

SOCKETFAST RESIN

This product appears in the following stock number(s):

6002R

Last revised: 10/18/00

Printed: 11/15/2001

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** SOCKETFAST RESIN**General use:** The following information pertains to the resin component of a two component vinyl ester kit. The cured material is not hazardous.**Chemical family:** Styrene Containing Coating**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 | 50 ppm | 50 ppm (Canada) |
| Crystalline silica | | 14808607 | 50-60 | 0.05 mg/m ³ | 10/(%Q+2) mg/m ³ | 0.1 mg/m ³ (Canada) |
| 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) 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, form, odor: Thick white liquid with pungent odor.

WARNING! Flammable. Reactive. Eye, skin and mucous membrane irritant. May cause Central Nervous System depression. 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.

Potential health effects

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:**Skin:** May cause irritation and sensitization, rash, redness, itching, 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.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer: Yes

Cancer-suspect constituent(s) : Styrene

Medical conditions which may be aggravated by exposure:

Existing respiratory disorders.

Other effects:

Styrene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations (sixteen times the tl_v and higher); however, the relevance of this to humans is unknown. Some studies in humans link repeated styrene exposure to minor subclinical decreases in the ability to discriminate between colors.

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**General fire and explosion characteristics:**

Flammable Liquid.

Extinguishing media:

Water

Carbon dioxide

Dry chemical

Foam

Alcohol foam

Flash Point (°F): 90

Method: TCC

Explosive limits in air (percent) -- 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:

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

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

10. STABILITY AND REACTIVITY

This material is chemically . 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 products of decomposition:

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

Conditions under which hazardous polymerization may occur:

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.
No data available.

Exposure: hours.

Eye irritation:

No data available.

Subchronic effects:

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

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.

Other chronic effects:

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

Toxicological information on hazardous chemical constituents of this product:

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

'n/d' = 'not determined'

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

Please see also Section 15, Regulatory Information.

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 : N/A
Hazard class : 3
UN number: 1866
Packing group: III
Emergency Response Guide no.: 127
IMDG page number: N/A
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 | 1000.0 | Not required |
| Crystalline silica | No | No | 0.0 | Not required |
| Polyester Resin | No | No | 0.0 | Not required |

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance 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. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -- Fire hazard -- Reactivity hazard -

Canadian regulations

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

16. OTHER INFORMATION

| | | | |
|--|---------------------|--------------------------|------------------------|
| Hazardous Materials Identification System (HMIS) ratings: | Health 2* | Flammability 3 | Reactivity 2 |
|--|---------------------|--------------------------|------------------------|

Revisions for this issue:

| MSDS section | Revisions |
|---------------------|-------------------------|
| 2 | Updated exposure limits |

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

SOCKETFAST CATALYST

This product appears in the following stock number(s):

6002H

Last revised: 01/14/1999

Printed: 11/17/2001

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** SOCKETFAST CATALYST**General use:** This information applies only to the catalyst. After proper mixing and curing, the product is not hazardous.**Chemical family:** Organic peroxide solution**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 |
|------------------------------|-------|---------|----------------|-----------|-----------------|------------------|
| Dimethylphthalate | | 131113 | 40-60 | 5 mg/m3 | 5 mg/m3 | n/e |
| Methyl ethyl ketone peroxide | MEKPO | 1338234 | 20-35 | | 0.7 ppm ceiling | n/e |
| Hydrogen peroxide | | 7722841 | 1-5 | 1 ppm | n/e | 1 ppm (Canada) |
| Methyl ethyl ketone | MEK | 78933 | 1-5 | 200 ppm | 200 ppm | 200 ppm (Canada) |

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) 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, form, odor: Clear liquid with ketone odor.

DANGER! Reactive. Severe eye irritant. Contact with eyes may cause blindness. Severe skin irritant. Respiratory tract irritant. Contact with foreign materials, especially strong mineral acids, metals (including certain equipment and containers), metal salts or exposure to heat above 135 degrees F may lead to violent decomposition, releasing flammable vapors which may self ignite.

Potential health effects

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:

Skin: May cause severe irritation.

Eyes: May cause severe irritation. May cause blindness.

Inhalation:

Mucous membrane irritant.

Ingestion:

May irritate gastrointestinal tract, and cause nausea and vomiting.

Effects of chronic overexposure:

Negative ames test

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer: No

Cancer-suspect constituent(s) : None

Medical conditions which may be aggravated by exposure:

None reported

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:

Wash thoroughly with soap and warm 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.

First aid for ingestion:

Do not induce vomiting. If patient is conscious, dilute by giving water. Get prompt medical attention.

5. FIRE FIGHTING MEASURES**Extinguishing media:**

Water

Carbon dioxide

Dry chemical

Foam

Alcohol foam

Flash Point (°F): 151

Method: TCC

Explosive limits in air (percent) -- Lower: n/d

Upper: n/d

Special firefighting procedures:

If large amounts of material are involved, evacuate area and fight fire from safe distance. Cool fire-exposed containers with water spray. Fire fighters should wear self-contained breathing apparatus.

Unusual fire and explosion hazards:

Methyl ethyl ketone peroxide can decompose violently if heated strongly while confined.

Hazardous products of combustion:

Oxides of Carbon; Decomposition products are flammable and may autoignite.

6. ACCIDENTAL RELEASE MEASURES**Spill control:**

Evacuate area; eliminate ignition sources; wear protective clothing and overshoes.

Containment:

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

Cleanup:

Absorb spill on inert material such as vermiculite and transfer with nonsparking tools to impervious container.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Notify appropriate authorities as required.

7. HANDLING AND STORAGE**Handling precautions:**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities.

Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles.

Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and against particulates during sanding/grinding (3 mg/m³). Use nonsparking equipment.

Storage:

Store in a cool, dry area away from high temperatures and flames. Storage above 100 F will reduce useful life of the material. Keep from heat, sparks, and open flame. Exposure to high heat can cause violent reaction. Do not store near combustibles. Contact with foreign materials, especially strong mineral acids, metals (including certain equipment and containers) or metal salts or exposure to heat above 135 degrees F may lead to violent decomposition, releasing flammable vapors which may self ignite.

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

Local exhaust is recommended for confined areas. General mechanical ventilation is adequate for normal use.

Other engineering controls :

Have eyewash and safety shower available.

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

Safety glasses with side shields, or splash goggles.

Skin protection:

Chemical resistant rubber gloves are recommended.

Respiratory protection:

None required at normal handling temperatures.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|------------------------------------|-------------|--|---------|
| Specific gravity: | 1.08 | Boiling point (°F): | n/d |
| Melting point (°F): | < 0 | Vapor density (air = 1): | n/e |
| Vapor pressure (mmHg): | n/e at 0 °F | Evaporation rate (butyl acetate = 1): | n/e |
| VOC (grams/liter): | 0.27 | Solubility in water: | Nil |
| Percent volatile by volume: | Approx. 3 | pH (5% solution or slurry in water): | Neutral |
| Percent solids by weight: | Approx. 96 | | |

10. STABILITY AND REACTIVITY

This material is chemically unstable. Hazardous polymerization will not occur.

Conditions to avoid :

Heat, spark, open flame, contamination, and friction

Incompatible materials:

Strong acids and bases, strong oxidizers, amines, acetone, transition metal salts, promoters and reducing agents.

Hazardous products of decomposition:

Flammable and toxic fumes including organic acids; carbon monoxide and carbon dioxide from complete combustion

Conditions under which hazardous polymerization may occur:

None

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): No data available

Acute dermal effects: LD50 (rabbit): No data available

Acute inhalation effects: LC50 (rat): No data available

Exposure: 4 hours.

Subchronic effects:

No data available.

Carcinogenicity, teratogenicity, and mutagenicity:

Ames Test: Negative.

Other chronic effects:

No data available.

Toxicological information on hazardous chemical constituents of this product:

| Constituent | Oral LD50 (rat) | Dermal LD50 (rabbit) | Inhalation LC50 4hr, (rat) |
|------------------------------|--------------------|-------------------------|-------------------------------|
| Dimethylphthalate | 6800 mg/kg | >20 ml/kg | n/d |
| Methyl ethyl ketone peroxide | 484 mg/kg | n/d | n/d |
| Hydrogen peroxide | n/d | n/d | n/d |
| Methyl ethyl ketone | 2737 mg/kg | 6480 mg/kg | 33234 mg/m ³ |

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION

Ecotoxicity:

No data available

Mobility and persistence:

No data available.

Environmental fate:

No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

Dispose of in accordance to applicable federal, state, and local regulation.

14. TRANSPORT INFORMATION

Proper shipping name: Organic peroxide type D, liquid
Technical name : Methyl Ethyl Ketone Peroxide, < 45%
Hazard class : 5.2
UN number: 3105
Packing group: II
Emergency Response Guide no.: 145
IMDG page number: N/A
Other: N/A

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:

U160; D035

Regulatory status of hazardous chemical constituents of this product:

| Constituent | Extremely Hazardous* | Toxic Chemical** | CERCLA RQ (lbs) | TSCA 12B Export Notification |
|------------------------------|----------------------|------------------|-----------------|------------------------------|
| Dimethylphthalate | No | Yes | 5000.0 | Required |
| Methyl ethyl ketone peroxide | No | No | 0.0 | Not required |
| Hydrogen peroxide | Yes | No | 0.0 | Not required |
| Methyl ethyl ketone | No | Yes | 5000.0 | Not required |

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance 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. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es) : D2B; C

All components of this product are on the Domestic Substances List.

16. OTHER INFORMATION

| | | | |
|--|---------------|---------------------|-------------------|
| Hazardous Materials Identification System (HMIS) ratings: | Health | Flammability | Reactivity |
| | 3* | 2 | 2 |

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.