

APPLICATION TRACKING SYSTEM

06/30/88

APPL NO:151435

APPL RECVD:06/30/88 TYPE CODE:AC SUBCODE:05 LAST UPDATE:06/30/88

DER OFFICE RECVD:ORL DER OFFICE TRANSFER TO:BFQ APPLICATION COMPLETE:___/___/___

DER PROCESSOR:J-TURNER

APPL STATUS:AC DATE:06/30/88 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)

RELIEF:___ (SSAC/EXEMPTIONS/VARIANCE)

(Y/N) N MANUAL TRACKING DISTRICT:30 COUNTY:05
(Y/N) N DNR REVIEW REQD? LAT/LONG:28.24.26/80.42.03
(Y/N) N PUBLIC NOTICE REQD? BASIN-SEGMENT:___
(Y/N) N GOV BODY LOCAL APPROVAL REQD? COE #:_____
(Y/N) Y LETTER OF INTENT REQD? (I/ISSUE D/DENY) ALT#:_____

PROJECT SOURCE NAME:SEA RAY BOATS/LAMINATION & ASSEMBLY
STREET:SEA RAY DRIVE CITY:MERRITT ISLAND

STATE:FL ZIP:_____ PHONE:_____

APPLICATION NAME:CANTELOU ASSOCIATES, INC.

STREET:POST OFFICE BOX 3102 CITY:AIKEN

STATE:SC ZIP:29802 PHONE:803-648-9300

AGENT NAME:_____
STREET:_____ CITY:_____

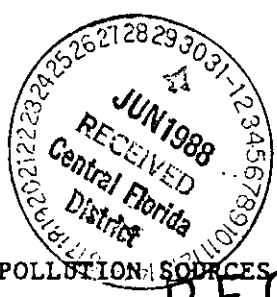
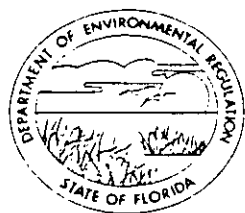
STATE:_____ ZIP:_____ PHONE:_____

FEE #1 DATE PAID:06/30/86 AMOUNT PAID:00750 RECEIPT NUMBER:00124304

Table with columns for event type (B, C, D, E, F, G, H, I, J, K, L, M, N) and date. Rows include: B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE, C DATE DER SENT DNR APPLICATION/SENT DNR INTENT, D DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP., E DATE #1-#6 ADDITIONAL INFO REQ--REC FROM APPLICANT, F DATE GOVERNING BODY REQUESTED SURVEY RESULTS/REPORTS, G DATE FIELD REPORT WAS REQ--REC, H DATE DNR REVIEW WAS COMPLETED, I DATE APPLICATION WAS COMPLETE, J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS, K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT, L DATE PUBLIC NOTICE WAS SENT TO APPLICANT, M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED, N WAIVER DATE BEGIN--END (DAY 90).

COMMENTS: 1. Plan or map to file?
2. Incorrect fee? (1)
3. One copy of ... (2)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
ALEX ALEXANDER
DISTRICT MANAGER

CENTRAL FLORIDA DISTRICT
3319 MACUIRE BOULEVARD
SUITE 222
DELANDO, FLORIDA 32803-3757
750
JUN 30 1988

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCE(S)

SOURCE TYPE: Fiberglass Boat Plant [X] New¹ [] Existing

APPLICATION TYPE: [X] Construction [] Operation [] Modification

COMPANY NAME: Sea Ray Boats, Inc. COUNTY: DERBY

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired Lamination & Assembly

SOURCE LOCATION: Street Sea Ray Drive Building Building
City Merritt Island

UTM: East Zone 17 - 529,300 E North 3,142,100 N
Latitude 28° 24' 26"N Longitude 80° 42' 03"W

APPLICANT NAME AND TITLE: Cantelou Associates, Inc.

APPLICANT ADDRESS: P. O. Box 3102, Aiken, S. C., 29802

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Sea Ray Boats, Inc.
Sykes Creek Plant
I certify that the statements made in this application for a Boat Manuf. Plant
permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: [Signature]
G. E. Cantelou, Jr. P.E.
Name and Title (Please Type)
Date: 6-28-88 Telephone No. 803-648-9300

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471; F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

¹ See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

G. E. Cantelou, Jr. P. E.
Name (Please Type)

Cantelou Associates, Inc.
Company Name (Please Type)

P. O. Box 3102, Aiken, S. C. 29802
Mailing Address (Please Type)

Florida Registration No. 18006 Date: June 28, 1988 Telephone No. 803/648-9300

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

The proposed facility will produce fiberglass pleasure boats. The complete procedure is described in detail under Section V: Supplemental Requirements Article 7.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction August 1, 1988 Completion of Construction March 30, 1989

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Dust Collection System - \$120,000 (approximately)

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

Permit Number 051322579

E. Requested permitted equipment operating time: hrs/day 16 ; days/wk 5 ; wks/yr 48 ;
if power plant, hrs/yr _____ ; if seasonal, describe: Does Not Apply

F. If this is a new source or major modification, answer the following questions.
(Yes or No)

- 1. Is this source in a non-attainment area for a particular pollutant? No
 - a. If yes, has "offset" been applied? _____
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
 - c. If yes, list non-attainment pollutants. _____
- 2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. No
- 3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. No
- 4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? No
- 5. Do "National Emission Standards for Hazardous Air Pollutants"
(NESHAP) apply to this source? No

- H. Do "Reasonably Available Control Technology" (RACT) requirements apply
to this source? No
 - a. If yes, for what pollutants? _____
 - b. If yes, in addition to the information required in this form,
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-
cation for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Resin	Styrene	40	323.	Step 2
Gelcoat	Styrene	35	{ 49.5 }	Step 1
Gelcoat	Methyl Methacralate	5		Step 1
MEKP9	MEKP	34	4.7	Steps 1,2
Glue(adhesive)	1,1,1-Tri-chloroethane	34	3.5	Step 4
Acetone	Acetone	99	12.5	Steps 1,1,5
Bottom Paint	*1 Misc.	43	11.7	Step 5 (outside)

B. Process Rate, if applicable: (See Section V, Item 1)

- Total Process Input Rate (lbs/hr): _____
- Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission ¹		Allowed Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Styrene	29.8	57.2	Not Determined		260,000	130.0	Step 1,2
Methyl Methacralate	3.96	7.6	Not Determined		34,600	17.3	Step 1
MEKP	0.47	0.9	Not Determined		4,000	2.0	Step 1,2
1,1,1-Tri-chloroethane	2.31	4.4	Not Determined		20,100	10.1	Step 4
Acetone	6.25	12.	Not Determined		54,600	27.3	Step 1,2,5
*1 Misc.	7	13.4	Not Determined		61,000	30.5	Step 3,4,5

¹See Section V, Item 2.

217.2

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard.

⁴Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Dust Collector Mfg. Not Determined	SawDust(Wood)	±99%	(Not Vented)	

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Contaminated acetone is recycled by licensed handler off-site

Solid waste generated is non-toxic and non-hazardous and is disposed

of offsite (incinerated)

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: DOES NOT APPLY ft. Stack Diameter: _____ ft.
 Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.
 Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION DOES NOT APPLY

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____
 Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____
 Approximate Number of Hours of Operation per day _____ day/wk. _____ wks/yr. _____
 Manufacturer _____
 Date Constructed _____ Model No. _____

	Volume (ft) ³	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____
 Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: Cyclone Wet Scrubber Afterburner
 Other (specify) _____

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

Yes No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:* | 4. Capital Costs: |

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: ft. b. Diameter: ft.
- c. Flow Rate: ACFM d. Temperature: °F.
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.
 - a. Control Device: b. Operating Principles:
 - c. Efficiency:¹ d. Capital Cost:
 - e. Useful Life: f. Operating Cost:
 - g. Energy:² h. Maintenance Cost:
 - i. Availability of construction materials and process chemicals:
 - j. Applicability to manufacturing processes:
 - k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.
 - a. Control Device: b. Operating Principles:
 - c. Efficiency:¹ d. Capital Cost:
 - e. Useful Life: f. Operating Cost:
 - g. Energy:² h. Maintenance Cost:
 - i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION DOES NOT APPLY

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? Yes No
- b. Was instrumentation calibrated in accordance with Department procedures?
 Yes No Unknown

B. Meteorological Data Used for Air Quality Modeling

- 1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year
- 2. Surface data obtained from (location) _____
- 3. Upper air (mixing height) data obtained from (location) _____
- 4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

- 1. _____ Modified? If yes, attach description.
- 2. _____ Modified? If yes, attach description.
- 3. _____ Modified? If yes, attach description.
- 4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO ₂	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

- F. Attach all other information supportive to the PSD review.
- G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.
- H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT I

SECTION V: SUPPLEMENTAL REQUIREMENTS

1. Not required.
2. See Attachment II.
3. Attached see Exhibit "A", Part 1 - excerpt from Cal-OSHA study indicating the emission factor for styrene from resins is 6%, Part 2 - Product data sheets.
4. Dust collector not vented to atmosphere.
5. Dust Collector not vented efficiency = 100%
6. See Exhibit "B".
7. See Exhibit "C".
8. See Exhibit "D".
9. \$750 permit fee.
10. Not required.

UTILIZATION RATE:RESIN

$$\frac{1,240,000 \text{ lbs/year}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 323 \text{ lbs/hr.}$$

GELCOAT

$$\frac{190,000 \text{ lbs/year}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 49.5 \text{ lbs/hr.}$$

MEKP-g

$$\frac{18,000 \text{ lbs/year}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 4.7 \text{ lbs/hr.}$$

GLUE (Adhesive)

$$\frac{13,410 \text{ lbs/yr.}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 3.5 \text{ lbs/hr.}$$


ACETONE

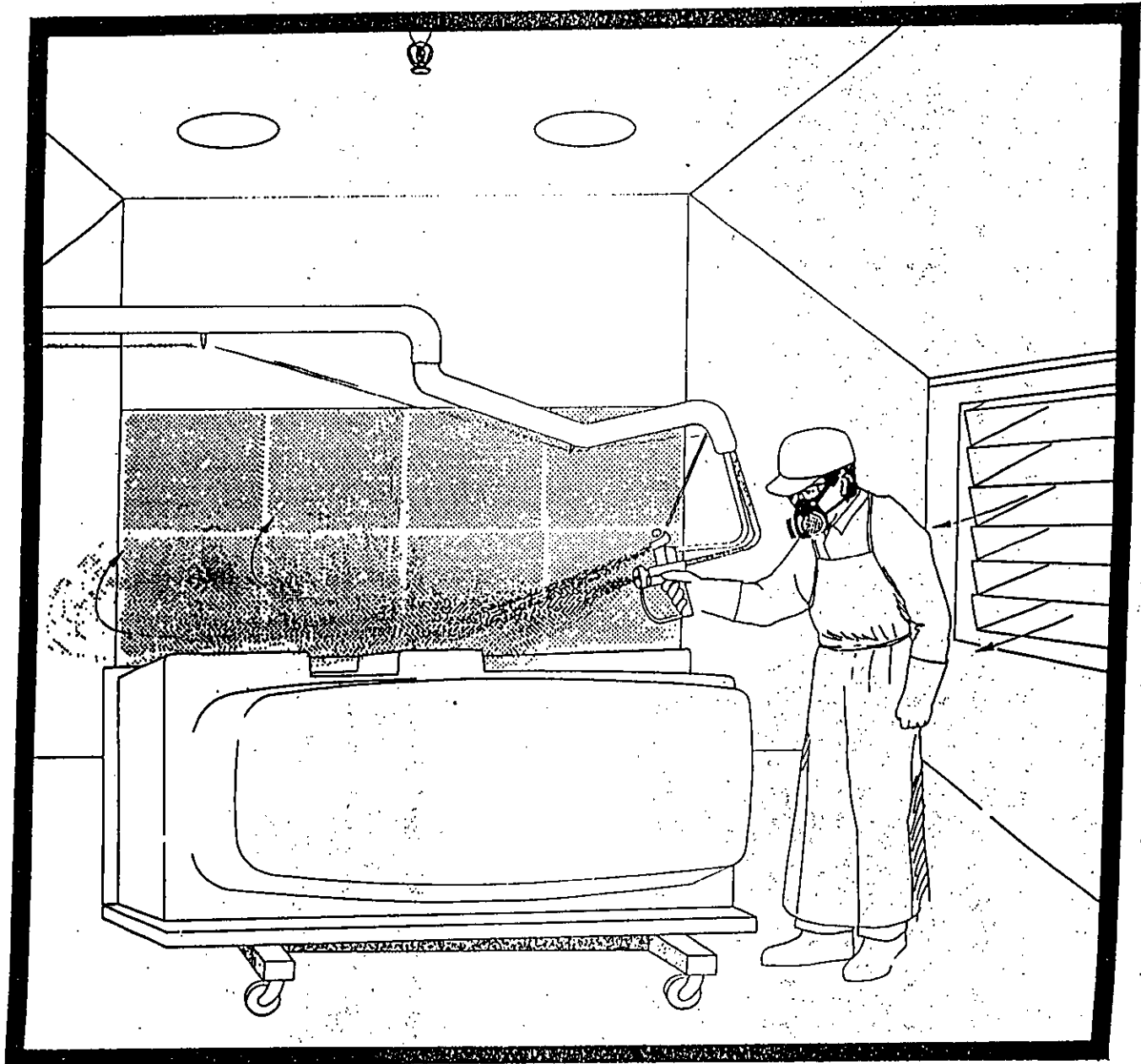
$$\frac{48,000 \text{ lbs/yr.}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 12.5 \text{ lbs/hr.}$$

BOTTOM PAINT

$$\frac{45,000 \text{ lbs/yr.}}{48 \frac{\text{wks}}{\text{yr}} \times 5 \frac{\text{days}}{\text{wk}} \times 16 \frac{\text{hrs}}{\text{day}}} = 11.7 \text{ lbs/hr.}$$

Occupational Exposures to Styrene and Other Health Hazards in the Fiberglass Reinforced Plastics Industry

A Special Studies Report by 



worker performed almost continuous spraying while standing on a portable platform that was inserted into the tank that also supported a large duct with high velocity airflow that exhausted vapors very close to the point of generation.

Two facilities, using a unique production process to ensure good secondary bonding between resin layers, also had the side effect of obtaining low ambient exposure levels from the process. After gelcoating and hand laminating the mold, the part was covered with plastic sheeting and a vacuum pulled while the part is curing. Covering the part and pulling a vacuum through the space between the part and the plastic, removes styrene vapor from the work place air and reduces employee exposure.

The majority of companies which installed some form of dilution ventilation, for example, filter banks on the walls that pull a large volume of air, were mostly ineffective. They were either too far from the source of the exposure or were defeated by lack of directionality and turbulence.

Substitution

NIOSH estimates that approximately 6% of styrene monomer in a 40/60 polyester resin mixture vaporizes during the curing process. Methyl styrene (also called vinyl toluene) is a close chemical cousin of styrene that has a lower vapor pressure, reducing the amount of vaporization. Methyl styrene has three isomers, para, meta, or the ortho form. Two production facilities were using a resin mixture containing 60% polyester, 14% styrene and 26% para-methyl styrene.

FIGURE V.3

Styrene and the Three Isomers of Methyl Styrene

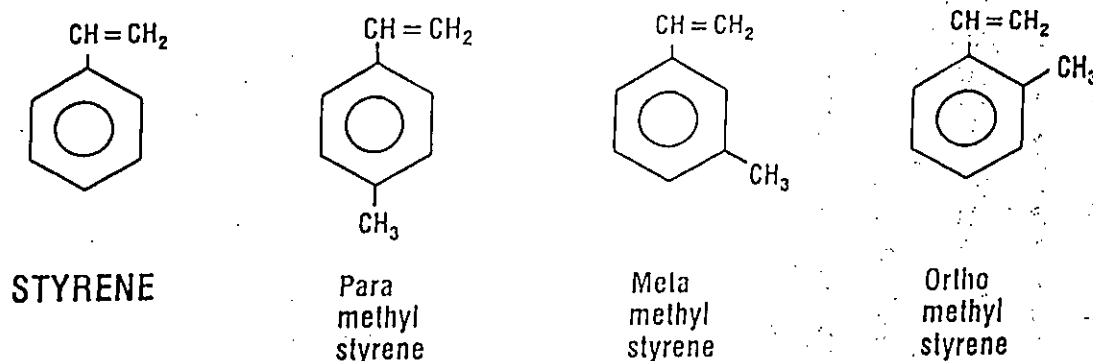


EXHIBIT "A"
PART 2

Material Safety Data Sheet

Manufacturer's Name Alpha Resins Corporation

Emergency Telephone No. (813) 858-4431

Address 4620 N. Galloway Road
Lakeland, Florida 33805

Other Information Calls (813) 858-4431

Signature of Person Responsible for Preparation Pete Peterson

Date Prepared Dec. 31, 1987

SECTION 1 - IDENTITY

Common Name: (used on label) Trade Name & Synonym(s) 80-530

Cas No. Mixture

Chemical Name Unsaturated Polyester Resin

Chemical Family Diacid/Glycol Condensate

Formula Mixture

SECTION 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical & common names)	%	OSHA PEL
STYRENE (100-42-5)	39	100ppm

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

Boiling Point 293°F Specific Gravity (H₂O=1) 1.0 - 1.1 Vapor Pressure (mm Hg) < 4.5

Percent Volatile by Volume (%) 39 Vapor Density (Air = 1) 3.6 Evaporation Rate (Bu Act=1) 3.1

Solubility in Water Very slight Reactivity in Water None

Appearance and Odor Viscous liquid with sweet pungent odor.

Flash Point Flammable Limits in Air % by Volume Lower 1.1 Upper 6.1 Extinguisher Media Water fog, foam Dry chem., CO₂ Auto-ignition Temperature

Special Fire Fighting Procedures If electrical equipment is involved, the use of foam should be avoided. Handling equipment should be cooled by water stream if exposed to fire.

Unusual Fire and Explosion Hazards At elevated temperatures, such as in a fire condition, polymerization may take place resulting in violent rupture of closed containers. Wear positive pressure apparatus, eye protection, and keep vapors away from possible ignition sources.

SECTION 4 - PHYSICAL HAZARDS

Stability Unstable Stable Conditions to Avoid Sunlight, open flames, contamination, and prolonged storage above 75° F

Incompatibility (Materials to Avoid) Acids, oxidizing agents, free radical initiators such as peroxides, and metallic halides and soaps.

Hazardous Decomposition Products Carbon monoxide, carbon dioxide and low molecular weight hydrocarbons.

Hazardous Polymerization May Occur Will Not Occur Conditions to Avoid Open flames, contamination and prolonged exposure to sunlight or temperatures greater than 75° F

SECTION 5 - HEALTH HAZARDS

Signs and Symptoms of Exposure **1. Acute**
 Overexposure May irritate eyes, nose, throat, and skin.

2. Chronic
 Overexposure May feel drugged, become sleepy, or unconscious. Repeated skin contact may cause rash.

Medical Conditions Generally Aggravated by Exposure **Pre-existing respiratory and skin disorders**

Chemical Listed as Carcinogen or Potential Carcinogen **Neurotoxicology Program** Yes No **I.A.R.C. Monographs** Yes No **OSHA** Yes No

OSHA Permissible Exposure Limit **100ppm** **ACGIH Threshold Limit Value** **50ppm** **Other Exposure Limit Used** **STEL=100ppm**

Emergency and First Aid Procedures **PRIMARY ROUTES OF ENTRY**

1. Inhalation Move exposed person(s) to fresh air. Get medical attention.

2. Eye Contact lens should not be worn while working with this material. Immediately flush with plenty of water for at least 15 minutes. Get prompt medical attention.

3. Skin Wash exposed skin with soap and water. Get medical attention if irritation develops. Remove contaminated clothing, shoes, and thoroughly clean before reuse.

4. Ingestion DO NOT induce vomiting. Call physician immediately.

SECTION 6 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) **Chemical cartridge respirator with NIOSH/OSHA approved organic vapor cartridge to 400ppm. Above 400ppm SCBA.**

Ventilation **Local Exhaust Preferred** **Mechanical (General) Acceptable** **Special Explosion proof** **Other N/A**

Protective Gloves **Rubber or other resistant material** **Eye Protection Chemical goggles**

Other Protective Clothing or Equipment **Chemical resistant aprons or coats to avoid skin contact.**

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken in Handling and Storage **Store in an area below 75° F and out of direct sunlight. Keep from heat, spark, and smoking areas. Empty containers may be hazardous.**

Other Precautions **Do not transfer to bottles or unlabeled containers. Equipment should be grounded during transfer with non-sparking pumps used.**

Steps to be Taken in Case Material is Released or Spilled **Remove all sources of ignition. Ventilate area. Prevent material from entering drains. Absorbent should be vermiculite, dry sand or earth.**

Waste Disposal Methods **Small spill - Soak up with absorbent and scoop into drums.**
Large spill - Dike and pump into drums. Dispose of in accordance with local state and federal regulations.

IMPORTANT

Do not leave any blank spaces. If required information is unavailable, unknown, or does not apply, so indicate.

THE ALPHA CORPORATION HAS MADE EVERY EFFORT TO ENSURE THE ACCURACY OF THE FOREGOING INFORMATION. NO WARRANTIES OF ACCURACY ARE MADE, HOWEVER, AS TO CHEMICAL OR PHYSICAL CHANGES THAT MAY OCCUR IN THE TRANSPORTATION, STORAGE OR USE OF THIS MATERIAL AFTER IT LEAVES ALPHA'S CONTROL.

Orig. Date 1/88

MATERIAL SAFETY DATA SHEET

SECTION I - MANUFACTURERS INFORMATION

PRODUCT CODE IDENTITY: 944WA62 330 PRODUCT NAME: WHITE *Gel Coat*
 NAME : COOK PAINT AND VARNISH COMPANY DATE OF MSDS: 01/15/88
 ADDRESS: P.O. BOX 419389 EMERGENCY TELEPHONE: 816-391-6000
 KANSAS CITY, MO 64141-6389 INFORMATION TELEPHONE: 816-391-6003

ATTN: SAFETY AND HEALTH OFFICER
 SEA RAY BOATS-KNX
 2601 SEA RAY BLVD
 KNOXVILLE TN 37914

CUSTOMER NUMBER: 285455
 DATE PRINTED: 04/25/88

SECTION II - HAZARDOUS INGREDIENTS

TYRENE MONOMER

CAS #: 100-42-5 PERCENT: 35.000 VAPOR PRESSURE: 4.5 (MMHG/DEG F)

EXPOSURE LIMIT:
 ACGIH TLV/TWA: 50 PPM (SKIN) (215 MG/CU.M.)
 ACGIH TLV/STEL: 100 PPM (SKIN) (425 MG/CU.M.)
 OSHA PEL: 100 PPM (425 MG/CU.M.)
 OSHA PEL/CEILING: 200 PPM (850 MG/CU.M.)
 OTHER: OSHA: 600 PPM/5 MIN/3 HR PEAK

TITANIUM DIOXIDE
SEE ACGIH TLV BOOKLET, APPENDIX D

CAS #: 13463-67-7 PERCENT: 15.000 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
 ACGIH TLV/TWA: 10MG/CU.M. AS DUST, 5MG/CU.M. AS FUMES
 OSHA PEL: 15MG/CU.M.

SILICA, AMORPHOUS

CAS #: 7631-86-9 PERCENT: LESS THAN 5 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
 ACGIH TLV/TWA: 10MG/CU.M. TOTAL DUST
 OSHA PEL: 20M PPCF AS DUST

ALC (HYDROUS MAGNESIUM SILICATE)

CAS #: 14807-96-6 PERCENT: 10.000 VAPOR PRESSURE: N/A (MMHG/DEG F)

EXPOSURE LIMIT:
 ACGIH TLV/TWA: 2 MG/M3 RESPIRABLE DUST
 OSHA PEL: 20 M PPCF

ETHYL METHACRYLATE

CAS #: 80-62-6 PERCENT: 5.000 VAPOR PRESSURE: 29.0 (MMHG/DEG F)

EXPOSURE LIMIT:
 ACGIH TLV/TWA: 100 PPM (410 MG/CU.M.)
 ACGIH TLV/STEL: 125 PPM (510 MG/CU.M.)
 OSHA PEL: 100 PPM (410 MG/CU.M.)

MAXIMUM VOC NOT CONSUMED DURING CURING IS 40 GRAM/LITER (OR 230 GRAMS/SQUARE METER OF SURFACE AREA OPEN TO AIR). MAXIMUM VOC OF UNCATALYZED RESINS AND GEL COATS IS 600 GRAMS/LITER.

*Replaces
 and
 after
 (1988)*

MATERIAL SAFETY DATA SHEET

PRODUCT CODE IDENTITY: 944WA62 330 PRODUCT NAME: WHITE

SECTION III - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE TO PRODUCT. PRIMARY ROUTES OF ENTRY ARE:

EYE CONTACT: IRRITATION. SYMPTOMS ARE TEARING, REDNESS AND DISCOMFORT.

SKIN CONTACT: IRRITATION. CAN CAUSE DEFATTING OF SKIN WHICH MAY LEAD TO DERMATITIS.

INHALATION: IRRITATION TO NOSE AND THROAT. EXTENDED OR REPEATED EXPOSURE TO CONCENTRATIONS ABOVE THE RECOMMENDED EXPOSURE LIMITS MAY CAUSE BRAIN OR NERVOUS SYSTEM DEPRESSION, CAUSING DIZZINESS, HEADACHE OR NAUSEA AND IF CONTINUED INDEFINITELY, LOSS OF CONSCIOUSNESS, LIVER AND KIDNEY DAMAGE.

REPORTS HAVE ASSOCIATED REPEATED OR PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE.

INGESTION: MAY CAUSE MOUTH, THROAT, ESOPHAGUS AND STOMACH IRRITATION, NAUSEA, VOMITING AND DIARRHEA.

MEDICAL CONDITIONS THAT MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT:
PREEXISTING EYE, SKIN, LIVER, KIDNEY AND RESPIRATORY DISORDERS.

EMERGENCY AND FIRST AID PROCEDURES:

IN CASE OF EYE CONTACT, FLUSH IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION; FOR SKIN, WASH THOROUGHLY WITH SOAP AND WATER. IF AFFECTED BY INHALATION OF VAPORS OR SPRAY MIST, REMOVE TO FRESH AIR. IF SWALLOWED, GET MEDICAL ATTENTION IMMEDIATELY.

SECTION IV - PHYSICAL DATA

BOILING POINT, DEG. F. 212

VAPOR DENSITY IS HEAVIER THAN AIR

WEIGHT PER GALLON: 10.76

EVAPORATION RATE IS SLOWER THAN ETHER

PERCENT VOLATILE BY VOLUME: 53.826

SECTION V - FIRE AND EXPLOSION HAZARD DATA

OSHA FLAMMABILITY CLASSIFICATION: FLAMMABLE LIQUID CLASS II-C

FLASH POINT SETA CLOSED CUP, DEG F: 82

HAZARD CLASS: RED-LABEL, FLAMMABLE LIQUID LEL: 1.10

EXTINGUISHING MEDIA: FOAM, CARBON DIOXIDE, DRY CHEMICAL, WATER FOG.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

IF POLYMERIZATION TAKES PLACE IN A CONTAINER, THERE IS POSSIBILITY OF VIOLENT RUPTURE OF THE CONTAINER. STYRENE VAPORS ARE UNINHIBITED AND MAY FORM POLYMERS IN VENTS OR FLAME ARRESTORS OF STORAGE TANKS RESULTING IN STOPPAGE OF VENTS. VAPORS MAY CAUSE FLASH FIRE. KEEP CONTAINERS TIGHTLY CLOSED AND ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND FLAME. NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

SPECIAL FIRE FIGHTING PROCEDURES:

FULL PROTECTIVE EQUIPMENT INCLUDING SELF-CONTAINED BREATHING APPARATUS SHOULD BE USED. WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT

MATERIAL SAFETY DATA SHEET

PRODUCT CODE IDENTITY: 944WA62 330 PRODUCT NAME: WHITE

SECTION VI - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: MAY OCCUR.

CONDITIONS TO AVOID:

ELEVATED TEMPERATURES. IMPROPER ADDITION OF PROMOTER AND/OR CATALYST. AVOID DIRECT CONTACT OF MEKP CATALYST WITH ACCELERATOR. IF AN ACCELERATOR SUCH AS COBALT DRIER IS TO BE ADDED, MIX THIS ACCELERATOR WITH BASE MATERIAL BEFORE ADDING CATALYST.

INCOMPATIBILITY (MATERIALS TO AVOID):

OXIDIZERS, PEROXIDES, STRONG ACIDS, ALUMINUM CHLORIDE AND VINYL POLYMERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION OR COMBUSTION CAN PRODUCE FUMES CONTAINING ORGANIC ACIDS, CARBON DIOXIDE AND CARBON MONOXIDE.

SECTION VII - SPILL OR LEAK PROCEDURES

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

REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. CONTAIN AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

WASTE DISPOSAL METHOD:

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS. INCINERATE IN APPROVED FACILITY.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

DO NOT BREATHE OR INGEST VAPORS, SPRAY MIST OR DUST WHILE APPLYING, SANDING, GRINDING, OR SAWING CURED PRODUCT. WEAR AN APPROPRIATE, (NIOSH/MSHA APPROVED) PROPERLY FITTED RESPIRATOR DURING APPLICATION AND OTHER USE OF THIS PRODUCT UNTIL ALL VAPORS, MISTS, AND DUSTS ARE EXHAUSTED, UNLESS AIR MONITORING DEMONSTRATES VAPOR AND MIST AND DUST LEVELS ARE BELOW APPLICABLE LIMITS. FOLLOW RESPIRATOR MANUFACTURER'S DIRECTIONS FOR RESPIRATOR USE. OBSERVE OSHA STANDARD 29CFR 1910.134.

VENTILATION:

PROVIDE GENERAL CLEAN AIR DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE AIR CONTAMINANT CONCENTRATION BELOW THE LOWER EXPLOSION LIMIT AND BELOW CURRENT APPLICABLE EXPOSURE LIMITS IN THE MIXING, APPLICATION AND CURING AREAS; AND TO REMOVE DECOMPOSITION PRODUCT DURING WELDING AND FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT. IN CONFINED AREAS, USE ONLY WITH FORCED VENTILATION ADEQUATE TO KEEP VAPOR CONCENTRATION BELOW 20% OF LOWER EXPLOSION LIMITS. REFER TO OSHA STANDARDS 29CFR 1910.94, 1910.107, 1910.108.

NOTE: HEAVY SOLVENT VAPORS SHOULD BE REMOVED FROM LOWER LEVELS OF THE WORK AREA AND ALL IGNITION SOURCES (NONEXPLOSION-PROOF MOTORS, ETC.) SHOULD BE ELIMINATED.

PROTECTIVE GLOVES: USE SOLVENT IMPERMEABLE GLOVES TO AVOID CONTACT WITH PRODUCT

EYE PROTECTION:

DO NOT GET IN EYES. USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS, CHEMICAL GOGGLES, FACE SHIELDS.

OTHER PROTECTIVE EQUIPMENT:

AVOID CONTACT WITH SKIN. USE PROTECTIVE CLOTHING. PREVENT CONTACT WITH CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING, INCLUDING SHOES, BEFORE REUSE.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

DO NOT STORE ABOVE 120 DEG. F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED

MATERIAL SAFETY DATA SHEET

PRODUCT CODE IDENTITY: 944WA62 330 PRODUCT NAME: WHITE

TO COMPLY WITH OSHA 1910.106. KEEP AWAY FROM HEAT, SPARKS AND FLAME. KEEP CONTAINERS CLOSED WHEN NOT IN USE AND UPRIGHT TO PREVENT LEAKAGE.

OTHER PRECAUTIONS:

CONTAINERS SHOULD BE GROUNDED WHEN POURING. DO NOT TAKE INTERNALLY. WASH HANDS AFTER USING AND BEFORE SMOKING OR EATING. EMPTIED CONTAINERS MAY RETAIN HAZARDOUS RESIDUE AND EXPLOSIVE VAPORS. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. DO NOT CUT, PUNCTURE OR WELD ON OR NEAR EMPTIED CONTAINERS. FOLLOW ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET UNTIL CONTAINER IS THOROUGHLY CLEANED OR DESTROYED. IF THIS PRODUCT IS BLENDED WITH OTHER COMPONENTS SUCH AS THINNERS, CONVERTER, COLORANTS AND CATALYSTS PRIOR TO USE, READ ALL WARNING LABELS. ANY MIXTURE OF COMPONENTS WILL HAVE HAZARDS OF ALL COMPONENTS. FOLLOW ALL PRECAUTIONS. IF SPRAYING THIS MATERIAL, KEEP SPRAY BOOTHS CLEAN. AVOID BUILDUP OF SPRAY DUST OR OVERSPRAY IN BOOTHS OR DUCTS.

KEEP OUT OF REACH OF CHILDREN

FOR INDUSTRIAL USE ONLY

DISCLAIMER AND LIMITATION OF LIABILITY

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. TO THE EXTENT ALLOWED BY LAW, THIS STATEMENT IS MADE IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IS IN LIEU OF ANY OTHER OBLIGATIONS OR LIABILITY ON THE PART OF COOK PAINT AND VARNISH COMPANY.

COOK PAINT AND VARNISH COMPANY WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. FINAL DETERMINATION OF THE SUITABILITY OF THE MATERIAL FOR THE USE CONTEMPLATED, THE MANNER OF USE, AND WHETHER THE SUGGESTED USE INFRINGES ANY PATENT IS THE SOLE RESPONSIBILITY OF THE BUYER.

MATERIAL SAFETY DATA SHEET

REV 09 1988

SECTION I

MANUFACTURER	THE NORAC COMPANY, INC.	EMERGENCY TELEPHONE	818-334-290
ADDRESS	405 S. MOTOR AVENUE, AZUSA, CA 91702	CHEMTREC	1-800-424-9300
PRODUCT NAME	NOROX MEKP-9	CAS NO.	1338-23-4
CHEMICAL NAME	METHYL ETHYL KETONE PEROXIDE (MEKP)		
CHEMICAL FAMILY	ORGANIC PEROXIDE	FORMULA	MIXTURE OF MANY

SECTION II - HAZARDOUS INGREDIENTS

COMPONENTS	%	HAZARD DATA
METHYL ETHYL KETONE PEROXIDES	34	ORAL--RAT LD50: 484 mg/kg
DIMETHYL PHTHALATE	58	ORAL--RAT LD50: 6900 mg/kg
2 ETHYL HEXYL ACETATE	7	ORAL--RAT LD50: 3000 mg/kg
HYDROGEN PEROXIDE	1	SKIN--RAT LD50: 4060 mg/kg

SECTION III - PHYSICAL DATA

BOILING POINT °F	UNKNOWN	SPECIFIC GRAVITY (Water=1)	1.1
VAPOR PRESSURE mm Hg.	UNKNOWN	PERCENT VOLATILE BY VOLUME	UNKNOWN
VAPOR DENSITY (Air=1)	>1	EVAPORATION RATE	UNKNOWN
SOLUBILITY IN WATER	SLIGHT		
APPEARANCE AND ODOR	WATER WHITE LIQUID, SLIGHT ODOR <i>Note! 0.2% Red Dye may be added for color</i>		

SECTION IV - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 1.5 mg/m³ FOR METHYL ETHYL KETONE PEROXIDES

EFFECTS OF SHORT-TERM EXPOSURE: PROLONGED INHALATION OF VAPORS MAY CAUSE MUCOUS MEMBRANE IRRITATION AND VERTIGO.

EMERGENCY PROCEDURE: MEKP IS A STRONG IRRITANT. AVOID SWALLOWING AND ALL CONTACT WITH EYES AND SKIN. WASH CONTAMINATED AREAS THOROUGHLY WITH SOAP AND WATER. FOR EYES, IRRIGATE IMMEDIATELY FOR 30 MINUTES--CALL A PHYSICIAN. IF SWALLOWED, TAKE LARGE QUANTITIES OF MILK OR WATER AND IMMEDIATELY CALL A PHYSICIAN. FOR AID TO PHYSICIAN, SUGGEST POISON CONTROL CENTER (213) 484-5151, DAY OR NIGHT.

 SECTION V - REACTIVITY DATA

INCOMPATIBILITY (Materials to avoid) DIMETHYLANILINE, COBALT NAPHTHENATE & OTHER PROMOTERS, ACCELERATORS, REDUCING AGENTS, OR ANY HOT MATERIAL

STABILITY STABLE WHEN KEPT IN ORIGINAL, CLOSED CONTAINER, OUT OF DIRECT SUNLIGHT AT TEMPERATURES BELOW 80°F.

HAZARDOUS DECOMPOSITION PRODUCTS UNKNOWN

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

 SECTION VI - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION NONE

VENTILATION MECHANICAL, GENERAL

EYE PROTECTION SAFETY GOGGLES RECOMMENDED

GLOVES PROTECTIVE GLOVES RECOMMENDED (SOLVENT RESISTANT)

OTHER NONE

 SECTION VII - FIRE AND EXPLOSION DATA

FLASH POINT (Method used) >200°F (C.O.C) FLAMMABLE LIMITS: UNKNOWN

EXTINGUISHING MEDIA WATER FROM A SAFE DISTANCE--PREFERABLY WITH A FOG NOZZLE. IN CASE OF VERY SMALL FIRES, OTHER MEANS SUCH AS CARBON DIOXIDE, FOAM OR DRY CHEMICAL EXTINGUISHERS MAY BE EFFECTIVE. DRY CHEMICAL COMBINED WITH MEKP MAY REIGNITE. LIGHT WATER ADDITIVES MAY BE PARTICULARLY EFFECTIVE AT EXTINGUISHING MEKP FIRES. IF DRY CHEMICAL IS USED TO EXTINGUISH AN MEKP FIRE, THE EXTINGUISHED AREA MUST BE THOROUGHLY WET WITH WATER TO PREVENT REIGNITION.

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS THE HEAT OF DECOMPOSITION OF THE PEROXIDES ADD TO THE HEAT OF THE FIRE. DRY CHEMICAL FIRE EXTINGUISHING AGENT MAY CATALYZE THE DECOMPOSITION.

 SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE DIKE TO PREVENT RUNOFF FROM ENTERING DRAINS, SEWERS, STREAMS, ETC. AND TRANSFER INTO CONTAINER. SPILLED MATERIAL SHOULD BE SWEEPED UP WITH AN INERT, MOIST, DILUENT SUCH AS PERLITE, VERMICULITE, OR SAND, AND PLACED IN A CLEAN POLYETHYLENE LINED DRUM OR POLYETHYLENE DRUM.

WASTE DISPOSAL METHOD IMMEDIATELY DISPOSE OF WASTE MATERIAL IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

 SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING MEKP SHOULD NEVER BE ADDED TO HOT SOLVENTS OR MONOMERS AS VIOLENT DECOMPOSITION AND/OR REACTION MAY RESULT. WHEN USING SPRAY EQUIPMENT, NEVER SPRAY RAW MEKP ONTO CURING OR INTO RAW RESIN OR FLUES. KEEP MEKP IN ITS ORIGINAL CONTAINER. DO NOT STORE WITH FOOD OR DRINK. DO NOT USE NEAR FOOD OR DRINK.

OTHER PRECAUTIONS



PRODUCT NUMBER: 69 X 3063

DATE: 12-15-87

DESCRIPTION: 69x3063 is a clear adhesive for bonding carpet and foam for marine and RV applications. Good open time and heat resistance.

APPLICATION: Apply 69x3063 either by spray, brush, or roller.

PHYSICAL CHARACTERISTICS:

BASE:	Thermoplastic Rubber
COLOR: (DRY):	Straw
(WET):	Amber
SOLIDS:	34% +/- 1%
VISCOSITY:	1000 +/- 200 cps
WEIGHT PER GALLON:	10.0 lbs/gal
DILUENT:	1,1,1-Trichloroethane
SHELF LIFE:	6 Months
HEAT RESISTANCE:	200° F.

*66%
by wt.*

MANUFACTURER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, OF MERCHANTABILITY OF THE PRODUCT OR FITNESS OF THE PRODUCT FOR A PARTICULAR PURPOSE. Manufacturer shall not be liable to Purchaser or any other person for loss or damage directly, indirectly, or consequentially arising from or related to the use of this product.

The user of this product assumes all risks of use and/or handling, whether or not in accordance with any directions or suggestions of the Manufacturer or Seller.

PURCHASER'S REMEDY IS LIMITED TO THE REPLACEMENT OF PRODUCT.

For industrial or professional use only. If resold or repackaged for any use other than industrial or professional, containers must be labeled in accordance with the Federal Hazardous Substances Labeling Act.

Refer to the material safety data sheet for exact details of hazardous warning information.

6100 Centennial Blvd • PO Box 34090 • Nashville, TN 37202 • (615) 386-9955

GENERAL ADHESIVES
MATERIAL SAFETY DATA SHEET

70 Volatile
by wet volume
= 66.9%

===SECTION I - MANUFACTURER'S INFORMATION===

MANUFACTURER'S NAME AND ADDRESS
GENERAL ADHESIVES
6100 CENTENNIAL BLVD.
NASHVILLE, TN. 37209

EMERGENCY TELEPHONE NUMBERS
WEEKDAYS (615) 350-8555
NIGHTS/WEEKENDS (615) 350-8989
MSDS INFORMATION (615) 350-8555

DATE PREPARED: Revised February 19, 1988

SIGNATURE OF PREPARER: *Lisa Dishner*

IDENTITY: 69 X 3063

TRADE NAME: Carpet/Foam Adhesive

===SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION===
(Specific Chemical Identity; Common Name(s))

HAZARDOUS COMPONENTS	OSHA PEL	ACGIH TLV	OTHER LIMITS	CAS#
7 Stoddard Solvent 5-10%	500 ppm	100 ppm	STEL 200 ppm	8052-41-3
Methyl Chloroform (1,1,1-Trichloroethane) 50-66.9%	350 ppm	350 ppm	STEL 450 ppm	71-55-6
Diethylene Ether (Skin) *	100 ppm	25 ppm	STEL 100 ppm	123-91-1

*The Diethylene Ether is an inhibitor in the 1,1,1-Trichloroethane. This product contains more than 0.1% but less than 3.0% Diethylene Ether. Potential risks to humans can be minimized by observing good work practices and personal hygiene procedures.

5-10 Mineral Spirits, Versatic

===SECTION III - PHYSICAL CHEMICAL CHARACTERISTICS===

Boiling Point (F): 165-380 F Vapor Pressure: 92 @ 20 C Vapor Density: >1
(mm Hg.) (Air=1)

Specific Gravity: 1.25 (Water=1) Melting Point: N/A Evaporation Rate: 4.9 (Butyl Acetate=1)

Solubility in Water: None.

Appearance and Odor: Natural or red in color; solvent odor.

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

Flash Point (F): None Method Used: TCC

Flammable Limits: (LEL) 8.0% (UEL) 10.5%

Extinguishing Media: CO₂, Dry Chemical, Foam, Halon.

Special Fire Fighting Procedures: Self-contained breathing apparatus must be worn.

Unusual Fire and Explosion Hazards: Cool drums with water spray to prevent pressure explosion. Vapors may ignite explosively.

===SECTION V - REACTIVITY DATA===

STABILITY: Stable: XXX Unstable: _____

Incompatibility (Materials to Avoid): Active metals such as Aluminum, Zinc, Magnesium, etc., Strong acids or bases.

Hazardous Decomposition or Byproducts: HCL, Carbon Monoxide, Chlorine and Products of partial decomposition.

Hazardous Polymerization: May Occur: _____ Will Not Occur: XXX

Conditions to Avoid: Contact with active metals such as Aluminum, Zinc, Magnesium, etc., flame, spark or extreme heat.

===SECTION VI - HEALTH HAZARD DATA===

ROUTES OF ENTRY

INGESTION:

ACUTE HEALTH HAZARDS: Unlikely route of exposure. Ingesting this product may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

CHRONIC HEALTH HAZARDS: N/E

EMERGENCY AND FIRST AID PROCEDURES: Do not induce vomiting. Keep the affected person warm, quiet and get medical attention. Aspiration of this material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

SKIN:

ACUTE HEALTH HAZARDS: May cause skin irritation, jaundice or dermatitis. This product may be absorbed through the skin.

CHRONIC HEALTH HAZARDS: Reproductive abnormalities have been noted in studies animals exposed to high concentrations.

EMERGENCY AND FIRST AID PROCEDURES: If this product comes in contact with the skin, promptly wash the contaminated skin using soap and water or a skin cleanser. If this product soaks through the clothing, remove the clothing promptly and wash the skin with soap and water or a skin cleanser. If irritation persists after washing, get medical attention. not wear contaminated clothing before laundering.

EYES:

ACUTE HEALTH HAZARDS: If this product is splashed into the eye, may cause severe irritation, pain, slight corneal injury, redness, tearing and blurred vision.

CHRONIC HEALTH HAZARDS: N/E

EMERGENCY AND FIRST AID PROCEDURES: If this product gets in the eyes, wash eye immediately with large amounts of water, lifting the lower and upper lids occasionally. If irritation is present after washing, get medical attention. Contact lenses should not be worn when working with this product.

===SECTION VI - HEALTH HAZARD DATA CONT'D===

INHALATION:

ACUTE HEALTH HAZARDS: Overexposure to this product may cause nausea, irritation to the respiratory tract, fatigue, vomiting, marrow hypoplasia, and headache. Vapors may also cause eye and nasal irritation. Continued exposure at extremely high levels may cause staggering, unconsciousness, irregular heartbeat, and asphyxiation.

CHRONIC HEALTH HAZARDS: Damage to the Central Nervous System, liver, kidney and respiratory system could result from chronic continual overexposure to this product.

EMERGENCY AND FIRST AID PROCEDURES: If a person breathes in large amounts of this product, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
Yes: 1985	No:	Yes:XXX No:	Yes: No:XXXX
		Animals indefinite 20,515,79	
		Animal Positive 11,247,76	

Medical Conditions Generally Aggravated by Exposure: Impaired liver and renal functions, cardiac disease, central nervous system, obstructive airway diseases, and pre-existing skin disorders.

===SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE===

Steps to be taken in case Material is Released or Spilled: Ventilate area. Contain spill. Clean up area by wiping, mopping or absorption with an absorbent material. Transfer material to a metal container. Avoid breathing vapors. Wear appropriate respirator and protective clothing.

Waste Disposal Method: Contaminated absorbent material or waste product must be disposed of in accordance with regulations in the Resource Conservation and Recovery Act and/or State, local or EPA regulations.

Precautions to be taken in Handling and Storing: Avoid contact with skin and avoid breathing vapors. Pipe vents outdoors. Store in cool, dry ventilated area. Vapors are heavier than air and will collect in low areas.

Other Precautions: No smoking in presence of vapors. Prevent moist air from entering storage area. Avoid prolonged contact with or storage in aluminum and its alloys. Contact with aluminum parts in a pressurizable fluid system may cause violent reactions.

===SECTION VIII - CONTROL MEASURES===

Respiratory Protection (Specify) Type: If exposure may or does exceed occupational exposure limits use a NIOSH/MSHA approved respirator to prevent overexposure. Use either a self-contained air supplied respirator or organic vapor respirator in accordance with 29 CFR 1910.134.

Ventilation:

Local Exhaust: Yes, generally required to reduce exposure to below OSHA allowable levels.

Mechanical (General): Not generally required if local exhaust ventilation is provided. If room air is not recirculated, but exhausted, may be adequate.

Special Exhaust: N/A

Other: Galvanized or Aluminum materials may be reactive with this product.

Protective Gloves: Employees should be provided with impervious gloves if direct skin contact is made with the product in a liquid state.

Eye Protection: Chemical Safety goggles, glasses or face shield (8" minimum) should be worn if a splash hazard is present. Contact lenses should not be worn when using this product.

Other Protective Clothing or Equipment: Impervious clothing should be worn to prevent repeated or prolonged skin contact with the product in a liquid state.

Special Work/Hygienic Practices: Wash hands with soap and water or a skin cleanser before eating, drinking, smoking, or using toilet facilities.

The following codes are being used:

N/A means: Not Applicable
N/E means: Not Established

ACETONE

REVISION OF: 06/23/86

SEA RAY BOATS INC

ORDER NO: 640W16840

2600 SEARAY BLVD

KNOXVILLE

TN 37914

MCKESSON CHEMICAL COMPANY ONE POST STREET SAN FRANCISCO, CA 94104

-----EMERGENCY ASSISTANCE-----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL CHEMTREC
(800) 424-9300.

-----FOR PRODUCT AND SALES INFORMATION-----

CONTACT YOUR LOCAL MCKESSON CHEMICAL COMPANY SERVICE CENTER

-----PRODUCT IDENTIFICATION-----

PRODUCT NAME: ACETONE

CAS NO.: 67-64-1

COMMON NAMES/SYNONYMS: ACETONE;

MCKESSON CODE: T1018

2-PROPANONE

FORMULA: C3 H6 O

DATE ISSUED: 06/86

HAZARD RATING (NFPA 704)

SUPERCEDES: 02/86

HEALTH: 1

HAZARD RATING SCALE:

FIRE: 3

0=MINIMAL 3=SERIOUS

REACTIVITY: 0

1=SLIGHT 4=SEVERE

SPECIAL: NONE

2=MODERATE

-----HAZARDOUS INGREDIENTS-----

EXPOSURE LIMITS, PPM

COMPONENT
ACETONE

%

OSHA
FELACGIH
TLVOTHER
LIMITHAZARD
FLAMMABLE; IRRITANT

-----PHYSICAL/CHEMICAL CHARACTERISTICS-----

ACETONE

REVISION OF: 06/23/86

BOILING POINT, DEG F: 133 VAPOR PRESSURE, MM HG/20 DEG C: 184
MELTING POINT, DEG F: -142 VAPOR DENSITY (AIR=1): 2.0
SPECIFIC GRAVITY (WATER=1): 0.79 WATER SOLUBILITY, %: 100
APPEARANCE AND ODOR: CLEAR, EVAPORATION RATE (BUTYL ACETATE=1): 14
COLORLESS LIQUID; SWEET ODOR

-----FIRST AID MEASURES-----

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

IF SWALLOWED: IF CONSCIOUS, IMMEDIATELY INDUCE VOMITING BY GIVING 2 GLASSES OF WATER AND STICKING A FINGER DOWN THE THROAT. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING TO AN UNCONSCIOUS OR CONVULSING PERSON.

-----HEALTH HAZARD INFORMATION-----

PRIMARY ROUTES OF EXPOSURE: INHALATION, SKIN OR EYE CONTACT.

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: PROLONGED OR REPEATED EXPOSURE OR BREATHING VERY HIGH CONCENTRATIONS MAY CAUSE HEADACHES, NAUSEA, VOMITING, DIZZINESS, OTHER CENTRAL NERVOUS SYSTEM EFFECTS, CONVULSIONS, AND IN EXTREME CASES, UNCONSCIOUSNESS AND DEATH.

EYE CONTACT: VAPORS WILL IRRITATE THE EYES. LIQUID AND MISTS WILL IRRITATE AND MAY BURN THE EYES.

SKIN CONTACT: BRIEF CONTACT MAY DRY THE SKIN. PROLONGED OR REPEATED CONTACT MAY IRRITATE THE SKIN, CAUSING DERMATITIS.

SWALLOWED: SWALLOWING LARGE QUANTITIES CAUSES HEADACHES, NAUSEA, VOMITING, AND PERHAPS UNCONSCIOUSNESS. CAN ALSO CAUSE LIVER AND KIDNEY

ACETONE

REVISION OF: 06/23/86

INJURY.

CHRONIC EFFECTS OF EXPOSURE: NO SPECIFIC INFORMATION AVAILABLE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: PREEXISTING EYE OR SKIN DISORDERS MAY BE AGGRAVATED BY ACETONE EXPOSURE. ALSO, USE OF ALCOHOLIC BEVERAGES ENHANCES TOXIC EFFECTS.

-----TOXICITY DATA-----

ORAL: RAT LD50 = 9750 MG/KG

DERMAL: RABBIT LD50 = 20 G/KG

INHALATION: RAT LC50 = 16,000 PPM/4 HR

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

OTHER DATA: INHALATION HUMAN TCLO = 500 PPM (EYE)

-----PERSONAL PROTECTION-----

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING EMISSIONS AT THE POINT OF USE BELOW THE PEL.

RESPIRATORY PROTECTION: IF USE CONDITIONS GENERATE VAPORS OR MISTS, WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE FOR THOSE EMISSION LEVELS. APPROPRIATE RESPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS/MISTS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

EYE PROTECTION: CHEMICAL GOGGLES UNLESS A FULL FACEPIECE RESPIRATOR IS ALSO WORN. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER GLOVES, AND RUBBER APRON.

ACETONE

REVISION OF: 06/23/86

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

-----FIRE AND EXPLOSION INFORMATION-----

FLASH POINT, DEG F: 0

FLAMMABLE LIMITS IN AIR, %

METHOD USED: TCC

LOWER: 2 UPPER: 13

EXTINGUISHING MEDIA: USE WATER SPRAY, DRY CHEMICAL, CO2, OR ALCOHOL FOAM.

SPECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: ACETONE IS EXTREMELY FLAMMABLE. EXTINGUISH ALL NEARBY SOURCES OF IGNITION. AVOID ACCUMULATION OF WATER OR ACETONE VAPORS BECAUSE AQUEOUS SOLUTIONS CONTAINING MORE THAN 2.5% ACETONE ARE FLAMMABLE.

-----HAZARDOUS REACTIVITY-----

STABILITY: STABLE

POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, SPARKS, AND OPEN FLAMES.

MATERIALS TO AVOID: ACIDS, OXIDIZING MATERIALS, POTASSIUM T-BUTOXIDE, ALKALIS, AMINES, ALKANOLAMINES, AMMONIA, ALDEHYDES, AND CHLORINATED COMPOUNDS.

HAZARDOUS DECOMPOSITION PRODUCTS: MAY LIBERATE CARBON MONOXIDE, CARBON DIOXIDE, AND UNIDENTIFIED ORGANIC COMPOUNDS IN BLACK SMOKE.

-----SPILL, LEAK, AND DISPOSAL PROCEDURES-----

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED FOR ORGANIC VAPORS MAY BE SATISFACTORY. IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. EXTINGUISH ALL IGNITION SOURCES AND ENSURE THAT ALL HANDLING EQUIPMENT IS ELECTRICALLY GROUNDED. FOR SMALL SPILLS OR DRIPS, MOP OR WIPE UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, CONTAIN BY DIKING WITH SOIL OR

ACETONE

REVISION OF: 06/23/86

OTHER NON-COMBUSTIBLE ABSORBENT MATERIALS AND THEN PUMP INTO DOT-APPROVED WASTE CONTAINERS; OR ABSORB WITH NON-COMBUSTIBLE SORBENT MATERIAL, PLACE RESIDUE IN DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL. COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.

NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

-----SPECIAL PRECAUTIONS-----

HANDLING AND STORAGE PRECAUTIONS: KEEP AWAY FROM HEAT, SPARKS, AND FLAMES. STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. VENT CONTAINER FREQUENTLY, AND MORE OFTEN IN WARM WEATHER, TO RELIEVE PRESSURE. ELECTRICALLY GROUND ALL EQUIPMENT WHEN HANDLING THIS PRODUCT AND USE ONLY NON-SPARKING TOOLS. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: DO NOT CUT, GRIND, WELD, OR DRILL ON OR NEAR THIS CONTAINER.

OTHER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL RETAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

-----FOR ADDITIONAL INFORMATION-----

CONTACT DOUGLAS EISNER, TECHNICAL DIRECTOR, MCKESSON CHEMICAL COMPANY;
DURING BUSINESS HOURS, PACIFIC TIME (415)983-9214.

-----NOTICE-----

ALL INFORMATION, RECOMMENDATIONS, AND SUGGESTIONS APPEARING HEREIN CONCERNING THIS PRODUCT ARE BASED UPON DATA OBTAINED FROM THE MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES; HOWEVER, MCKESSON

ACETONE

REVISION OF: 06/23/86

CHEMICAL COMPANY ("MCC") MAKES NO WARRANTY, REPRESENTATION OR GUARANTY AS TO THE ACCURACY, SUFFICIENCY OR COMPLETENESS OF THE MATERIAL SET FORTH HEREIN. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY AND SUITABILITY OF HIS OWN USE, HANDLING AND DISPOSAL OF THE PRODUCT. ADDITIONAL PRODUCT LITERATURE MAY BE AVAILABLE UPON REQUEST. SINCE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE BY MCC AS TO THE EFFECTS OF SUCH USE, THE RESULTS TO BE OBTAINED OR THE SAFETY AND TOXICITY OF THE PRODUCT, NOR DOES MCC ASSUME ANY LIABILITY ARISING OUT OF USE BY OTHERS OF THE PRODUCT REFERRED TO HEREIN. THE DATA IN THIS MSDS RELATE ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DO NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS.

REVISION

0000002

06/86: ADDED HAZARD INFORMATION TO INHALATION, SWALLOWING, AND MEDICAL CONDITIONS SECTIONS. ADDED INHALATION TOXICITY DATA AND CORRECTED "OTHER" TOXICITY DATA. REVISED RESPIRATORY AND EYE PROTECTION. REVISED FIRE AND EXPLOSION INFORMATION SECTION. ADDED MATERIALS TO AVOID AND REVISED SPILL/LEAK PROCEDURES AND HANDLING ADVICE.

END OF MSDS

Bottom Paint
OSHA 101-106-01

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME NAUTICAL COATINGS, INC.		EMERGENCY TELEPHONE NO. 813-536-3789
ADDRESS (Number, Street, City, State, and ZIP Code) 12400 Belcher Road, Largo, Fl. 33543		
CHEMICAL NAME AND SYNONYMS ANTI-FOULING PAINT	TRADE NAME AND SYNONYMS SEA HAWK OEP-II	
CHEMICAL FAMILY	FORMULA	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Unit)
PIGMENTS Tri-<i>n</i>-butyl tin fluoride	4.5		BASE METAL		
CATALYST			ALLOYS		
VEHICLE Tributyl tin methacrylate	10.8		METALLIC COATINGS		
SOLVENTS Aromatic hydrocarbons	42.9	100	FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES		ppm	OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				X	TLV (Unit)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H ₂ O=1)	1.38
VAPOR PRESSURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	60
VAPOR DENSITY (AIR=1)	Geater than 1	EVAPORATION RATE	0.19
SOLUBILITY IN WATER	slight	n-butyl acetate	
APPEARANCE AND ODOR	Liquid. Odor of Xylol.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used)	790 F TCC	FLAMMABLE LIMITS	Li	Uli
EXTINGUISHING MEDIA	Water spray, CO₂, Foam, dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES	Fire fighters should be equipped with self contained breathing apparatus.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Flammable if exposed to heat, sparks, or flame.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Organotin compounds - 0.1mg. Sn/M³

EFFECTS OF OVEREXPOSURE

Causes severe damage to eyes and skin. Toxic by ingestion. Fumes are irritating to upper respiratory tract.

EMERGENCY AND FIRST AID PROCEDURES

In case of eye contact, flush with flowing water at least 15 minute and get immediate medical attention. Remove contaminated clothing.

Skin: Flush with water and wash with soap & water. Inhalation: move exposed individual to fresh air.

SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

Exposure to heat, sparks and fire.

INCOMPATIBILITY (Materials to avoid)

Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate all ignition sources. Absorb spills with sand or other inert material, using non-sparking tools. Place in suitable containers for disposal.

WASTE DISPOSAL METHOD

Incinerate or dispose of as solid waste. Follow all applicable regulations for pollution control.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Use NIOSH approved respirator if airborne concentration exceeds TLV

VENTILATION

LOCAL EXHAUST

Required

SPECIAL

MECHANICAL (General)

Required

OTHER

PROTECTIVE GLOVES

Required

EYE PROTECTION

Chemical workers goggles

OTHER PROTECTIVE EQUIPMENT

Emergency eye-wash

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid all skin and eye contact. Provide adequate ventilation,;

Do not breathe fumes. Launder contaminated clothing before re-use.

OTHER PRECAUTIONS

Store in area suitable for flammable materials.

EXHIBIT "B"

Sea Ray Boats, INC at the Sykes Creek Facility shall be in the business of manufacturing fiberglass pleasure boats.

The process is generally described as follows:

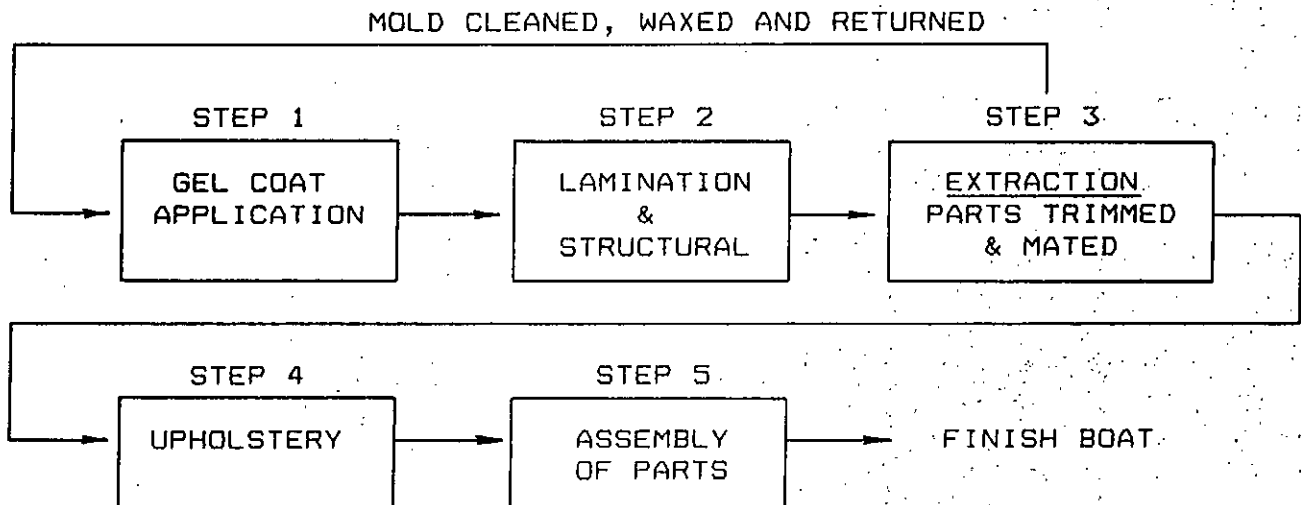
Step 1. Gel coat (the exterior colors) are sprayed into a mold by an airless method. Gel Coat is described in the attached Material Safety Data Sheets titled Exhibit A.

Step 2. Structural resin and fiberglass is again sprayed by an airless method into the mold over the Gel Coat and wooden and foam parts are added for rigidity. Resin is described in the attached Material Safety Data Sheets titled Exhibit A.

Step 3. After the lamination (resin applications) process the hull and deck parts plus any miscellaneous small parts are extracted from their molds and are trimmed of excess or overspray. (Molds are cleaned, waxed and returned to Step 1).

Step 4. Glue is utilized in the preparation of upholstered parts, which are also used in the final assembly process.

Step 5. The boat assembly process utilizes the fiberglass parts, the exposed wooden parts and other materials and parts which come to the site in a ready to use condition (i.e. they are not manufactured on site).



CHEMISTRY

Polyester resin is a chemical chain containing organic acids and alcohols with an ester linkage (hence the name, polyester).

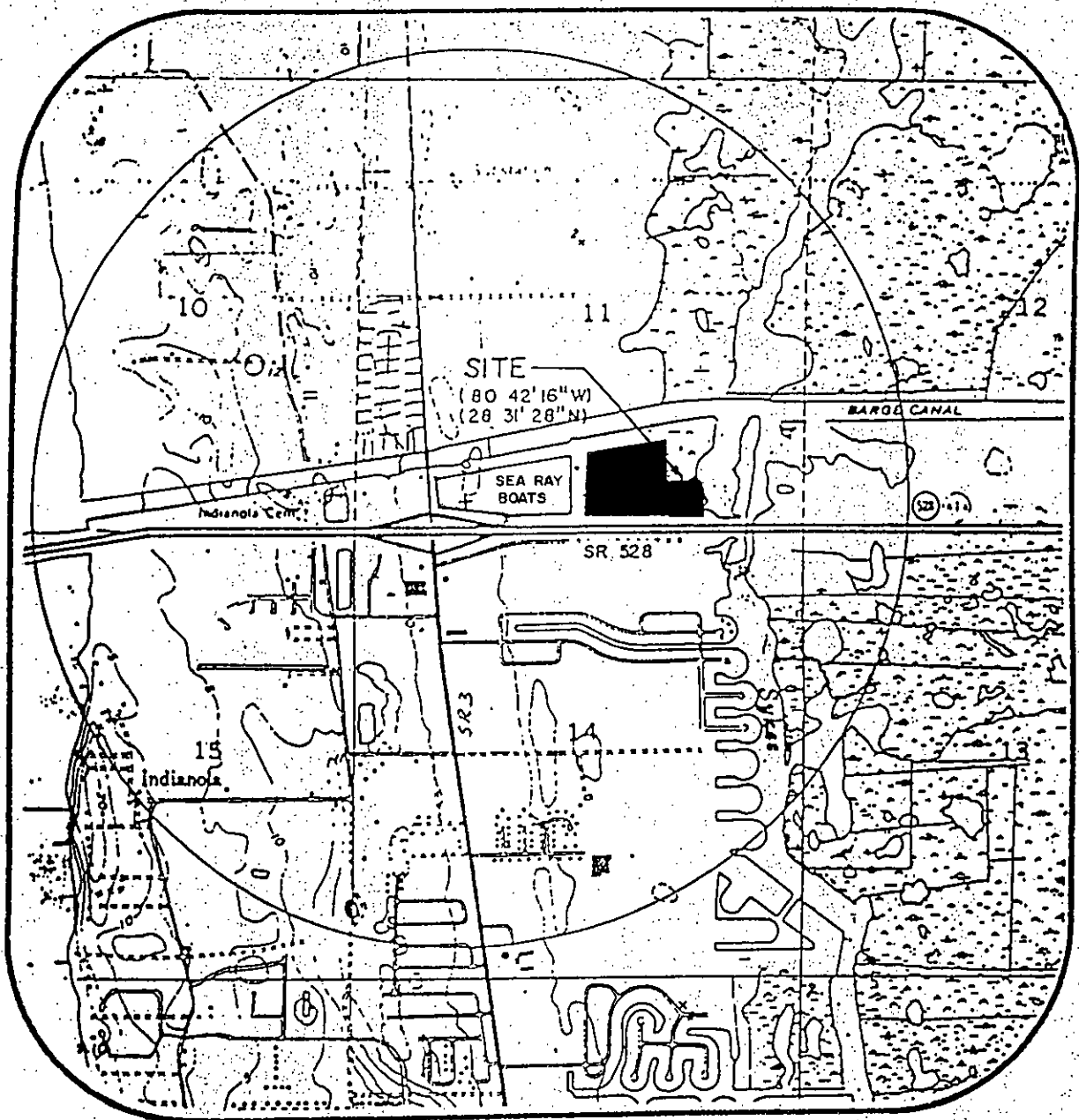
Styrene is the most commonly used crosslinking agent that connects the polyester chains and creates a polyester resin which is liquid and flexible for the fabrication of parts.

Styrene, as a crosslinking agent, reacts with the available bond sites on the polyester chain, usually the unsaturated organic acid.

When the resin arrives at the plant it is in a liquid form: a polyester thinned with 30 to 45% styrene monomer and mixed with inhibitors to prevent a spontaneous cross-linking reaction.

Catalysts, promoters and temperature control the rate of cross-linking or reaction. Methyl Ethyl Ketone Peroxide is the catalyst used and is normally a 1% addition.

Acetone is used sparingly as a solvent to clean equipment after application of the resin.



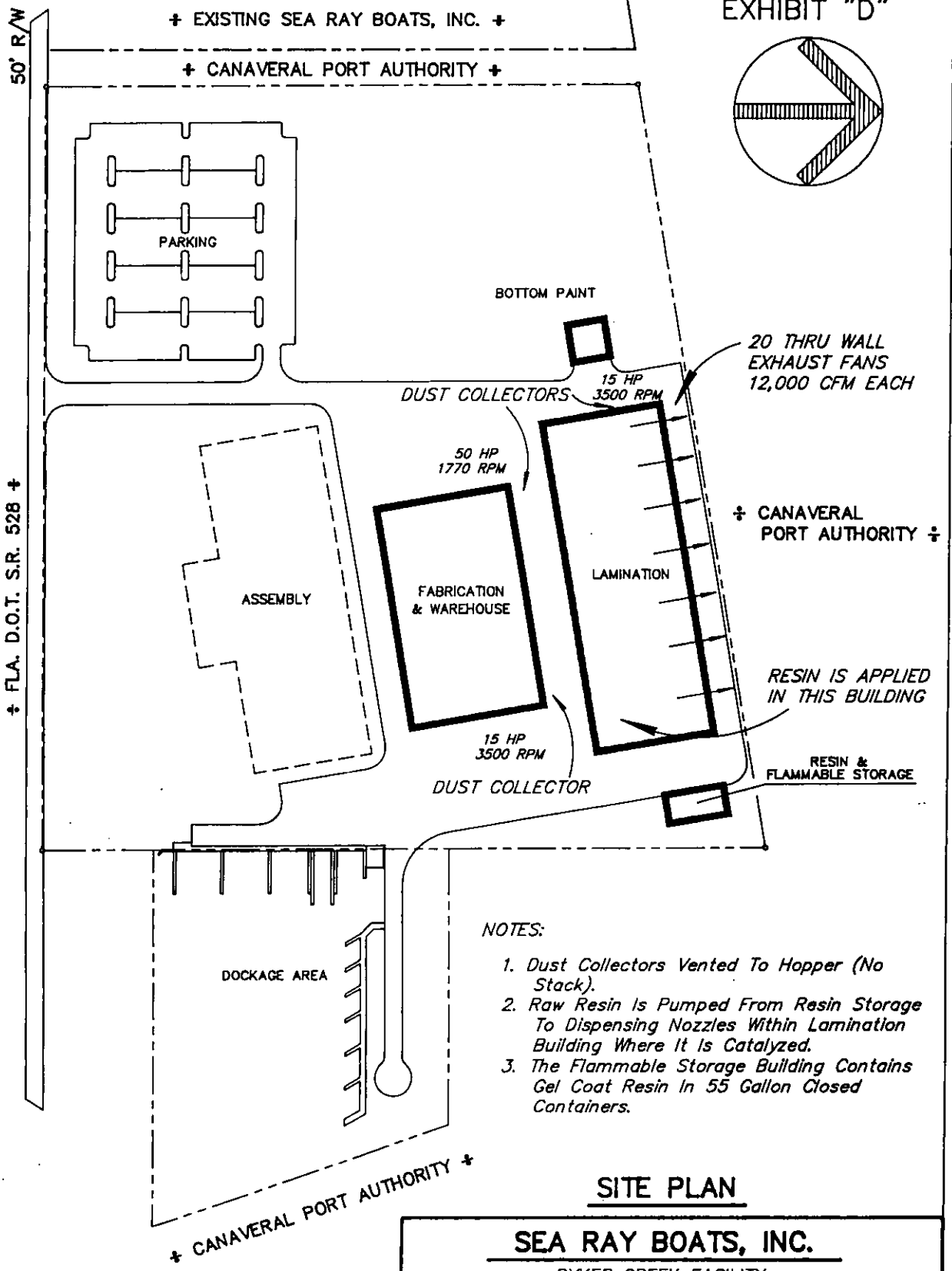
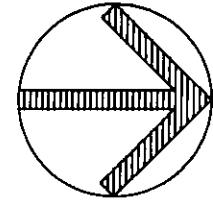
VICINITY MAP

1" = 2000'

ADJACENT PROPERTY OWNERS:

1. CANAVERAL PORT AUTHORITY
P.O. BOX 267
CAPE CANAVERAL, FL 32920
2. FLORIDA DEPARTMENT OF TRANSPORTATION

EXHIBIT "D"



NOTES:

1. Dust Collectors Vented To Hopper (No Stack).
2. Raw Resin Is Pumped From Resin Storage To Dispensing Nozzles Within Lamination Building Where It Is Catalyzed.
3. The Flammable Storage Building Contains Gel Coat Resin In 55 Gallon Closed Containers.

SITE PLAN

SEA RAY BOATS, INC.

SYKES CREEK FACILITY

MERRITT ISLAND,

FLORIDA

SCALE:
1" = 200'

DATE:
6-20-88

DRAWN:

CANTELOU ASSOCIATES

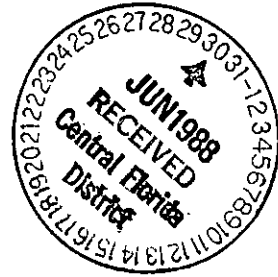
CONSULTING ENGINEERS • SURVEYORS • PLANNERS
1359 Silver Bluff Rd. Suite B-3/P.O. Box 3102/Aiken, S.C. 29801





SEA RAY BOATS, INC.
WORLD HEADQUARTERS, 2600 SEA RAY BLVD., KNOXVILLE, TENNESSEE 37914 (615) 522-4181

June 28, 1988



State of Florida
Department of Environmental Regulation
Central Florida District
3319 Maguire Boulevard
Orlando, Florida 32803-3767

Gentlemen:

Please be advised that G. E. Cantelou, Jr., a professional engineer, is serving as a consultant to our Company in matters attendant to our new manufacturing plant to be located in Merritt Island, Florida and will be filing with your offices as our representative an Application To Operate/Construct Air Pollution Sources seeking a construction permit with respect to such facility.

Very truly yours,

SEA RAY BOATS, INC.

John A. Cronkhite
Senior Vice President/
General Counsel

JAC:cbh