

# MATERIAL SAFETY DATA SHEET

## **PolyGard**

Revision Date: 05/22/2002  
MSDSUSA/ANSI/EN/150000056873/Version 2.0

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Unsaturated Polyester Resin 246-7825 (PolyGard)  
**PRODUCT ID NUMBER(S):** 246-7825, P2634500, P2634502, P2634508, P263450H  
**CHEMICAL NAME:** N/A  
**SYNONYM(S):** 26345-00 979930  
**MOLECULAR FORMULA:** N/A  
**MOLECULAR WEIGHT:** N/A  
**PRODUCT USE:** Industrial Chemical  
**OSHA STATUS:** Hazardous

**DISTRIBUTOR'S NAME:** SUPERIOR EPOXIES & COATINGS, INC.  
**ADDRESS:** 2527 Lantrac Court  
Decatur, GA 30035

**NON-EMERGENCY PRODUCT INFO:** 1-800-543-3516  
**EMERGENCY PHONE:** 1-800-424-9300 (CHEMTREC, 24 Hours)

### SECTION II – COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided.)

Weight %	Component	CAS Registry No.
61.4%	unsaturated polyester polymer	proprietary
35.2%	styrene	100-42-5
2%	alpha-methylstyrene	98-83-9
1%	3-trimethoxysilylpropylmethacrylate	2530-85-0
< 0.5%	cobalt compound(s)	proprietary
< 1%	residual additives, modifiers, colorants, reactants, and/or impurities	not applicable

### SECTION III – HAZARDS IDENTIFICATION

#### **WARNING!**

Contains styrene  
Possible cancer hazard – may cause cancer based on animal data  
Harmful if inhaled, absorbed through skin, or swallowed  
Causes skin and eye irritation  
Flammable liquid and vapor  
May form explosive peroxides  
May polymerize  
The physical-chemical and toxicological properties of this material have not been fully investigated

**HMIS Hazard Ratings:** Health – 2\*, Flammability – 3, Chemical Reactivity – 1

HMIS rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

### SECTION IV – FIRST-AID MEASURES

#### **INHALATION:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYES:**

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

**SKIN:**

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**INGESTION:**

Call a physician or poison control center immediately. Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person.

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**SECTION V – FIRE FIGHTING MEASURES**

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**EXTINGUISHING MEDIA:**

Water spray, dry chemical, carbon dioxide, foam

**SPECIAL FIRE-FIGHTING PROCEDURES:**

Wear self-contained breathing apparatus and protective clothing. Fight fire from a protected location. Use water spray to keep fire-exposed containers cool. USE WATER WITH CAUTION. Water may be ineffective in fighting the fire.

**HAZARDOUS COMBUSTION PRODUCTS:**

Carbon dioxide, carbon monoxide

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. May form explosive peroxides. Fire or excessive heat may result in rupture of container due to bulk polymerization. Heating may cause an explosion.

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**SECTION VI – ACCIDENTAL RELEASE MEASURES**

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Use personal protective equipment (See Section VIII, EXPOSURE CONTROLS/PERSONAL PROTECTION). Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

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**SECTION VII – HANDLING AND STORAGE**

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**PERSONAL PRECAUTIONARY MEASURES:**

Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

**PREVENTION OF FIRE AND EXPLOSION:**

Keep away from heat, sparks, and flame. Keep from contact with oxidizing materials. Use only with adequate ventilation. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids. Do not expose to air. After opening, purge container with nitrogen before re-closing. Do not distill to near dryness. Periodically test for peroxide formation on long-term storage. If peroxide formation is suspected, do not open or move container. Addition of water or appropriate reducing materials will lessen peroxide formation.

**STORAGE:**

Keep container tightly closed. Store in a cool place away from heat and light. Protect from contamination.

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**SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION**

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Country specific exposure limits have not been established or are not applicable unless listed below.

**STYRENE, MONOMER**

US.ACGIH Threshold Limit Values

Time Weighted Average (TWA): 20 ppm, 85 mg/m<sup>3</sup>

US.ACGIH Threshold Limit Values

Short Term Exposure Limit (STEL): 40 ppm, 170 mg/m<sup>3</sup>

**STYRENE**

US.NIOSH: Pocket Guide to Chemical Hazards

Recommended exposure limit (REL): 50 ppm, 215 mg/m<sup>3</sup>

US.NIOSH: Pocket Guide to Chemical hazards

Short Term Exposure Limit (STEL): 100 ppm, 425 mg/m<sup>3</sup>

US.OSHA Table Z-2 (29 CFR 1910.1000)

Time Weighted Average (TWA): 100 ppm,

US.OSHA Table Z-2 (29 CFR 1910.1000)

Ceiling Limit Value: 200 ppm,

US.OSHA Table Z-2 (29CFR 1910.1000)

Maximum concentration: 600 ppm, 5 minutes in any 3 hours

US.OSHA Table Z-1-A (29 CFR 1910.1000)

Time Weighted Average (TWA): 50 ppm, 215 mg/m<sup>3</sup>

US.OSHA Table Z-1-A (29 CFR 1910.1000)

Short Term Exposure Limit (STEL): 100 ppm, 425 mg/m<sup>3</sup>

### **STYRENE (MONOMER); PHENYLETHYLENE**

US, California Code of Regulations, Title 8, Section 5155, Airborne Contaminants

Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 50 ppm, 215 mg/m<sup>3</sup>

US, California Code of Regulations, Title 8, Section 5155, Airborne Contaminants

Ceiling Limit Value: 500 ppm.

US, California Code of Regulations, Title 8, Section 5155, Airborne Contaminants

Short Term Exposure Limit (STEL): 100 ppm, 425 mg/m<sup>3</sup>

US, California Code of Regulations, Title 8, Section 5155, Airborne Contaminants

Skin designation: Can be absorbed through the skin.

### **a-METHYL STYRENE**

US.ACGIH Threshold Limit Values

Time Weighted Average (TWA): 50 ppm, 242 mg/m<sup>3</sup>

US.ACGIH Threshold Limit Values

Short Term Exposure Limit (STEL): 100 ppm, 483 mg/m<sup>3</sup>

US.NIOSH: Pocket Guide to Chemical Hazards

Recommended exposure limit (REL): 50 ppm, 240 mg/m<sup>3</sup>

US.NIOSH: Pocket Guide to Chemical Hazards

Short Term Exposure Limit (STEL): 100 ppm, 485 mg/m<sup>3</sup>

### **ALPHA-METHYLSTYRENE**

US.OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Ceiling Limit Value: 100 ppm, 480 mg/m<sup>3</sup>

US.OSHA Table Z-1-A (29 CFR 1910.1000)

Time Weighted Average (TWA): 50 ppm, 240 mg/m<sup>3</sup>

US.OSHA Table Z-1-A (29CFR 1910.1000)

Short Term Exposure Limit (STEL): 100 ppm, 485 mg/m<sup>3</sup>

### **ALPHA-METHYLSTYRENE; 1-METHYL.1-PHENYLETHENE**

US, California Code of Regulations, Title 8, Section 5155, Airborne Contaminants

Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 50 ppm, 240 mg/m<sup>3</sup>

US, California Code of Regulations, Title 8, Section 5155, Airborne Contaminants

Short Term Exposure Limit (STEL): 100 ppm, 485 mg/m<sup>3</sup>

**Ventilation:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. NOTE: Some countries might not have established exposure limits.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: air-purifying respirator with a high efficiency particulate filter.

**Eye Protection:** Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.

**Skin Protection:** Wear chemical-resistant gloves, boots, and protective clothing appropriate for the risk of exposure. Contact

glove manufacturer for specific information.

**Recommended Decontamination Facilities:** Eye bath, washing facilities, safety shower

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## SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

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**Physical Form:** viscous liquid  
**Color:** amber  
**Odor:** styrene  
**Specific Gravity:** 1.15 (25° C)  
**Boiling Point:** > 64° C  
**Solubility in Water:** negligible  
**Flash Point:** 31° C (Setaflash closed cup)  
**Thermal Decomposition Temperature:** Thermal stability not tested. Low stability hazard expected at normal operating temps.

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## SECTION X – STABILITY AND REACTIVITY

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**Stability:** Not fully evaluated. Materials containing similar functional groups form explosive peroxides.  
**Incompatibility:** Material reacts with strong oxidizing agents, metals, strong acids.  
**Hazardous Polymerization:** May occur. Avoid initiators, heat, acids, extended storage period.

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## SECTION XI – TOXICOLOGICAL INFORMATION

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Toxicity data are not available unless listed below.

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## SECTION XII – ECOLOGICAL INFORMATION

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This material has not been tested for environmental effects.

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## SECTION XIII – DISPOSAL CONSIDERATIONS

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Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

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## SECTION XIV – TRANSPORT INFORMATION

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**Marine pollutant components:** None unless listed below.  
**Reportable Quantity:** 1,290 kg  
**DOT (USA):** Class 3 Packing group III  
**TDG (Canada):** Class 3 Packing group III  
**ICAO Status:** Class 3 Packing group III  
**IMDG Status:** Class 3 Packing group III

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## SECTION XV – REGULATORY INFORMATION

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**WHMIS (Canada) Status:** controlled  
**WHMIS (Canada) Hazard Classification:** B/2, D/2/A

**SARA 311-312 Hazard Classification(s):**  
Immediate (acute) health hazard  
Delayed (chronic) health hazard  
Fire hazard

**SARA 313:** none, unless listed below  
STYRENE  
COBALT COMPOUND(S)

**Carcinogenicity Classification (components present at 0.1% or more):** none, unless listed below  
IARC (International Agency for Research on Cancer):

Styrene: possibly carcinogenic to humans.

**TSCA (US Toxic Substances Control Act):**

All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

**DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act):**

One or more components of this product are not listed on the DSL.

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**SECTION XVI – DISCLAIMER**

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The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.