

# SAFETY DATA SHEET



Date Prepared : 12/10/2013  
SDS No : 128761  
Date Revised : 11/14/2016  
Revision No : 3

## Fire Retardant Resin, 4510

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Fire Retardant Resin, 4510

**GENERAL USE:** Unsaturated Polyester solution for composite manufacturing.

**PRODUCT CODE:** 128761, 128760

#### MANUFACTURER

Fiberglass Coatings Inc.  
4301A 34th Street North  
St. Petersburg, FL 33714

**Customer Service:** (800) 272-7890

**E-Mail:** [www.fgci.com](http://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/Corrosion, Category 2  
Serious eye damage/eye irritation, Category 2A  
Skin Sensitization, Category 1  
Carcinogenicity, Category 1B  
Reproductive Toxicity, Category 2  
STOT SE, Category 3  
STOT RE, Category 1

##### Environmental:

Chronic Aquatic Toxicity, Category 3

##### Physical:

Flammable Liquids, Category 3

#### GHS LABEL



Flame



Health  
hazard



Exclamation  
mark

**SIGNAL WORD:** DANGER

## HAZARD STATEMENTS

H315: Causes skin irritation.  
 H319: Causes serious eye irritation.  
 H351: Suspected of causing cancer.  
 H332: Harmful if inhaled.  
 H361: Suspected of damaging fertility or the unborn child.  
 H335: May cause respiratory irritation.  
 H370: Causes damage to organs (or state all organs affected, if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).  
 H412: Harmful to aquatic life with long lasting effects.  
 H226: Flammable liquid and vapour.

## PRECAUTIONARY STATEMENT(S)

### Prevention:

P270: Do not eat, drink or smoke when using this product.  
 P261: Avoid breathing dust, fumes, gas, mist, vapors, spray.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P264: Wash skin thoroughly after handling.  
 P233: Keep container tightly closed.  
 P243: Take action to prevent static discharges.  
 3395PTK0: P210: Keep away from heat, sparks, open flames, and hot surfaces. - No Smoking.  
 P241: Use explosion-proof [electrical/ventilating/lighting] equipment.  
 P242: Use non-sparking tools.

### Response:

P302+P352: If on skin; Wash with plenty of water.  
 P332+P313: If skin irritation occurs: Get medical advice/attention.  
 P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/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/attention.  
 P304+P340: If inhaled; Remove person to fresh air and keep comfortable for breathing.  
 P303+P361+P353: If on skin or hair: Immediately take off all contaminated clothing. Rinse skin with water [or shower].  
 P370+P378: In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.

### Storage:

P403+P235: Store in a well-ventilated place. Keep cool.  
 P405: Store locked up.

### Disposal:

1048ZK1E: Dispose of product and container according to Federal, State and local regulations.

## EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Viscous liquid.

**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:** Risk of serious damage to 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
Polyester Resin (Trade Secret)	60 - 70	N/A
Styrene	30 - 40	100-42-5

**COMMENTS:** The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "Proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**EYES:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If lasting effects occur, consult a physician, preferably an ophthalmologist. A suitable emergency eyewash facility should be available in work area.

**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 and keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Immediate medical attention required.

#### SIGNS AND SYMPTOMS OF OVEREXPOSURE

**ACUTE EFFECTS:** 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.

**COMMENTS:** Notes to Physician: Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

**FLAMMABLE CLASS:** Category 3, Flammable Liquid.

**EXTINGUISHING MEDIA:** Use dry chemicals, CO<sub>2</sub>, water spray/fog (not jet), or foam.

**EXPLOSION HAZARDS:** Vapors may form an explosive mixture with air. Do not pressurize, cut weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed. Closed containers may rupture when exposed to extreme heat.

**FIRE FIGHTING PROCEDURES:** Evacuate any non-essential personnel. Extinguish all ignition sources if safe to do so. Move container from fire area if this is possible without hazard. Use water to cool exposed containers and structures until fire is out. Avoid spreading burning material with water jet stream used for cooling purposes. However, burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Fight fire from protected location or safe distance. Contain fire water run-off if possible to prevent environmental damage. Review the "Accidental Release Measures" and "Ecological Information" sections of this SDS.

**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 using non-sparking tools.

**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.

**GENERAL PROCEDURES:** Always ensure proper ventilation from any spill. NIOSH respirators or SCBA are required if permissible exposure limits are exceeded due to inadequate general ventilation. Evacuate personnel to a safe area. Special attention should be given to low areas/pits where flammable vapors can accumulate.

## 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 77 degrees F.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
EXPOSURE LIMITS				
Chemical Name	Type		ppm	mg/m <sup>3</sup>
Styrene	OSHA PEL	TWA	50	
		STEL	100	
	ACGIH TLV	TWA	20	85
		STEL	40	170

**ENGINEERING CONTROLS:** Provide ventilation or other engineering controls to keep the airborne concentrations of vapors 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 eye wash 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 exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid.

**ODOR:** Styrene Odor.

**ODOR THRESHOLD:** 0.2 ppm Styrene.

**APPEARANCE:** Syrup.

**pH:** Not Applicable.

**PERCENT VOLATILE:** 30 to 45 % (styrene)

**FLASH POINT AND METHOD:** 31.1°C (88°F) Closed Cup at 102.89hPa EC Method A9.

**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:** 5 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.

**THERMAL DECOMPOSITION:** Not Available.

**SOLUBILITY IN WATER:** Insoluble.

**EVAPORATION RATE:** 0.49 (Butyl Acetate = 1) Styrene.

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

**VISCOSITY:** No data available.

**(VOC):** 300.000 to 400.00 g/L

## 10. STABILITY AND REACTIVITY

**REACTIVITY:** Yes

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

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

**CONDITIONS TO AVOID:** Avoid contact with incompatible materials and ignition sources or 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, Amines, Peroxides and other Oxidizers.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

Chemical Name	ORAL LD <sub>50</sub> (rat)	DERMAL LD <sub>50</sub> (rabbit)	INHALATION LC <sub>50</sub> (rat)
Styrene	5000 mg / kg (Rat)	> 2000 mg / kg (dermal Rabbit)	11.8 mg/L (4h) Rat

**SKIN CORROSION/IRRITATION:** Causes skin irritation.

**SERIOUS EYE DAMAGE/IRRITATION:** Contact causes skin irritation. Prolonged skin contact may defat the skin and produce dermatitis.

**RESPIRATORY OR SKIN SENSITISATION:** May cause sensitization by contact.

**GERM CELL 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.

### CARCINOGENICITY

**IARC:** Group 2B - Possibly carcinogenic for humans.

**NTP:** Not Classified.

**OSHA:** Not Classified.

**NOTES:** Styrene manufacturers vary on their determination that the GHS hazard classification criteria for carcinogenicity has been met. Styrene is listed by IARC as a possible carcinogen to humans (Group 2B) based on "limited evidence" in humans, "limited evidence" in animals and "other relevant data". The United States NTP listed styrene as reasonably anticipated to be a human carcinogen based on "limited evidence" from studies in humans, "sufficient evidence" from studies in experimental animals, and supporting data on mechanisms of carcinogenesis. The significance of these results for humans has not been established through risk assessment.

**REPRODUCTIVE TOXICITY:** Product is or contains a chemical which is known or suspected reproductive hazard.

**STOT-SINGLE EXPOSURE:** Respiratory system.

**STOT-REPEATED EXPOSURE:** Causes damage to organs through prolonged or repeated exposure if inhaled.

**ASPIRATION HAZARD:** No data available.

**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 LC<sub>50</sub>:** 9.1 mg/L (Sheepshead minnow)

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with Federal, State/Provincial and local laws and regulations. Regulations may vary in different

locations.

**EMPTY CONTAINER:** Empty containers should be taken for local recycling, recovery or waste disposal.

**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.

**GENERAL COMMENTS:** US EPA Waste Number : D001(IGNITABLE): When discarded in its purchased form, this material would be regulated under 40CFR261.21 as EPA Hazardous Waste Number D001 on the characteristic of ignitability.

#### 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

**REPORTABLE QUANTITY (RQ) UNDER CERCLA:** Pounds

##### AIR (ICAO/IATA)

**SHIPPING NAME:** Resin Solution

**UN/NA NUMBER:** 1866

**PRIMARY HAZARD CLASS/DIVISION:** 3

**PACKING GROUP:** III

**ERG:** 127

##### VESSEL (IMO/IMDG)

**SHIPPING NAME:** Resin Solution

**UN/NA NUMBER:** 1866

**PRIMARY HAZARD CLASS/DIVISION:** 3

**PACKING GROUP:** III

##### CANADA TRANSPORT OF DANGEROUS GOODS

**SHIPPING NAME:** Resin Solution

**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 test data available. **REACTIVITY:** Yes **ACUTE:** Yes **CHRONIC:** Yes

**313 REPORTABLE INGREDIENTS:** Styrene 100-42-5

**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 100-42-5

**CERCLA RQ:** 1000 lb.

### TSCA (TOXIC SUBSTANCE CONTROL ACT)

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

### CLEAN AIR ACT

**40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION:** Causes skin irritation.

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

**OSHA HAZARD COMM. RULE:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CLEAN WATER ACT:** Causes skin irritation.

### 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):** Causes skin irritation.

**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

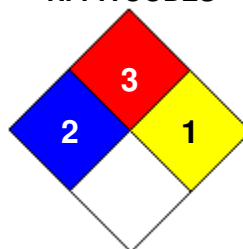
**PREPARED BY:** Fiberglass Coatings, Inc. (GS) **Date Revised:** 11/14/2016

**REVISION SUMMARY:** This MSDS replaces the 08/14/2015 MSDS. Revised: **Section 14:** PACKING GROUP, PRIMARY HAZARD CLASS/DIVISION, UN/NA NUMBER, SHIPPING NAME, VESSEL (IMO/IMDG) - SHIPPING NAME.

### HMIS RATING

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		1
PERSONAL PROTECTION		

### NFPA CODES



**HMIS RATINGS NOTES:** The customer is responsible for determining the PPE code for this material.

**MANUFACTURER DISCLAIMER:** This information is compiled from sources believed reliable as of the date of issue, it is provided in good faith and correct to the best of our knowledge. No warranty, guarantee, or representation is made as to the sufficiency of the information for the safe use of the product nor to relieve the end user of their own Federal, State, and local regulatory



compliance requirements.