

MATERIAL SAFETY DATA SHEET

Date Prepared: 9/17/04
SMC Resin

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MSDS Number: 121004

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: SMC Resin
Product Numbers: 100864 and 100865
Product Use: Polyester Resin

HEALTH: 2
FLAMMABILITY: 3
REACTIVITY: 2



Company

Fibre Glass-Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	EINECS Number	% (by weight)
Polyester Resin	Proprietary	Proprietary	50 - 55
Styrene	100-42-5	202-851-5	35 - 40
Methyl Methacrylate	80-62-6	201-297-1	5 - 10
Amorphous Silica	112945-52-5	231-545-4	1 - 5

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! FLAMMABLE LIQUID AND VAPOR.
CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION.

Potential Health Effects

Acute Effects (Short Term):

- Eye:** Contact with liquid or vapor may result in irritation, redness, tearing, and blurred vision.
- Skin:** May cause severe skin irritation. Prolonged or repeated contact may dry the skin and may cause skin sensitization. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.
- Swallowing:** Ingestion of this material may cause gastrointestinal irritation, nausea, diarrhea, and vomiting. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal.

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Inhalation: Excessive inhalation of vapors may cause nasal and respiratory irritation, acute nervous system depression, fatigue, weakness, nausea, headache, and dizziness. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Chronic Effects of Overexposure (Long Term):

Styrene: Excessive overexposure to styrene has been found to cause the following effects in humans and may aggravate pre-existing disorders of these organs; central nervous system effects, effects on hearing, mild effects on color vision and respiratory tract damage.

Methyl Methacrylate: Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation exposure may cause asthma. The substance may have effects on the central nervous system and the peripheral nervous system.

Cancer Information: The International Agency for Research on Cancer (IARC) has classified styrene as a group 2B carcinogen (possibly carcinogenic to humans). This classification is not based on evidence that styrene may be carcinogenic, but rather on a revised definition for Group 2B, and consideration of new data on styrene oxide (Group 2A). This material may contain trace amounts of chemicals considered to be carcinogenic by OSHA, (Benzene-IARC Group 1).

Other Health Effects:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, Skin absorption.

SECTION 4. FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes. Seek immediate medical attention.

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

Swallowing: Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. If individual is drowsy or unconscious, do not give

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Inhalation: anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended. If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 93 °F (33.9 °C)

Explosive Limit: Lower: 1.1% Upper: 12.5%

Autoignition Temperature: 790.0 °F (421.0 °C)

OSHA Flammability Class: Flammable Liquid- Class IC

Hazardous Products of Combustion: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, styrene oxide, aniline, nitrogen oxides and various hydrocarbons.

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

Extinguishing Media: Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions: Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus NIOSH approved with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

NFPA Rating: Health - 2, Flammability - 3, Reactivity - 2

SECTION 6. ACCIDENTAL RELEASE MEASURES

In Case of Spill: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate the area. Wear proper protective equipment (Section 8). Avoid breathing vapors. Collect with an inert absorbant and dispose of properly.

SECTION 7. HANDLING AND STORAGE

Handling: All hazard precautions given in the data sheet must be observed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation. Do not breathe sanding dust, vapors or spray mist. Do not take internally. Close container after each use. **Keep out of reach of children.**

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Storage: Store material in a cool, well-ventilated area. For maximum product quality, avoid prolonged storage at temperatures above 75°F (25°C). Do not use or store near heat, sparks, or open flame. Keep container tightly closed. Avoid contact with incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended.

Skin Protection: Protective gloves and proper clothing should be worn to prevent skin contact. Gloves should be made of neoprene or natural rubber. A barrier cream may be used for additional skin protection. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Use a NIOSH approved respirator designed to remove particulate matter and organic solvent vapors.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Exposure Guidelines:

Hazardous Ingredients	CAS Number	OSHA PEL/TWA	ACGIH TLV
Amorphous Silica	112945-52-5	15 mg/m ³	10 mg/m ³
Methyl Methacrylate	80-62-6	100 ppm	100 ppm
Styrene	100-42-5	100 ppm	20 ppm

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	214-293 °F / 100-145 °C	Vapor Density:	Heavier than air.
Specific Gravity / Density:	1.09 / 9.10 lbs/gal	Percent Volatiles by weight:	32-36 %
Evaporation Rate:	Slower than ethyl ether.	Physical State:	Liquid
Melting Point:	-23.1 °F / -30.6 °C	pH:	Neutral
Odor:	Sharp, aromatic odor.	Solubility:	Insoluble in water.
Vapor Pressure:	5.0 mmHg @ 68 °F / 20 °C (Styrene)	Appearance:	Clear to Yellow Liquid
Octanol/Water Partition Coefficient:	Unknown		

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VOC (as packaged-less exempts and water):	3.8 lbs/gal or 456 g/L	VOC (as applied*- 2% by wt hardener-less exempts and water):	3.26 lbs/gal or 391 g/L
Percent Solids by weight – as packaged:	58.2 %	Percent Solids by weight – as applied* - 2% by wt hardener:	64.1 %
VHAP Content by weight – as packaged:	44.2 %	VHAP Content by weight – as applied* - 2% by wt hardener:	37.9 %

*NOTE: The applied VOC and VHAP Content is lower than the packaged VOC and VHAP Content due to a reactive diluent (styrene) that reacts and becomes non-volatile (bonded in the solid material) when the hardener is added.

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Product may undergo hazardous polymerization if exposed to extreme heat.

Hazardous Decomposition: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, styrene oxide, aniline, nitrogen oxides and various hydrocarbons.

Chemical Stability: Stable under normal handling conditions.

Incompatibility: Avoid contact in uncontrolled conditions with: peroxides, strong acids, strong oxidizing agents, strong bases and polymerization catalysts.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD ₅₀ Oral-Rat	LC ₅₀ Inhalation-Rat
Styrene	100-42-5	5,000 mg/kg	24 g/m ³ /4H
Methyl Methacrylate	80-62-6	7,872 mg/kg	3,750 ppm
Amorphous Silica	112945-52-5	3,160 mg/kg	N/E

N/E-Not Established

Carcinogenicity: See Cancer Information, Section 3.

Mutagenicity: No significant evidence found.

Teratogenicity: No significant risk of birth defects or reproductive toxicity of styrene to humans.

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity: Styrene and Methyl Methacrylate are toxic to aquatic organisms and should not be released to sewage, draining systems or any body of water exceeding concentrations of approved limits under applicable regulations and permits.

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: This material as supplied, if discarded, would be regulated as a hazardous waste under RCRA (40 CFR 261). Dispose of in accordance with applicable federal, state, and local regulations.

RCRA Hazard Class: This material would be regulated as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is dependant on quantity, type of packaging (a kit may include other components), or method of shipment.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

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

CERCLA RQ - 40 CFR 302.4(a)

Component	RQ (lbs.)
Styrene	1000
Methyl Methacrylate	1000

SARA Title III: Section 302- Extremely Hazardous Substances
None

SARA Title III: Section 313- Toxic Chemical List

Component	CAS Number	Percentage
Styrene	100-42-5	35-40%
Methyl Methacrylate	80-62-6	5-10%

International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

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

WHMIS Classification

Health Hazard: D2A, D2B (Other Toxic Effects)

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Physical Hazard: B2 (Flammable)

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. BENZENE, STYRENE OXIDE, ACETALDEHYDE, 1,4-DIOXANE, ETHYLENE OXIDE

Styrene, in the presence of air and high temperature or prolonged exposure of styrene/air mixture to sunlight, can react to form styrene oxide.

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. BENZENE, ETHYLENE OXIDE

SECTION 16. OTHER INFORMATION

HMIS Rating: Health - 2*, Flammability - 3, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: This product must be mixed with Cream Hardener prior to use. Please refer to the Material Safety Data Sheet (#100340) for catalyst before using. If product is to be sanded, the OSHA PEL/TLV of 10 mg/m³ for nuisance dust should be observed.

Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.