

# MATERIAL SAFETY DATA SHEET

## VINYL ESTER WELDKIT / BUTT-WRAP KIT PART A

### I. 24-HOUR EMERGENCY CONTACT INFORMATION

CHEM-TEL United States.....800-255-3924  
 International.....813-248-0585

### II. HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Component Identification	CASRN	OSHA PEL	ACGIH TLV	% (by weight)
Vinyl Ester Resin	Various	None Established		45-70
Styrene Monomer	0000100-42-5	100 ppm	20 ppm	30-55
Silicon Carbide <sup>(1)</sup> [Present in abrasion-resistant kits only]	0000409-21-2	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (Respirable dust)	10 mg/m <sup>3</sup> (inhalable dust) 3mg/m <sup>3</sup> (Respirable dust)	0-25

<sup>(1)</sup>These materials are substantially incorporated into the mixture and exposure via inhalation is not likely to occur

Product Description.....VINYL ESTER RESIN

### III. PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point.....294°F (146°C), Based on Styrene  
 Melting Point.....Not Determined  
 Vapor Pressure.....7 mmHg @ 68°F (20°C), Based on Styrene  
 Vapor Density (Air = 1).....3.6 @ 59-68°F (15-20°C), Based on Styrene  
 Specific Gravity (Water = 1).....1.026-1.036  
 Evaporation Rate (butyl acetate = 1).....Not Determined  
 pH.....Not Determined  
 Appearance and Odor.....Straw-Yellow or Purple Liquid, Styrene Odor  
 Odor Threshold.....0.02-0.047, Based on Styrene

### IV. FIRE and EXPLOSION HAZARDS

Flash Point.....92°F (33°C), Seta Flash Closed Cup  
 Autoignition Temperature.....914°F (490°C), Based on Styrene  
 LEL / UEL.....1.1%/6.1%, Based on Styrene  
 Extinguishing Media.....Foam, Dry Chemical, CO<sub>2</sub>, Water Fog, Water Spray  
 NFPA Ratings.....Health (2) – Flammability (3) – Reactivity (2)

Special Firefighting Procedures: Wear full bunker gear and a positive pressure, self-contained breathing apparatus. Cool containers that are exposed to fire by soaking outside of containers with water until well after fire is extinguished.

Fire and Explosion Hazards: This material is flammable and may be ignited by heat, sparks, or flame. Sealed containers may explode in fire. Upon exposure to heat or flame, an exothermic reaction can develop, followed by decomposition of the product. Keep away from potential ignition sources.

### V. REACTIVITY DATA

Stability.....Stable  
 Hazardous Polymerization.....May occur at very high temperatures  
 Conditions to Avoid.....Temperatures above 100°F (38°C)  
 Incompatibilities.....Oxidizing Materials  
 Hazardous Decomposition Products.....CO and CO<sub>2</sub>

**VI. HEALTH HAZARD DATA**

Route(s) of Entry: Inhalation.....Yes  
Skin.....Yes  
Ingestion.....Not Expected

Acute (Short-Term) Health Effects: Short-term exposure to styrene can cause irritation to the eyes, throat, and skin. Dizziness, light-headedness, drowsiness, headache, nausea, and possible unconsciousness may also result from acute styrene overexposure. Material may stick to the skin causing irritation upon removal.

Chronic (Long-Term) Health Effects: Repeated or prolonged contact with the skin may cause dermatitis and skin sensitization. Chronic exposure to styrene vapors may cause asthma and affect the central nervous system.

Carcinogenicity: The NTP (National Toxicology Program) does not classify styrene as a known or potential human carcinogen. IARC (International Agency for Research on Cancer) classifies styrene as a Group 2B (possibly carcinogenic to humans). In its 1989 Air Contaminant Rulemaking, OSHA concluded, "current evidence on styrene's carcinogenicity does not support its classification as a carcinogen."

Signs and Symptoms of Exposure: Signs and symptoms following exposure to this product will generally be related to styrene fumes and may include weakness, irritation to the eyes and mucous membranes, conjunctivitis, central nervous system depression, loss of coordination, drowsiness, lack of appetite, nausea and vomiting, and dermatitis. Styrene can produce narcotic effects at high concentrations.

Medical Conditions Generally Aggravated by Exposure: Styrene exposure may aggravate preexisting central nervous system or respiratory disorders.

Emergency and First Aid Procedures:

- Inhalation:* Immediately leave the contaminated area; take deep breaths of fresh air. If breathing is difficult, administer oxygen and seek medical attention.
- Skin Contact:* Gently wash all affected skin areas thoroughly with water soap and water. If irritation persists or burning sensation is evident, seek medical attention.
- Eye Contact:* Flush eyes with water or normal saline for 20 to 30 minutes. Do not apply any ointments, oils, or other medication without specific instructions from a physician. Seek medical attention.
- Ingestion:* Not expected under normal use conditions. However, if ingestion does occur, do not induce vomiting. If the victim is conscious and not convulsing, give 1 to 2 glasses of water to dilute the chemicals and immediately call a hospital or poison control center. If the victim is convulsing or unconscious, do not give anything by mouth, ensure the victim's airway is open and lay the victim on his/her side with the head lower than the body. Seek immediate medical attention.

HMIS Ratings.....Health (2) – Flammability (3) – Reactivity (2)

**VII. PRECAUTIONS FOR SAFE HANDLING and USE**

Steps to be Taken in Case Material is Released or Spill: : If a spill occurs, all ignition sources in the immediate area should be removed. Use only non-sparking tools during cleanup and place discarded material into a suitable container. Do not allow spilled materials to enter storm sewers, sanitary sewers, or impact ground water.

Waste Disposal Method: Disposal must be in accordance with applicable laws. Blending with catalyst at proper ratio may render materials non-hazardous.

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Precautions to be Taken in Handling and Storage: Store in a cool environment away from ignition sources or direct sunlight. Avoid prolonged exposure to temperatures in excess of 100°F (38°C). Material is flammable; keep away from heat, sparks, and open flames. Avoid skin and eye contact. Use only in a well ventilated area.

**VIII. CONTROL MEASURES**

Respiratory Protection: If styrene vapors exceed prescribed limits, use appropriate respiratory protection.

Ventilation: A system of local and/or general exhaust is recommended.

Hand Protection: Gloves impervious to this material should be worn.

Eye Protection: ANSI-approved safety glasses with side shields or chemical goggles.

Other: Such clothing as to minimize or eliminate skin contact.

**IX. REGULATORY INFORMATION (Not meant to be all-inclusive)**

Hazardous Materials Transportation Act (HMTA)

When offered alone, this material should be classified as follows:

Proper Shipping Name.....Resin Solution, Flammable  
 Hazard Class.....3  
 Identification Number.....UN1866  
 Packing Group.....III  
 Label Required.....Flammable Liquid

When offered with the catalyst within the same container, the classification is:

Proper Shipping Name.....Polyester Resin Kit  
 Hazard Class.....3  
 Identification Number.....UN3269  
 Packing Group.....III  
 Label Required.....Flammable Liquid

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This produce contains the following CERCLA Section 102(a) hazardous substance(s) as listed in 40 CFR 302.4:

Identity	CASRN	% (by weight)	Reportable Quantity (RQ)
Styrene	0000100-42-5	20-55	1,000-lbs (454-kg)

Superfund Amendment and Reauthorization Act (SARA)

This product contains the following SARA Title III Section 302 extremely hazardous substance(s) as listed in 40 CFR Part 355:

Identity	CASRN	% (by weight)
None		

SARA Title III Section 311/312 hazardous categorization:

This product has been reviewed according to the EPA hazard categories promulgated under SARA Tile III Section 311 and 312 and is considered to meet the following hazard categories:

- An immediate (acute) health hazard
- A delayed (chronic) health hazard
- A fire hazard
- A reactive hazard

This product contains the following SARA Title III Section 313 toxic substance(s) as listed in 40 CFR Part 372:

Identity	CASRN	% (by weight)
Styrene Monomer	0000100-42-5	30-55

Toxic Substances Control Act (TSCA)

All ingredients are on the TSCA inventory or are not required to be on the inventory.

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**CATALYST / HARDENER INDEX**

The material described in the MSDS is intended for use with the following:

**VINYL ESTER WELDKIT / BUTT-WRAP KIT PART B**

Review literature supplied with product or contact NOV Fiber Glass Systems for proper mixing ratios.

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