

**SOCKETFAST RESIN**

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**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Chemical family Styrene Containing Coating

General information: The following information pertains to the resin component of a two component vinyl ester kit. The cured material is not hazardous.

**MANUFACTURER**

ITW Philadelphia Resins  
130 Commerce Dr.  
Montgomeryville, PA 18936

**EMERGENCY INFORMATION**

Emergency telephone number  
(CHEMTREC) **(800) 424-9300**  
Other calls: **(215) 855-8450**

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS CONSTITUENTS			Exposure limits			
Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Styrene monomer		100425	5-20	20 ppm	100 ppm	50 (Canada )
Crystalline silica		14808607	50-60	0.1 mg/m 3	0.1 mg/m <sup>^</sup> 3	0.1 (Canada ) 3
Polyester Resin		26098373	5-30	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) as established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (\*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

**3. HAZARDS IDENTIFICATION****Emergency Overview**

Appearance, physical form, odor: Thick white liquid with pungent odor.

**WARNING! Flammable. Reactive. Eye, skin and mucuos membrane irritant (evidenced by burning, tearing, redness or swelling). May cause Central Nervous System depression evidenced by anesthetic or narcotic effects. Suspected human carcinogen based on tests with laboratory animals. Potential liver and kidney effects. Prolonged or repeated contact with liquid or breathing of vapors or mists may cause delayed and serious injury. Keep away from heat, sparks and open flame. Store in a cool location, with container closed. Use with adequate ventilation. Do not cut or weld containers. Avoid contact with skin, eyes and clothing. Avoid breathing vapors.**

**Potential health effects:****Primary routes of exposure:**

Skin contact     Skin absorption     Eye contact     Inhalation     Ingestion

**Symptoms of acute overexposure:****Skin:**

May cause delayed skin irritation and blistering.

**Eyes:**

May cause moderate irritation, including burning sensation, tearing, redness or swelling.

**Inhalation:**

Overexposure may cause irritation to the respiratory tract and to other mucous membranes. Repeated or prolonged exposure may cause nausea, vomiting, loss of appetite, and general weakness.

**Ingestion:**

This material may be a slight health hazard if ingested in large quantities.

**Effects of chronic overexposure:**

Repeated excessive exposure to high amounts may cause central nervous system, liver, kidney effects and respiratory or eye irritation. Repeated excessive exposures to smaller amounts may cause central nervous system effects and respiratory or eye irritation.

**Medical conditions which may be aggravated by exposure:**

Existing respiratory disorders.

**Carcinogenicity -- OSHA regulated:** No    **ACGIH:** No    **National Toxicology Program:** No

**International Agency for Research on Cancer:** Yes

**Cancer-suspect constituent(s):** Styrene

**Other effects:**

Styrene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations (sixteen times the tlv and higher); however, the relevance of this to humans is unknown.

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**4. FIRST AID MEASURES****First aid for eyes:**

Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

**First aid for skin:**

Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with warm soap and water. Consult a physician if irritation develops.

**First aid for inhalation:**

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

**First aid for ingestion:**

Do NOT induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water Carbon dioxide Dry chemical Foam Alcohol foam**Flash Point (°F):** 90**Method:** TCC**Explosive limits in air -- Lower:** 1.1**Upper:** 6.1**Special firefighting procedures:**

Do not enter fire area without proper protection. Fight fire from a safe distance/protected location. Heat/impurities may increase temperature/build pressure/rupture closed containers, spreading fire, increasing risk of burns/injuries. Water may be ineffective in firefighting due to low solubility. Use water spray/fog for cooling. Pressure relief system may plug with solids, increasing risk of overpressure.

**Unusual fire and explosion hazards:**

Heat /inhibitor depletion/accidental impurities/exposure to air/radiation may cause spontaneous reaction/generate heat/pressure/rupture container. Liquid normally inhibited but not vapors. Vapors may condense as solids, plugging pressure relief devices, causing overpressure/rupture of storage containers during runaway polymerization.

**Hazardous products of combustion:**

Thermal decomposition may produce oxides of carbon, other toxic gases, acrid smoke and fumes.

### 6. ACCIDENTAL RELEASE MEASURES

**Spill control:**

Avoid personal contact. Eliminate ignition sources. Ventilate area.

**Containment:**

Dike, contain and absorb with clay, sand or other suitable non-combustible material.

**Cleanup:**

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly (RCRA hazardous waste). Add inhibitor to prevent polymerization.

**Special procedures:**

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Use non-sparking tools.

### 7. HANDLING AND STORAGE

**Handling precautions:**

Do not breathe vapor or mist. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Close container after each use. Ground container when pouring. Keep away from heat, flame, sparks or oxidizers. Use non-sparking tools.

**Storage precautions:**

Do not store in tanks above the flash point without proper precautions. Styrene can self-react/polymerize/liberate heat or rupture container unless properly inhibited. Check periodically to confirm inhibitor content. If below desired level, add extra inhibitor/mix well to be effective. Avoid conditions which remove all oxygen from stored liquid. Minimize storage time. Keep in a cool place, without direct exposure to sunlight. Keep container tightly closed and otherwise in accordance with NFPA regulations. Maintain air space in storage containers.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls****Ventilation:**

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

**Other engineering controls:**

Keep container tightly closed. Observe label precautions. Have emergency eye wash and safety shower present.

**Personal protective equipment****Eye and face protection:**

Wear safety glasses. Wear coverall chemical splash goggles and face shield when eye and face contact is possible.

**Skin Protection:**

Wear impervious butyl rubber clothing to prevent any containment.

**Respiratory protection:**

A NIOSH/MSHA air purifying respirator with an organic vapor cartridge may be permissible, however use a positive pressure air supplied respirator if there is any potential for uncontrolled release, or unknown exposure levels.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Specific gravity:</b>	1.1 - 1.5	<b>Boiling point (°F):</b>	295
<b>Melting point (°F):</b>	n/d	<b>Vapor density (air = 1):</b>	> 1
<b>Vapor pressure (mmHg):</b>	4.5	at 68 °F	<b>Evaporation rate (butyl acetate = 1):</b> n/d
<b>VOC (grams/liter):</b>	n/d	<b>Solubility in water:</b>	Negligible
<b>Percent volatile by volume:</b>	< 30	<b>pH (5% solution or slurry in water):</b>	n/a
<b>Percent solids by weight:</b>	> 70		0

**10. STABILITY AND REACTIVITY**

Hazardous polymerization may occur.

**Conditions to avoid:**

Heat, direct sunlight

**Incompatible materials:**

Aluminum chloride; contaminants and catalysts for vinyl polymers; peroxides; strong acids; strong alkalies; strong oxidizing agents; sulfuric acid; pure oxygen; copper compounds

**Hazardous decomposition products:**

Thermal decomposition may produce oxides of carbon, other toxic gases, acrid smoke and fumes.

**Conditions of hazardous polymerization:**

Heat, depletion of inhibitor

**11. TOXICOLOGICAL INFORMATION****Acute oral effects:**

LD50 (rat): > 2000 mg/kg

No data available.

**Acute dermal effects**

LD50 (rabbit): > 4000 mg/kg

No data available.

**Acute inhalation effects:**

LC50 (rat): No data available. in 0 hours

No data available.

**Eye irritation:**

No data available.

**Subchronic effects**

Some studies in humans link repeated styrene exposure to subtle, subclinical effects on color vision.

**Chronic effects**

Lung effects have been observed in the mouse following repeated exposure to styrene.

**Carcinogenicity, teratogenicity, and mutagenicity:**

Styrene: An increased incidence of lung tumors was observed in mice from an inhalation study. The International Agency for Research on Cancer (IARC) states that styrene is 'possibly carcinogenic to humans' (Group 2B) based on 'inadequate evidence' in humans, 'limited evidence' in animals and other 'relevant data'. According to the IARC report, these 'other relevant data' include studies demonstrating that styrene is metabolized in humans to styrene oxide, an agent which is known to induce cancers in two animal species. Additionally, styrene has been shown to be mutagenic in several 'in vitro' assays. However, unlike some animal species, man apparently is able to readily detoxify the styrene oxide generated from styrene exposures. Moreover, studies in humans exposed for long periods of time to styrene have not demonstrated any carcinogenic effects. TERATOLOGY: In laboratory animals, styrene did not produce birth defects or any other effects on the fetus even at exposure concentrations having an adverse effect on the mother. REPRODUCTIVE EFFECTS: In animal studies, styrene has been shown not to interfere with reproduction.

**Toxicological information on hazardous chemical constituents of this product:**

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat, 4 hours)
Styrene monomer	2650 mg/kg	n/d	24,000 mg/m <sup>3</sup>
Crystalline silica	n/d	n/d	n/d
Polyester Resin	n/d	n/d	n/d

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

Styrene: Material is slightly toxic to aquatic organisms on an acute basis (LC50 between 10 and 100 mg/l in most sensitive species).

**Mobility and persistence:**

Styrene: Bioconcentration potential is low (BCF less than 100 or log Kow less than 3). Potential for mobility in soil is low (Koc between 500 and 2000).

**Environmental fate:**

Styrene: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). Degradation is expected in the atmospheric environment within minutes to hours.

**13. DISPOSAL CONSIDERATIONS****Waste management recommendations:**

Do not dispose of in a landfill. Incineration is the preferred method of disposal.

**14. TRANSPORT INFORMATION**

Proper shipping name: Resin solution

Technical name:

Hazard class: 3

UN number: 1866

Packing group: III

IMDG Page no.:

Emergency Response Guide no.: 127

Other: Marine Pollutant (Styrene)

**15. REGULATORY INFORMATION****U.S. Federal Regulations****TSCA:**

All ingredients of this product are listed, or are exempt from listing, on the TSCA Inventory.

The following RCRA code(s) applies to this material if it becomes waste: D001

**Regulatory status of hazardous chemical constituents of this product:**

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Styrene monomer	No	Yes	No	Not required
Crystalline silica	No	No	No	Not required
Polyester Resin	No	No	No	Not required

\*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substances list.

\*\*Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. Consult the appropriate regulations for specific requirements.

**Classification of this material for SARA Section 312 hazardous materials inventory reporting:**

Immediate health hazard Delayed health hazard Fire hazard Reactivity hazard

**Canadian regulations**

WHMIS hazard class(es): B2; D2A; D2B;

**16. OTHER INFORMATION**

<b>Hazardous Materials Information System (HMIS) ratings:</b>		
<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>
<b>2*</b>	<b>3</b>	<b>2</b>

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