 $\frac{\%}{22 \text{ +/- } 2}$ CAS #  
1338-23-4

67 +/- 2

131-11-3

Form: liquid

Odor: slightly pungent

Appearance: clear

Color: water-white

Specific Gravity (water=1): 1.133

Boiling Point: no data available, decomposes over 68°C (155°F)

Melting Point: not applicable

Solubility in Water (by weight %): less than 1 at 25°C

Volatile (by weight %): less than 3

Evaporation Rate: not applicable

Vapor Pressure (mm Hg at 20°C): not applicable

Vapor Density (air=1): not applicable

pH (as is): no data available

Stability: Product is stable when stored at recommended temperatures

Viscosity SUS at 100°F: 15 centistokes at 25°C (77°F)

## Other physical properties:

self accelerating decomposition temperature (SADT): 4 gal: 76°C (169°F); 1 gal: 79°C (175°F)

(Continued on next page)

# WITCO MATERIAL SAFETY DATA SHEET

HI-POINT(R) PD-1

PAGE 2

Product Code: 260 0155

## FIRE AND EXPLOSION DATA---SECTION III

### Special Fire Fighting Procedures:

Fight fire with large amounts of water from a safe distance. Keep containers cool with water spray. After a fire, wait until material has cooled to room temperature before starting clean-up. Wear protective equipment to prevent smoke inhalation.

### Unusual Fire and Explosion Hazards:

Potential explosion hazards. Once ignited, product will burn vigorously.

Flashpoint: (Method Used) Setaflash closed tester 85°C (185°F)

Flammable limits %: not applicable

### Extinguishing agents:

Drychemical or Waterspray or Waterfog or CO<sub>2</sub> or Foam  
Closed containers exposed to fire may be cooled with water.

## HEALTH HAZARD DATA---SECTION IV

### Permissible concentrations (air):

methyl ethyl ketone peroxide: 0.7 ppm, 5 mg/m<sup>3</sup> ceiling (OSHA); 0.2 ppm, 1.5 mg/m<sup>3</sup> ceiling (ACGIH)

dimethylphthalate: 5 mg/m<sup>3</sup> (OSHA/ACGIH)

### Chronic effects of overexposure:

Specific symptoms and effects of over exposure not known, but will cause severe eye irritation; may cause blindness. Harmful if inhaled. Harmful or fatal if swallowed. Moderate skin irritant.

### Acute toxicological properties:

for methyl ethyl ketone peroxide: acute oral LD<sub>50</sub> = 1000-5000 mg/kg (rat); eye (rabbit) severe irritant/corrosive

### Emergency First Aid Procedures:

Eyes: Immediately flush with large quantities of water on site for 20 to 30 minutes. Hold eyes open while flushing. Call a physician. Continue water flush up to one hour during transport to a medical facility.

Skin Contact: Wash with soap and water. If irritation occurs, see a physician.

Inhalation: Remove to fresh air. Consult a physician if discomfort persists.

If Swallowed: Administer large quantities of water if person is conscious. Never give anything by mouth to an unconscious person. Immediately contact a physician.

### ROUTES OF ENTRY:

Inhalation, skin/eye contact, ingestion

## SPECIAL PROTECTION INFORMATION---SECTION V

### ventilation Type Required (Local, mechanical, special):

Local if necessary to maintain allowable PEL(permissible exposure limit) or TLV(threshhold limit value)

### Respiratory Protection (Specify type):

Use NIOSH/MSHA certified respirator with organic vapor cartridge if vapor

(Continued on next page)

# W I T C O M A T E R I A L S A F E T Y D A T A S H E E T

HI-POINT(R) PD-1

PAGE 3

Product Code: 260 0155

(Section V continued)

concentration exceeds permissible exposure limit

Protective Gloves:

neoprene type

Eye Protection:

chemical safety goggles

Other Protective Equipment:

as required to protect against skin contact

=====

## HANDLING OF SPILLS OR LEAKS---SECTION VI

=====

Procedures for Clean-Up:

Use appropriate protective clothing during clean-up.

Absorb spills with inert material such as perlite, vermiculite, or sand and then wet with water. Sweep up using non-sparking equipment and place in double polyethylene bags. Isolate leakers and contaminated containers to a safe place for disposal.

Waste Disposal:

Dispose of in accordance with all applicable federal, state and local regulations.

Dispose of waste at EPA-approved hazardous waste disposal facilities.

=====

## SPECIAL PRECAUTIONS---SECTION VII

=====

Precautions to be taken in handling and storage:

Store in original containers away from promoters and combustible material. Keep away from acids, heat, sparks, flames and direct sunlight. Keep closed to avoid contamination. Isolated storage is desirable.

Maximum Storage Temperature: 38°C (100°F)

=====

## TRANSPORTATION DATA---SECTION VIII

=====

D.O.T.: Regulated

U.S. D.O.T. Proper Shipping Name: Organic peroxide Type E, liquid (methyl ethyl ketone peroxides, <40%), 5.2, UN 3107, PG II, ERG 48, HI-Point PD-1

U.S. D.O.T. Hazard Class: Organic Peroxide

I.D. Number: UN 3107

Label(s) Required: Organic Peroxide

Reportable Quantity: not applicable

Freight Classification: Chemicals, NOI, N.F.M.C. Item 43940 Sub 2

Special Transportation Notes:

none

(Continued on next page)

# W I T C O M A T E R I A L S A F E T Y D A T A S H E E T

HI-POINT(R) PD-1

PAGE 4

Product Code: 260 0155

## ENVIRONMENTAL/SAFETY REGULATIONS---SECTION IX

### Section 313 (Title III Superfund Amendment and Reauthorization Act):

This product contains the following chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (the corresponding CAS number and percent by weight are also provided):  
dimethyl phthalate CAS# 131-11-3 67%

## COMMENTS

Never mix any promoter or accelerator with product as very rapid or explosive decomposition could occur. Do not store with food or drink.

\*\*\* STATE RIGHT-TO-KNOW SUBSTANCES \*\*\*

CAS NUMBER	CHEMICAL NAME
11-11-3	Dimethyl phthalate
22-84-1	Hydrogen peroxide
78-93-3	Methyl ethyl ketone
1338-23-4	Methyl ethyl ketone peroxide

Trade Secret Registry Numbers: NJ 136411-5146P

PA RTK Withheld

Prepared by: Roger N. Lewis

Title: R & D Director/Organic Peroxides

Original Date: Sent to:

Revision Date: 04/25/94

Supersedes: 09/30/93

Date Sent:

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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## MATERIAL SAFETY DATA SHEET For Coatings, Resins and Related Materials

Printed : 08/15/95

Revised : 08/11/94

### SECTION I - PRODUCT IDENTIFICATION

Manufacturer: POLYGARD, INC.  
Distributor: 5010 N. COOLIDGE AVENUE  
P.O. BOX 15477  
TAMPA FL 33614

Information Phone: 813 877-7591  
Emergency Phone: 1-800-424-9300  
CHEMTEC Phone: 1-800-424-9300

Product Class: RESIN GELCOAT  
Trade Name: ORANGE TOOLING GELCOAT  
Product Code: 2545  
A.S. Number: N/A  
O.T. Hazard Class:  
Proper Shipping Name: RESIN SOLUTION

1. Hazard Rating: Health - 2  
1. none > extreme Flg - 3  
1. 0 > 4 Reactivity - 2  
1. Personal Protection - 6

UN II:

### SECTION II - HAZARDOUS INGREDIENTS

Ingredients:	CAS #	Weight %	Exposure Limit	VP
			ACGIH/TLV	OSHA/PEL
			mm Hg	
STYRENE MONOMER	100-42-5	54.286	50 PPM ppm	50 ppm 5
		54.286	100	

CLASSIFIED AS A POSSIBLE CARCINOGEN

AMORPHOUS SILICA	112945-52-5	0.730	10 ppm	ppm 0
TITANIUM DIOXIDE	13463-67-7	0.476	10 mg/H3	15 mg/H30
IRON OXIDE YELLOW	51274-00-1	0.476	5 mg/H3	5 mg/H30
IRON OXIDE RED	1309-37-1	0.476	5 mg/H3	5 mg/H30
IRON OXIDE BROWN	1309-38-2	0.476	5 mg/H3	5 mg/H30
IRON OXIDE BLACK	1317-61-9	0.476	5 mg/H3	5 mg/H30
CHROMIUM OXIDE	1308-38-9	0.476	0.5 mg/H3	1.0 mg/H30
CARBON BLACK	1333-86-4	0.794	3.5 mg/H3	3.5 mg/H30

OVEREXPOSURE TO RESPIRABLE SILICA DUST CAN CAUSE SILICOSIS  
A FORM OF PROGRESSIVE PULMONARY FIBROSIS. CRYSTALLINE SILICA  
IS LISTED BY IARC AS A GROUP 2A CARCINOGEN BASED ON LIMITED  
EVIDENCE IN THE LABORATORY.

These items are listed on the SARA TITLE III Section 313 Inventory

### SECTION III - PHYSICAL DATA

Boiling Range: 290F Deg. F  
Vapor Density: Heavier than Air.  
Evap. Rate: Slower than n-Butyl Acetate  
Liquid Density: Heavier than Water.  
Volatiles volume: <50 %  
Ugt per gallon: 9-12 Pounds.  
Appearance: LIQUID, STYRENE ODOR  
V.O.C.: NONE

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

Flammability Class: 3      Flash Point: 80 F      LFL: 1.0

**-EXTINGUISHING MEDIA:**

SMALL FIRES: DRY CHEMICAL, CO2, HALON, WATER SPRAY OR STANDARD FOAM.

LARGE FIRES: WATER SPRAY, FOG OR STANDARD FOAM IS RECOMMENDED. MOVE CONTAINER FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK.

COOL CONTAINERS THAT ARE EXPOSED TO FLAMES WITH WATER FROM THE SIDE UNTIL WELL AFTER FIRE IS OUT. STAY AWAY FROM ENDS OF TANKS. FOR MASSIVE FIRE IN CARGO AREA, USE UNMANNED HOSE HOLDER OR MONITOR NOZZLES. IF THIS IS IMPOSSIBLE, WITHDRAW FROM AREA AND LET FIRE BURN.

WITHDRAW IMMEDIATELY IN CASE OF RISING SOUND FROM VENTING SAFETY DEVICE OR ANY DISCOLORATION OF TANK DUE TO FIRE.

**SPECIAL FIREFIGHTING PROCEDURES:**

USE STANDARD GUIDELINES SET BY LOCAL, STATE, FEDERAL, IFC, CONCERNING THE EXTINGUISHMENT OF HAZARDOUS MATERIALS.

**UNUSUAL FIRE & EXPLOSION HAZARDS:**

HIGHLY FLAMMABLE / COMBUSTIBLE MATERIAL; MAY BE IGNITED BY HEAT, SPARKS OR FLAMES. VAPORS MAY TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. CONTAINER MAY EXPLODE IN HEAT OF FIRE. VAPOR EXPLOSION HAZARD INDOORS, OUTDOORS OR IN SEWERS. RUNOFF TO SEWER MAY CREATE FIRE OR EXPLOSION HAZARD.

**SECTION V - HEALTH HAZARD DATA**

**PERMISSIBLE EXPOSURE LEVEL:**

STYRENE MONOMER - TWA (50 PPM) \ STEL (100 PPM) \ (5 MG/M3)

MAGNESIUM SILICATE - TIV (2 PPM) \ OSHA PEL (2 PPM)

AMORPHOUS SILICA - OSHA TIV (10 PPM)

**EFFECTS OF OVEREXPOSURE:**

STYRENE AT HIGH PPM OR IN A STRONG CONCENTRATION IS IRRITATING TO ALL PARTS OF THE RESPIRATORY TRACT AND EYES. STYRENE VAPOR GENERATION OF POLYESTER RESINS WILL RARELY EXCEED 200 PPM.

RESPIRATORY AGGRAVATION AND DERMATITIS MAY OCCUR.

ROUTES OF EXPOSURE: SKIN AND EYE CONTACT.

INHALATION  
INGESTION  
SKIN ABSORPTION

**AID:**

REMOVE VICTIM FROM EXPOSURE TO WELL VENTILATED AREA. MAKE COMFORTABLY WARM BUT NOT HOT.

ASSIST IN VENTILATIONS (ARTIFICIAL RESPIRATIONS) IF NEEDED. ADMINISTER OXYGEN BY NONREBREATHING MASK. MONITOR FOR PULMONARY EDEMA AND TREAT AS NECESSARY.

(cont.)

POLYGARD, INC.  
Material Safety Data Sheet form

(2545)

## SECTION V - HEALTH HAZARD DATA (cont.)

## FIRST AID: (cont.)

ANTICIPATE SEIZURES AND TREAT AS NECESSARY

\*\*FLUSH EYE IMMEDIATELY WITH AVAILABLE WATER FOR EYE  
CONTAMINATION. IN ADULTS, IF LID AND GLOBE ARE INTACT AND  
WITHOUT EDEMA, EYE IRRIGATION TUBS MAY BE USED. DO NOT FORCE  
TUBS. IF UNABLE TO INSERT, DO NOT USE.

DO NOT USE EMPTICS. COVER SKIN WITH DRY STERILE DRESSINGS AFTER  
DECONTAMINATION.

\*\*PRODUCT MAY CAUSE ACIDOSIS; HYPERVENTILATION MAY BE  
BENEFICIAL. AVOID ETHYLENE AND RELATED COMPOUNDS.

## SECTION VI - REACTIVITY DATA

STABILITY: ☐ Unstable ☒ StableHAZARDOUS POLYMERIZATION: ☒ May occur ☐ Will not occur

INCOMPATIBILITY

## CONDITIONS TO AVOID:

STRONG ACIDS, PEROXIDES AND OTHER OXIDIZING AGENTS.

## HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE AND DIOXIDE, LOW MOLECULAR WEIGHT HYDROCARBONS  
AND ORGANIC ACID.

## SECTION VII - SPILL OR LEAK PROCEDURES

## STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

REMOVE SATURATED CLOTHING PROMPTLY AND WASH AFFECTED AREAS  
WITH SOAP AND WATER. REMOVE ALL SOURCES OF IGNITION. VENTILATE  
AREA. USE PROTECTIVE MEASURES IN SECTION D.

## WASTE DISPOSAL METHOD:

ABSORB WITH INERT MATERIALS SUCH AS VERMICULITE OR SAND IN A  
CLOSED CONTAINER FOR DISPOSAL AS A SOLID WASTE. WASH AREA WELL  
WITH TRISODIUM PHOSPHATE AND WATER. DISPOSAL MUST CONFORM TO  
LOCAL, STATE, AND FEDERAL REGULATIONS.

## SECTION VIII - SPECIAL PROTECTION INFORMATION:

## RESPIRATORY PROTECTION:

UP TO 100 PPM NONE; ABOVE 100 PPM: WEAR NIOSH AND MSHA APPROVED  
RESPIRATORS WHEN HANDLING AND APPLYING THE PRODUCT. THE USE OF A  
SELF-CONTAINED BREATHING APPARATUS (SCBA) MAY ALSO BE USED.

\*\*\* IF THE CURED PRODUCT IS SANDED, THE RESULTING DUST CON-  
TAINS SILICA. USE APPROVED RESPIRATORS WHEN SANDING.\*\*\*\*\*



POLYGARD, INC.  
Material Safety Data Sheet for:

(2545)

SECTION VIII SPECIAL PROTECTION INFORMATION (cont.)

**VENTILATION:**

LOCAL AND MECHANICAL EXHAUST, USE OF EXPLOSION PROOF MOTORS, IS HIGHLY RECOMMENDED.

**PROTECTIVE GLOVES:**

NEOPRENE OR NON SOLUBLE PLASTIC.

**EYE PROTECTION:**

USE SAFETY WEAR DESIGNED TO PROTECT AGAINST CHEMICAL SPLASH.

**OTHER PROTECTIVE EQUIPMENT:**

SAFETY SHOWERS AND EYE WASH STATIONS SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: STANDARD GOOD HOUSEKEEPING AND HEALTH PRACTICES.

SECTION IX - SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:**

AVOID IMPROPER ADDITION OF PROMOTER AND/OR CATALYST. AVOID DIRECT SUNLIGHT, OPEN FLAMES, CONTAMINATION AND PROLONGED STORAGE ABOVE 100 DEG. (F).

CONSULT PRODUCT TECHNICAL BULLETIN AND READ PRODUCT PACKAGE LABEL. A PROMOTER (METAL ORGANIC SUCH AS COBALT OR AMINE TYPE) AND CATALYST (ORGANIC PEROXIDE TYPE) USED WITH THIS PRODUCT SHOULD ALWAYS BE MIXED SEPARATELY WITH THE PRODUCT AND SHOULD NEVER BE MIXED TOGETHER.

**OTHER PRECAUTIONS:**

\*\*\* SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION \*\*\*

ONE OR MORE OF THE CHEMICAL SUBSTANCES LISTED IN SECTION II OF THIS MSDS ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 AND 40 CFR 372.

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS 40 CFR 370: ACUTE, CHRONIC, FIRE, REACTIVE.

\*\*\* DOT PROPER SHIPPING NAME \*\*\*  
RESIN SOLUTION

\*\*\* UN NUMBER \*\*\*  
UN 1866

\*\*\* DOT HAZARD CLASS \*\*\*  
FLAMMABLE LIQUID

\*\*\* THIS MATERIAL SAFETY DATA SHEET AND THE INFORMATION IT CONTAINS IS OFFERED TO YOU IN GOOD FAITH AS ACCURATE. WE HAVE REVIEWED ANY INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET (S) WHICH WE RECEIVED FROM SOURCES OUTSIDE OUR COMPANY

PAGE: 5  
POLYGARD, INC.  
Material Safety Data Sheet for:

(2545)

SECTION IX - SPECIAL PRECAUTIONS (cont.)

-OTHER PRECAUTIONS: (cont.)

WE BELIEVE THAT INFORMATION TO BE CORRECT BUT CANNOT GUARANTEE ITS ACCURACY OR COMPLETENESS. HEALTH AND SAFETY PRECAUTIONS IN THIS MATERIAL SAFETY DATA SHEET MAY NOT BE ADEQUATE FOR ALL INDIVIDUALS AND/OR SITUATIONS.

IT IS THE USER'S OBLIGATION TO EVALUATE AND USE THIS PRODUCT SAFELY AND TO COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS. NO STATEMENT MADE IN THIS MATERIAL SAFETY DATA SHEET (S) SHALL BE CONSTRUED AS A PERMISSION OR RECOMMENDATION FOR THE USE OF ANY PRODUCT IN A MANNER THAT MIGHT INTERFERE EXISTING PATENTS. NO WARRANTY IS MADE, EITHER EXPRESS OR IMPLIED.

IT IS THE SOLE INTEREST OF POLYGARD INC. TO MEET AND COMPLY WITH ALL OSHA & EPA REGULATIONS. PLEASE REVIEW THE ENCLOSED MATERIAL SAFETY DATA SHEET (S). IF YOU HAVE ANY QUESTIONS PLEASE CONTACT US IMMEDIATELY. \*\*\*

OCCUPATIONAL HEALTH & SAFETY DEPARTMENT  
POLYGARD INC.

SECTION X SECTION X

## Page # : 1

**Extinguishing Media** .....: FOAM, WATER SPRAY (FOG), DRY CHEMICAL, CARBON DIOXIDE AND VAPORIZING LIQUID TYPE EXTINGUISHING AGENTS MAY ALL BE SUITABLE FOR EXTINGUISHING FIRES INVOLVING THIS TYPE PRODUCT, DEPENDING ON SIZE OR POTENTIAL SIZE OF FIRE AND CIRCUMSTANCES RELATED TO THE SITUATION. PLAN FIRE PROTECTION AND RESPONSE STRATEGY THROUGH CONSULTATION FIRE PROTECTION AUTHORITIES OR APPROPRIATE SPECIALIST. THE FOLLOWING PROCEDURES FOR THIS TYPE OF PRODUCT ARE BASED ON THE RECOMMENDATIONS FOUND IN THE NATIONAL FIRE PROTECTION ASSOCIATIONS (FIRE PROTECTION GUIDE ON HAZARDOUS MATERIAL), 8TH EDITION 1984.

**Special Fire Fighting Proc.** ...: USE AIR SUPPLIED BREATHING APPARATUS FOR ENCLOSED AREAS. USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. WATER OR FOAM MAY CAUSE FROTHING.

**Unusual Fire & Expl. Hazards** ..: EMPTY CONTAINERS RETAINING RESIDUE (LIQUID OR VAPOR) CAN BE DANGEROUS. DO NOT PRESSURIZE, WELD, CUT, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION, THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND RETURNED TO A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENT REGULATIONS. THESE TYPES OF PRODUCTS MAY EMIT HAZARDOUS FUMES WHEN EXPOSED TO HEAT, FIRE, OR OPEN FLAMES SUCH AS CARBON OXIDES AND IN SOME CASES OXIDES OF SULFUR.

#### SECTION V - HEALTH HAZARD DATA

**Threshold Limit Value** .....: 5MG/CUBIC METER AS AN OIL MIST

**OSHA Threshold Limit Value** .....: 5MG/CUBIC METER AS AN OIL MIST

**CGIH Threshold Limit Value** .....: N/A

**Carcinogen - NTP Program** .....: THIS PRODUCT DOES NOT CONTAIN ANY INGREDIENTS LISTED ON THE IARC, OR NTP, OR THE OSHA Z LIST.

**Carcinogen - IARC Program** .....: SAME AS ABOVE

**SARA Section 313 Status**.....: THIS MATERIAL IS NOT KNOWN TO CONTAIN ANY CHEMICALS ON THE SARA SECTION 313 LIST AT A CONCENTRATION GREATER THAN 1.0 PERCENT OR CARCINOGENIC CHEMICAL ON THAT LIST AT A CONCENTRATION GREATER THAN 0.1 PERCENT

**Symptoms of Exposure** .....: PROLONGED OR REPEATED SKIN CONTACT WITH THIS PRODUCT TENDS TO REMOVE SKIN OILS, POSSIBLY LEADING TO IRRITATION AND DERMATITIS; HOWEVER, BASED ON HUMAN EXPERIENCE AND AVAILABLE TOXICOLOGICAL DATA THIS PRODUCT IS JUDGED TO BE NEITHER A "CORROSIVE" NOR AN IRRITANT BY OSHA CRITERIA. THIS PRODUCT HAS A LOW ORDER OF ACUTE ORAL AND DERMAL TOXICITY. POSSIBLE ASPIRATION HAZARD; INDUCED VOMITING MAY CAUSE ASPIRATION OF PRODUCT INTO THE LUNGS. (SEE EMERGENCY FIRST AID SECTION).

**Medical Cond. Aggravated by Exp.** : PRE-EXISTING SKIN CONDITIONS MAY BE AGGRAVATED BY EXPOSURE. HEALTH STUDIES HAVE SHOWN THAT MANY PETROLEUM HYDROCARBONS AND SYNTHETIC LUBRICANTS POSE POTENTIAL HUMAN HEALTH RISKS WHICH VARY FROM PERSON TO PERSON. AS A PRECAUTION, EXPOSURE TO LIQUIDS, VAPORS, MISTS OR FUMES SHOULD BE MINIMIZED.

**Primary Route(s) of Entry** .....: ABSORPTION THROUGH THE SKIN AND INHALATIONS

**Emergency First Aid** .....: EYES: FLUSH WITH COPIOUS QUANTITIES OF WATER FOR AT LEAST 15 MINUTES. IF IRRITATION DEVELOPS, CONSULT PHYSICIAN. SKIN: WASH AFFECTED AREA WITH SOAP AND WATER. IF IRRITATION DEVELOPS, CONSULT PHYSICIAN. INGESTION: DO NOT INDUCE VOMITING, CONSULT PHYSICIAN IMMEDIATELY. INHALATION: VAPOR PRESSURE IS VERY LOW. VAPOR INHALATION UNDER AMBIENT CONDITIONS IS NORMALLY NOT A PROBLEM. IF OVERCOME BY VAPOR FROM HOT PRODUCT, IMMEDIATELY REMOVE FROM EXPOSURE AND CALL A PHYSICIAN. IF BREATHING IS IRREGULAR OR HAS STOPPED, START RESUSCITATION, ADMINISTER OXYGEN IF AVAILABLE. IF OVEREXPOSED TO OIL MIST, REMOVE FROM FURTHER EXPOSURE UNTIL EXCESSIVE OIL MIST CONDITION SUBSIDES.

## SECTION VI - REACTIVITY DATA

Stability - Unstable .....: NO  
          - Stable .....: YES  
Conditions to Avoid .....: OPEN FLAMES  
Incompatibility .....: STRONG OXIDIZING AGENTS  
Materials to Avoid .....: CHLORINE, LIQUID OXYGEN  
Hazard Polymerization - May Occur: NO  
                          - Will Not Occur ...: YES  
Conditions to Avoid .....: OPEN FLAMES  
Hazardous Decomposition Products : CARBON MONOXIDE, FUMES, SMOKE

## SECTION VII - ENVIRONMENTAL PROTECTION PROCEDURES

Spill Response .....: KEEP PRODUCT OUT OF SEWERS AND WATER COURSES BY DIKING OR IMPOUNDING. ABSORB WITH SAND OR INERT MATERIAL. SWEEP, SCOOP UP AND REMOVE. PREVENT SPREAD OR SPILL. ADVISE AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATER COURSES, OR EXTENSIVE LAND AREAS. ASSURE CONFORMITY WITH LOCAL REGULATIONS.  
Waste Disposal Method ...: CONSULT FEDERAL, STATE OR LOCAL AUTHORITIES FOR PROPER DISPOSAL PROCEDURES. ASSURE CONFORMITY WITH APPLICABLE DISPOSAL REGULATIONS. DISPOSE OF ABSORBED MATERIAL AT AN APPROVED WASTE SITE OR FACILITY.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

Protection .....: GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.  
Skin Protection .....: GLOVES, IF NEEDED TO AVOID PROLONGED OR REPEATED SKIN CONTACT.  
Respiratory Protection ..: NONE NORMALLY NEEDED AT AMBIENT TEMPERATURES. USE SUPPLIED AIR RESPIRATORY PROTECTION IN CONFINED OR ENCLOSED SPACES. USE ONLY NIOSH APPROVED EQUIPMENT. USE FILTER, DUST, FUME OR MIST RESPIRATOR TYPE UNDER CONDITIONS EXCEEDING TLV STANDARDS.  
Ventilation Recommended : ALWAYS MAINTAIN BELOW PERMISSIBLE EXPOSURE LIMITS. USE LOCAL EXHAUST TO CAPTURE VAPORS, MIST OR FUMES, IF NECESSARY. PROVIDE GREATER THAN SIXTY FEET PER MINUTE HOOD, FACE VELOCITY FOR CONFINED SPACES. PROVIDE VENTILATION SUFFICIENT TO PREVENT EXCEEDING RECOMMENDED EXPOSURE LIMITS OR BUILDUP OF EXPLOSIVE CONCENTRATIONS OF VAPOR IN AIR.  
Other Protection .....: USE CHEMICAL RESISTANT APRON OR OTHER IMPERVIOUS CLOTHING IF NEEDED TO AVOID CONTAMINATING REGULAR CLOTHING WHICH COULD RESULT IN PROLONGED OR REPEATED SKIN CONTACT.

## SECTION IX - SPECIAL PRECAUTIONS

Hygienic Practices in Handling & Storage .....: KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT HANDLE NEAR HEAT, SPARKS, FLAMES OR STRONG OXIDANTS. MINIMIZE BREATHING VAPORS, MISTS, OR FUMES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN.  
Precautions for Repair & Maintenance Of Contaminated Equipment ..: REMOVE CONTAMINATED CLOTHING, LAUNDER OR DRY CLEAN BEFORE REUSE OR DISCARD IF OIL CONTAMINATED.

Other Precautions ...: CLEAN SKIN THOROUGHLY AFTER CONTACT. BEFORE BREAKS AND MEALS AND AT END OF WORK PERIOD. PRODUCT IS READILY REMOVED FROM SKIN BY WATERLESS HAND CLEANERS, FOLLOWED BY WASHING THOROUGHLY WITH SOAP AND WATER. USE GOOD INDUSTRIAL HYGIENIC PRACTICES.

 PREPARED BY RAUL D. HERNANDEZ OR KAREN ZULLO

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. HOWEVER, SPECIALTY PRODUCTS COMPANY ASSUMES NO LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. FINAL DETERMINATION OF SUITABILITY OF ANY MATERIAL IS THE SOLE RESPONSIBILITY OF THE USER. ALL MATERIALS MAY PRESENT UNKNOWN HEALTH HAZARDS AND SHOULD BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS WHICH EXIST.

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4/8/96

(2)

# MATERIAL HEALTH AND SAFETY BULLETIN

MANUFACTURER'S NAME

T.R. INDUSTRIES

STREET ADDRESS

11022 VULCAN STREET

CITY, STATE AND ZIP CODE

SOUTH GATE, CALIFORNIA 90280-0893

EMERGENCY PHONE NUMBER (24 Hours):

Transportation Emergencies Call: CHEMTREC (800) 424-9300

Health Emergencies Call: Los Angeles Poison Information Center (213) 664-2121

PRODUCT: TR 100, 102, 104 & 106

PASTE WAX

CHEMICAL NAME: HYDROCARBON

CAS NUMBER: (Not Applicable for  
Blends)

DOT APPLICABLE

DOT (Proper Shipping Name)

## HAZARD RATING NFPA

0-LEAST	FIRE	-	2
1-SLIGHT	TOXICITY	-	2
2-MODERATE	REACTIVITY	-	0
3-HIGH	SPECIAL	-	
4-EXTREME			

## WARNING STATEMENT:

CAUTION: Combustible keep away from  
heat & open flame.

Do NOT induce vomiting if swallowed.  
Call a Physician immediately.

KEEP OUT OF REACH OF CHILDREN.

FOR INDUSTRIAL USE ONLY.

## SECTION I .. INGREDIENTS

PRODUCT	CAS NUMBER	TLV	PERCENTAGES
STODDARD SOLVENT (Mineral Spirits)	64741-41-9	500A 100B	70-75%
NON HAZARDOUS INGREDIENTS: PROPRIETARY WAX BLEND			25-30%

Threshold Limit Value

A, Osha [X] B, ACGII [X] C, See Section III [ ] D, Other [ ]

Section II .. ~~EMERGENCY AND FIRST AID PREcaUTIONS~~

EMERGENCY: Have a physician call: LOS ANGELES POISON INFORMATION CENTER  
(24 Hrs.) (213) 644-2121

EYE CONTACT	Gently flush with large quantities of water for at least 15 minutes. Seek medical attention immediately.
SKIN CONTACT	Remove any contaminated clothing. Wash with soap and large quantities of water. Seek medical attention if irritated.
INHALATION	If breathing difficulties, dizziness, or light-headedness occur when working in areas with high vapor concentration, move to outside air immediately. If breathing stops, begin artificial respiration and seek immediate medical attention.
INGESTION	If this product is swallowed, seek medical attention immediately. <b>DO NOT</b> induce vomiting unless directed by a physician.

## Section III .. PHYSIOLOGICAL EFFECTS AND HEALTH INFORMATION

EYE EFFECTS	This product may be an eye irritant.
SKIN EFFECTS	Prolonged skin contact may result in irritation and/or Dermatitis.  PROLONGED OR REPEATED SKIN CONTACT MAY RESULT IN DERMATITIS.
SYSTEMIC EFFECTS	Various studies have shown a possible association with exposure to this product and the following:  RESPIRATORY TRACT IRRITATION ANESTHESIA IN HIGH CONCENTRATIONS.

CARCINOGEN: NTP IARC MONOGRAPHS OSHA

NONE KNOWN



## SECTION IV .. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify Type)	The use of respiratory protection depends on vapor concentration of the time-weighted TLV. Use a respirator/gas mask with appropriate cartridges and canister (NIOSH approved, if available), or supplied air equipment, depending on airborne concentration.
VENTILATION	If general mechanical ventilation proves inadequate to maintain safe vapor concentrations, supplemental local exhaust may be required. Other special precautions, such as respiratory protection, may be required if vapor concentrations cannot be reduced to below the TLV by ventilation.
EYE PROTECTION	Safety glasses and/or face shields are recommended.
PROTECTIVE GLOVES	The use of heavy rubber gloves is advised to prevent skin irritation and absorption.
OTHER PROTECTIVE EQUIPMENT	Impermeable aprons, availability of eye washes and safety are recommended.

## SECTION V .. REACTIVITY DATA

STABILITY	Unstable      Conditions to avoid:  Stable      X    NONE
INCOMPATIBILITY (Materials to avoid)	This product is incompatible with strong oxidizing agents, strong acids, or bases, and selected amines.
HAZARDOUS DECOMPOSITION PRODUCTS	Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide.
HAZARDOUS POLYMERIZATION	May Occur      Conditions to avoid:  Will Not Occur    X    NONE

## SECTION VI .. SPILL OR LEAK PROCEDURES

## HIGHWAY OR RAILWAY SPILLS - CALL CHEMTREC (800) 424-9300

PRECAUTIONS IN CASE OF RELEASE OR SPILL	Stay upwind and away from spill unless wearing appropriate protective equipment. Stop and/or contain spill if it can be done safely. Keep all sources of ignition away.
WASTE DISPOSAL METHOD	Dispose of product in accordance with applicable local, county, state and Federal regulations.

SECTION VII .. STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORING PRECAUTIONS	Keep product containers cool, dry and away from sources of ignition. Use and store with adequate ventilation.
OTHER PRECAUTIONS	Personnel should avoid inhalation of vapors. Should contact be made, remove saturated clothing and flush with water.

SECTION VIII .. FIRE AND EXPLOSION HAZARD DATA

DOT FLAMMABILITY CLASSIFICATION	Flash Point Range <input type="checkbox"/> 20° F. <input type="checkbox"/> 20° F. to 100° F. <input checked="" type="checkbox"/> 100° F. to 200° F. COMBUSTIBLE <input type="checkbox"/> Over 200° F. <input type="checkbox"/> None to Boiling
EXTINGUISHING MEDIA	Use Foam, CO <sub>2</sub> , or dry chemical fire fighting apparatus.
UNUSUAL FIRE & EXPLOSION HAZARDS	Keep work areas free of hot metal surfaces and other sources of ignition.
HAZARDOUS POLYMERIZATION	The use of self-contained breathing apparatus is recommended for fire fighters. Avoid spreading burning liquid with water. Contact Fire Dept. immediately.

SECTION IX .. PHYSICAL DATA

APPROXIMATE BOILING RANGE °F	Vapor Density: <input checked="" type="checkbox"/> Heavier <input type="checkbox"/> Lighter Than Air		
EVAPORATION RATE: <input type="checkbox"/> Faster <input checked="" type="checkbox"/> Slower Than Ether	Percent Volatile: 70	Solubility in water: NEGLEGIBLE	
SPECIFIC GRAVITY: <input checked="" type="checkbox"/> Lighter <input type="checkbox"/> Heavier Than water	Weight Per Gallon: 7 LBS. VOC CONTENT: 278GM/14 OZ. 397GM CAN		
APPEARANCE AND ODOR: 100 CREME W/CHARACTERISTIC ODOR. 102 WHITE W/ " "	104 BLUE W/CHARACTERISTIC ODOR 106 AQUA " " 108 YELLOW " "		

SECTION X .. DOCUMENTARY INFORMATION

Product Code: TR 100,102,104,106, & 108 Issue date 1/96 Prepared By: R.LUKICH  
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