

SAFETY DATA SHEET



Date Issued : 12/10/2013
SDS No : 135440
Date Revised : 7/10/2015
Revision No : 2

Vinylester Marine Resin

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Vinylester Marine Resin

GENERAL USE: Vinylester resin for use in composite manufacturing and marine construction

PRODUCT CODE: 135440

MANUFACTURER

Fiberglass Coatings Inc.
4301A 34th Street North
St. Petersburg, FL 33714
Customer Service: (800) 272-7890
E-Mail: www.fgci.com
Emergency Contact: Chem-Tel
Emergency Phone: (800) 255-3924

24 HR. EMERGENCY TELEPHONE NUMBERS

Chem-Tel (800) 255-3924

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Irritation, Category 2
Eye Irritation, Category 2A
Acute Toxicity (Inhalation), Category 4
Skin Sensitization, Category 1
Carcinogenicity, Category 1B
Reproductive Toxicity, Category 2
Target Organ Toxicity (Single exposure), Category 3
Target Organ Toxicity (Repeated exposure), Category 1

Environmental:

Aquatic Toxicity (Chronic), Category 3

Physical:

Flammable Liquids, Category 3

GHS LABEL



Health
hazard



Flame



Exclamation
mark

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H320: Causes eye irritation.
 H315: Causes skin irritation.
 H304: May be fatal if swallowed and enters airways.
 H302: Harmful if swallowed.

PRECAUTIONARY STATEMENT(S)

Prevention:

P270: Do not eat, drink or smoke when using this product.
 P261: Avoid breathing fumes, dust, vapors, gases, or spray.
 P280: Wear protective gloves, protective clothing, eye protection and face protection.
 P264: Wash skin thoroughly after handling.
 P233: Keep container tightly closed.
 P243: Take precautionary measures against static discharge.
 P242: Use only non-sparking tools.

Response:

P302+P352: IF ON SKIN: Wash with plenty of soap and water.
 P332+P313: If skin irritation occurs: Get medical attention.
 P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or physician.
 P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313: If eye irritation persists: Get medical advice.

Storage:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501: Dispose of container and its contents in accordance with all Federal, State, and local regulations.
 12557CAW: Dispose of contents and container to industrial incineration plant

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Liquid, Styrene Odor.

IMMEDIATE CONCERNS: Flammable Liquid and Vapor. Can cause eye and skin irritation. May cause respiratory tract irritation. May contain traces of carcinogenic material. Avoid contact and exposure whenever possible.

POTENTIAL HEALTH EFFECTS

EYES: Can cause eye irritation. Symptoms include: stinging, tearing, redness, and swelling of the eyes.

SKIN: Can cause skin irritation. Symptoms may include redness, burning, drying and cracking of the skin, burns and other skin damage.

INGESTION: Swallowing can cause gastrointestinal irritation, nausea, diarrhea. Aspiration hazard. Aspiration can cause chemical pneumonitis, which can be fatal.

INHALATION: Vapors can cause respiratory tract irritation.

CARCINOGENICITY: IARC: Classified 2B (possible for humans)

ROUTES OF ENTRY: Inhalation, Skin absorption, Skin contact, Eye contact, Ingestion.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Vinylester Resin (Trade Secret)	50 - 60	XXXXXX
Styrene	40 - 50	100-42-5
Alpha-methyl Styrene	< 5	98-83-9
Silica, Amorphous, Fumed	< 5	112945-52-5
Methyl alcohol	< 2	67-56-1
Cobalt Compounds	< 0.3	XXXXXX

COMMENTS: The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

EYES: Flush eyes with water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do so. Seek immediate medical attention.

SKIN: Immediately flush with plenty of soap and water. Remove and dispose of contaminated clothing. Seek medical attention.

INGESTION: Aspiration hazard. If swallowed, Do NOT induce vomiting. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Rinse mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE TOXICITY: INHALATION: Harmful if inhaled. Effects from exposure may include headaches, fatigue, nausea, sensation of drunkenness, central nervous system depression and pulmonary edema.

CHRONIC EFFECTS: 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 and respiratory tract damage.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Category 3 Flammable Liquid

EXTINGUISHING MEDIA: Use dry chemical, CO₂, water spray/fog (not jet), or foam

EXPLOSION HAZARDS: Vapors may form an explosive mixture with air.

FIRE FIGHTING PROCEDURES: Evacuate any non-essential personnel. Extinguish all ignition sources if safe to do so. Use water to cool exposed containers and structures until fire is out. Avoid spreading burning material with water used for cooling purposes.

FIRE FIGHTING EQUIPMENT: Full Bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus (SCBA).

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors and gases.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Extinguish all nearby ignition sources. Stop leak if it can be done safely. Prevent from entering waterways and sewers. Absorb with non-combustible material and transfer into appropriate disposal container.

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. Collect with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite). Transfer contaminated absorbent, soil and other materials to containers for proper disposal according to all Federal, State, and Local ordinances.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

GENERAL PROCEDURES: Always ensure proper ventilation from any spill. Respirators or SCBA are required if permissible exposure limits are exceeded due to inadequate general ventilation. All spills should be contained as best as possible. All chemical spills should be assumed to be hazardous to the environment to ensure safety.

7. HANDLING AND STORAGE

HANDLING: Avoid ignition sources (flame, spark, smoking, etc) in use or handling areas. Use explosion proof electrical equipment. Ground all equipment containing this material. Do not ingest or breathe vapors/fumes. Avoid contact with eyes and skin. Always wear proper PPE when handling. Provide sufficient ventilation. A NIOSH respirator is required if permissible exposure limits are exceeded.

STORAGE: Store in a cool, dry, well-ventilated area, away from any sources of ignition and incompatible materials. Keep all equipment grounded to avoid static sparking. Keep container closed when not being used.

STORAGE TEMPERATURE: For safety to prevent pressure build up, and to maintain the product's proper shelf life store at temperatures below 80 degrees F.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³
Styrene	TWA	50		20	85
	STEL	100		40	170
Alpha-methyl Styrene	TWA	50		50	
	STEL	100		100	
Silica, Amorphous, Fumed	TWA		6	[1]	10 [1]
Methyl alcohol	TWA	200	260	200	160
	STEL	250	325	250	325
Footnotes:					
1. Inhalable					

ENGINEERING CONTROLS: Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (PEL/TLV). Any installed emergency eye wash station or safety showers should be located near the work area.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical splash goggles and/or face shield. Always use proper eye protection around the work area.

SKIN: Wear impermeable gloves. Clothing should limit skin exposure. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product. Maintain eyewash and shower station near work area in case of

exposure.

RESPIRATORY: Vapor respirator may be required if exposure limits are exceeded. Use a NIOSH approved respirator or equivalent when required. Proper mechanical ventilation should be installed to ensure the exposure levels are below the allowable thresholds (PEL/TLV).

WORK HYGIENIC PRACTICES: Never eat or drink in areas where the chemical is being used. Wash hands after handling to limit exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid.

ODOR: Pungent Odor.

ODOR THRESHOLD: 0.2 ppm Styrene

APPEARANCE: Syrup

COLOR: Opaque Amber

pH: No data available.

PERCENT VOLATILE: 30 to 40 % (styrene)

FLASH POINT AND METHOD: 31.1°C (88°F) Closed Cup

FLAMMABLE LIMITS: 1.1% to 6.1%

Notes: Flammable limits in air % by volume

AUTOIGNITION TEMPERATURE: 490°C (914°F)

Notes: Autoignition temp listed for Styrene (CAS: 100-42-5). Unknown autoignition for mixture.

VAPOR PRESSURE: 6.12 mm Hg @ 20 C

VAPOR DENSITY: 3.6 (Air =1)

BOILING POINT: 145°C (293°F)

FREEZING POINT: -30.4°C (-22.7°F)

MELTING POINT: No data available.

SOLUBILITY IN WATER: Insoluble.

EVAPORATION RATE: < 1 (Ethyl Ether = 1)

SPECIFIC GRAVITY: 1.08 to 1.15 (Water = 1) at 25°C (77°F)

VISCOSITY: No data available.

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: Yes

STABILITY: This product is stable under normal conditions of storage and use.

POLYMERIZATION: Under normal conditions of use, hazardous reactions will not occur.

CONDITIONS TO AVOID: Avoid contact with incompatible materials and ignition sources / heat.

POSSIBILITY OF HAZARDOUS REACTIONS: Extreme heat can cause rapid, uncontrolled polymerization.

HAZARDOUS DECOMPOSITION PRODUCTS: May form: carbon dioxide and carbon monoxide, various hydrocarbons.

INCOMPATIBLE MATERIALS: Avoid all unplanned contact with strong reactive chemicals, Acids, Bases, Aliphatic Amines, and Oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Styrene	5000 mg / kg (Rat)	> 2000 mg / kg (dermal Rabbit)	11.8 mg/L (4h)
Alpha-methyl Styrene	4900 mg / kg (Rat)		
Silica, Amorphous, Fumed	> 5000 mg / kg (Rat)	> 5000 mg / kg (dermal Rabbit)	2.08 mg/L (4h)
Methyl alcohol	300 mg / kg Human	15800 mg / kg (Rabbit)	64000 ppm (inhalation/rat) (8h)

EYES: Styrene causes transient moderate eye irritation without corneal involvement.

DERMAL LD₅₀: Styrene causes severe irritation at 72 hours.

INHALATION LC₅₀: 24 g / m³ 4 hours (rat)

EYE EFFECTS: Eye irritant

SKIN EFFECTS: Skin Irritant, Sensitizer.

CARCINOGENICITY

IARC: Group 2B - Possibly carcinogenic for humans (Styrene)

NTP: Not Classified.

OSHA: Not Classified

TARGET ORGANS: In humans, styrene may cause a transient decrease in color discrimination and effects on hearing. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to defatting properties of the product. May cause damage to the kidneys, liver, eyes, brain, respiratory system, central nervous system through prolonged or repeated exposure if inhaled.

TERATOGENIC EFFECTS: Styrene did not cause birth defects in orally dosed rats, mice and rabbits. Exposed by inhalation 6 hr. per day was toxic to fetal mice at 250 ppm and to fetal hamsters at 1000 ppm

MUTAGENICITY: Styrene has given mixed positive and negative results in a number of mutagenicity tests. Styrene was not mutagenic without metabolic activation but gave negative and positive mutagenic results with metabolic activation.

GENERAL COMMENTS: No toxicological data is available for this product. Based on properties and similar polymers, the polyester resin is not hazardous.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Environmental studies have not been performed for this mixture.

ECOTOXICOLOGICAL INFORMATION: DO NOT discharge into sewer or waterways.

BIOACCUMULATION/ACCUMULATION: Biodegradable.

AQUATIC TOXICITY (ACUTE)

96-HOUR LC₅₀: 9.1 mg/L (Sheepshead minnow)

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be in accordance with all Federal, State, and local regulations. Empty containers may still be considered dangerous due to residual vapors/liquid/dust.

RCRA/EPA WASTE INFORMATION: This material and containers that are not empty, if discarded, would be regulated as a hazardous waste under RCRA. Treatment and/or disposal must be completed at a RCRA-permitted Treatment, Storage and Disposal Facility (TSD). The storage and transportation of RCRA hazardous wastes are also regulated by the US-EPA.

RCRA HAZARD CLASS: Waste Number: D001 (Ignitable)

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)**

PROPER SHIPPING NAME: Resin Solution

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: 1866

PACKING GROUP: III

NAERG: 127

AIR (ICAO/IATA)

SHIPPING NAME: Resin Solution

UN/NA NUMBER: 1866

PRIMARY HAZARD CLASS/DIVISION: 3

PACKING GROUP: III

ERG: 127

VESSEL (IMO/IMDG)

UN/NA NUMBER: 1866

PRIMARY HAZARD CLASS/DIVISION: 3

PACKING GROUP: III

15. REGULATORY INFORMATION**UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

311/312 HAZARD CATEGORIES: Fire Hazard, Immediate (acute) Health Hazard, Chronic (Delayed) Health Hazard, Reactivity.

FIRE: Yes **PRESSURE GENERATING:** No **REACTIVITY:** Yes **ACUTE:** Yes **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: Styrene

TITLE III NOTES: Components meeting the requirements are listed.

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: Styrene (CAS # 100-42-5)

THRESHOLD QUANTITY: 1000 lb.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Styrene

CERCLA RQ: 1000 pounds

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: Sections: 8 (b), 12 (b)

TSCA STATUS: All Components listed.

CLEAN AIR ACT

40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION: Listed.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: Considered Hazardous

CALIFORNIA PROPOSITION 65: This material contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

RCRA STATUS: D001

OSHA HAZARD COMM. RULE: Listed.

CLEAN WATER ACT: Listed.

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): B2 Flammable Liquid; D2A Very Toxic Material; D2B Toxic Material; F Dangerous Reactive Material.

DOMESTIC SUBSTANCE LIST (INVENTORY): Listed.

GENERAL COMMENTS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

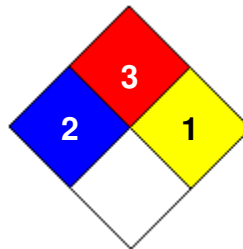
PREPARED BY: Fiberglass Coatings, Inc. (GS)

REVISION SUMMARY: This MSDS replaces the 6/5/2015 MSDS. Revised: **Section 11:** IARC, MUTAGENICITY, TARGET ORGANS. **Section 15:** TSCA STATUS.

HMIS RATING

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		1
PERSONAL PROTECTION		J

NFPA CODES



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