

MSDS

SOAPSTONE

TERREON REPAIR KITS PART NUMBER S65-117AA

&

TERREON JOINT KITS PART NUMBER S65-169AA

CONSISTS OF:

CATALYST CASTOLITE	ISSUED 08/02/1993	PAGES 4
POLYLITE REICHHOLD	ISSUED 12/09/2004	PAGES 8
FILLER R J MARSHALL	ISSUED 03/09/2006	PAGES 4

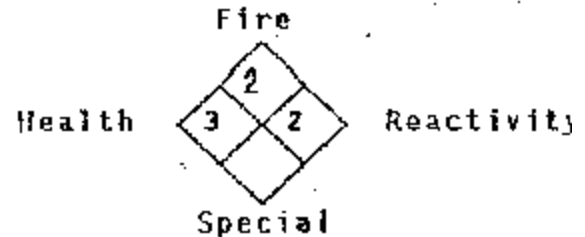
THE **CASTOLITE** COMPANY

4915 DEAN STREET • WOODSTOCK, ILLINOIS 60098

CAS NO:1338-23-4

NFPA HAZARD RATING

- 4 - Extreme
- 3 - High
- 2 - Moderate
- 1 - Slight
- 0 - Insignificant



DIVISION AND LOCATION---SECTION I

PRODUCT: CASTOLITE/CASTOGLAS HARDENER
PRODUCT CLASS: UNSATURATED POLYESTER
PHONE NUMBER: (815) 338-4670

CHEMICAL AND PHYSICAL PROPERTIES---SECTION II

Chemical Name:

methyl ethyl ketone peroxide

Formula: not applicable

Hazardous Decomposition Products:

carbon monoxide and carbon dioxide from burning.

Incompatibility (Keep away from):

strong acids, bases, promoters, accelerators, readily oxidizables, and metal salts.

Toxic and Hazardous Ingredients:

methyl ethyl ketone peroxide

3

38 +/-2

CAS #

1338-23-4

(9% active oxygen max.)

dimethylphthalate

47 +/-2

131-11-3

Form: liquid

Odor: slightly pungent

Appearance: clear

Color: water-white

Specific Gravity (water=1): 1.11

Boiling Point: no data available, decomposes over 58°C (155°F)

Melting Point: not applicable

Solubility in Water (by weight %): less than 1 at 25°C

Volatile (by weight %): less than 3

Evaporation Rate: not applicable

Vapor Pressure (mm Hg at 20°C): not applicable

Vapor Density (air=1): not applicable

pH (as is): no data available

Stability: Product is stable when stored at recommended temperatures

Viscosity SUS at 100°F: 101 SUS; 15-16 centistokes at 25°C (77°F)

Other physical properties:

self accelerating decomposition temperature (SADT): 4 gal: 71°C (150°F)

1 gal: 75°C (165°F)

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FIRE AND EXPLOSION DATA---SECTION III

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Special Fire Fighting Procedures:

Fight fire with large amounts of water from a safe distance. Keep containers cool with water spray. After a fire, wait until material has cooled to room temperature before starting clean-up. Wear protective equipment to prevent smoke inhalation.

Unusual Fire and Explosion Hazards:

Potential explosion hazards. Once ignited, product will burn vigorously.

Flashpoint: (Method Used) Setalash closed tester 82°C (180°F)

Flammable limits %: not applicable

Extinguishing agents:

Waterspray or Waterfog or CO₂ or Foam

Closed containers exposed to fire may be cooled with water.

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HEALTH HAZARD DATA---SECTION IV

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Permissible concentrations (air):

methyl ethyl ketone peroxide: 0.7 ppm, 5 mg/m³ ceiling (OSHA); 0.2 ppm, 1.5 mg/m³ ceiling (ACGIH)

dimethylphthalate: 5 mg/m³ (OSHA/ACGIH)

Chronic effects of overexposure:

Specific symptoms and effects of over exposure not known, but will cause severe eye irritation; may cause blindness. Harmful if inhaled. Harmful or fatal if swallowed. Moderate skin irritant.

Acute toxicological properties:

for methyl ethyl ketone peroxide: acute oral LD₅₀ = 1017 mg/kg (rat); eye (rabbit) severe irritant/corrosive

Emergency First Aid Procedures:

Eyes: Immediately flush with large quantities of water on site for 20 to 30 minutes. Hold eyes open while flushing. Call a physician. Continue water flush up to one hour during transport to a medical facility.

Skin Contact: Wash with soap and water. If irritation occurs, see a physician.

Inhalation: Remove to fresh air. Consult a physician if discomfort persists.

If Swallowed: Administer large quantities of water if person is conscious.

Never give anything by mouth to an unconscious person.

Immediately contact a physician.

ROUTES OF ENTRY:

Inhalation, skin/eye contact, ingestion

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SPECIAL PROTECTION INFORMATION---SECTION V

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Ventilation Type Required (Local, mechanical, special):

Local if necessary to maintain allowable PEL(permissible exposure limit) or TLV(threshold limit value)

Respiratory Protection (Specify type):

Use NIOSH/MSHA certified respirator with organic vapor cartridge if vapor

(Continued on next page)

CASTOLITE/CASTOGLAS HARDENER

concentration exceeds permissible exposure limit

Protective Gloves:

neoprene type

Eye Protection:

chemical safety goggles

Other Protective Equipment:

as required to protect against skin contact

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HANDLING OF SPILLS OR LEAKS---SECTION VI
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Procedures for Clean-Up:

Use appropriate protective clothing during clean-up.

Absorb spills with inert material such as perlite, vermiculite, or sand and then wet with water. Sweep up using non-sparking equipment and place in double polyethylene bags. Isolate leakers and contaminated containers to a safe place for disposal.

Waste Disposal:

Dispose of in accordance with all applicable federal, state and local regulations.

Dispose of waste at EPA-approved hazardous waste disposal facilities.

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SPECIAL PRECAUTIONS---SECTION VII
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Precautions to be taken in handling and storage:

Store in original containers away from promoters and combustible material. Keep away from acids, heat, sparks, flames and direct sunlight. Keep closed to avoid contamination. Isolated storage is desirable.

Maximum Storage Temperature: 38°C (100°F)

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TRANSPORTATION DATA---SECTION VIII
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D.O.T.: Regulated

U.S. D.O.T. Proper Shipping Name: Organic peroxide Type D, liquid (methyl ethyl ketone peroxides, <45%), 5.2, UN 3105, PG II, RQ, ERG 48, Hi-Point 90

U.S. D.O.T. Hazard Class: Organic Peroxide

I.D. Number: UN 3105

Label(s) Required: Organic Peroxide

Reportable Quantity: 10 LB/4.54 KG (for 2-butanone peroxide (or methyl ethyl ketone peroxide))

Freight Classification: Chemicals, NOI, N.F.M.C. Item 43940 Sub 2

Special Transportation Notes:

none

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ENVIRONMENTAL/SAFETY REGULATIONS---SECTION IX

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Section 313 (Title III Superfund Amendment and Reauthorization Act):

This product contains the following chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (the corresponding CAS number and percent by weight are also provided):

dimethyl phthalate CAS# 131-11-3 47%
methyl ethyl ketone CAS# 78-93-3 2%

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COMMENTS

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Never mix any promoter or accelerator with product as very rapid or explosive decomposition could occur. Do not store with food or drink.

STATE RIGHT TO KNOW SUBSTANCES:

CAS NUMBER	CHEMICAL NAME
131-11-3	Dimethyl phthalate
7722-84-1	Hydrogen peroxide
78-93-3	Methyl ethyl ketone
1338-23-4	Methyl ethyl ketone peroxide

Trade Secret Registry Numbers:

NJ 136411-5146P
PA RTK Withheld

Prepared by: Roger N. Lewis

Title: R & D Director/Organic Peroxides

Original Date:

Sent to:

Revision Date: 08/02/93

Supersedes: 10/30/91

Date Sent:

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

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REICHHOLD

8am to 5pm Phone: 1-800-275-6353
24-Hour Emergency Phone: 1-800-424-9300

Effective Date: 12/9/04

Material Safety Data Sheet

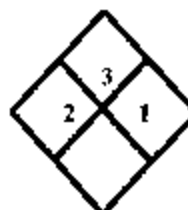
MSDS No: 5042

1. PRODUCT IDENTIFICATION

Trade Name: POLYLITE® 32166-20

Chemical Family: Unsaturated Polyester Resin

Intended Use: Marble Resin



NFPA RATING

Health:	2*
Flammability:	3
Reactivity:	1
Personal Protection:	

HMIS RATING

2. COMPOSITION / INFORMATION ON INGREDIENTS

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	100-42-5	Styrene Common Name: Concentration: 27.50 wt%	20 ppm	40 ppm	100 ppm	NE	NE	Yes	NR	NR
		Proprietary Concentration: 66.50 wt%	NE	NE	NE	NE	NE	NR	NR	NR
*	80-62-6	Methyl 2-Methyl-2-Propenoate Common Name: Concentration: 5.00 wt%	50 ppm	100 ppm	100 ppm	NE	NE	NR	NR	NR

NI - Not Established NR - Not Reviewed * - OSHA Hazardous ingredient

Reference Notes: Refer to Section 8, Subheading "Exposure Guidelines", for additional information concerning exposure limits.

3. HAZARDS IDENTIFICATION

Emergency Overview: Appearance: Blue-Grey Liquid, clear to slight haze. Pungent Odor
FLAMMABLE liquid and vapor.
Harmful if swallowed - can enter lungs and cause damage.
May undergo hazardous polymerization.
May cause skin and respiratory sensitization.

Route(s) of Entry: Inhalation, skin and eye contact.

Acute Exposure: INHALATION: Harmful if inhaled. Effects from exposure may include headaches, fatigue, nausea, sensation of drunkenness, central nervous system depression and pulmonary edema. Inhalation of vapor or aerosol may cause irritation to the respiratory tract (nose, throat, and lungs). May cause respiratory sensitization in susceptible individuals.

SKIN: Harmful if absorbed through skin. Contact causes skin irritation. Prolonged or repeated skin contact can result in defatting and drying of the skin. Contact may cause skin sensitization, an allergic reaction which becomes evident on re-exposure to this material.

EYES: Harmful to eyes. Direct contact with this material causes eye irritation. Symptoms may include stinging, tearing, redness and swelling.

INGESTION: Harmful if swallowed. Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful. Effects from exposure through ingestion may include gastrointestinal disturbances, pain and discomfort. Effects of exposure by ingestion may also include those indicated by the inhalation route. Styrene is harmful or fatal if liquid is aspirated into the lungs. Ingestion is not an anticipated route of exposure for this material in industrial use.

Chronic Exposure: Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans and may aggravate pre-existing disorders of these organs; central nervous system effects, effects on hearing and respiratory tract damage. Prolonged or repeated exposure may cause liver and kidney damage.

Carcinogenicity: This material contains styrene which is listed by the International Agency for Research (IARC) on Cancer as a group 2B cancer causing agent (possibly carcinogenic to humans).

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with large quantities of clean water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

Ingestion: DO NOT INDUCE VOMITING. **ASPIRATION HAZARD:** this material may enter the lungs during vomiting. Immediately give the victim one or two glasses of water or milk to drink. Never give anything by mouth to an unconscious person. GET IMMEDIATE MEDICAL ATTENTION.

Inhalation: Remove victim to fresh air. Keep warm and quiet. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. GET IMMEDIATE MEDICAL ATTENTION.

5. FIRE FIGHTING MEASURES

Flash Point:	89° F (32 °C)
Flash Point Method Used:	SetaFlash Closed Cup
Flammable Limits in Air (Lower):	1.1 % in air Styrene
Flammable Limits in Air (Upper):	7 % in air Styrene
Autoignition:	914° F (490 °C) Styrene

General Hazards: FLAMMABLE LIQUID: This material's flash point is less than 100°F (38°C).

Fire Fighting Extinguishing Media: Use carbon dioxide, foam, dry chemical or water fog to extinguish fire.

Fire Fighting Equipment: Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use.

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Fire Fighting Instructions: Evacuate all persons from the fire area to an explosion-protected location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazard while extinguishing the blaze. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. DO NOT extinguish a fire resulting from the flow of this flammable liquid until the flow of liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished. Use water spray to disperse vapors if a spill or leak has not ignited.

Fire and Explosion Hazards: FLAMMABLE LIQUID. Vapors can form an explosive mixture with air. Vapor can travel to a source of ignition (spark or flame) and flash back. This material may polymerize (react) when its container is exposed to heat (as during a fire). This polymerization increases pressure inside a closed container and may result in the violent rupture of the container.

Hazardous Combustion Products: Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors and gases.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: FOR SMALL SPILLS: Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Use non-sparking (non-metallic) tools to clean up spill. Remove all sources of ignition. NO SMOKING.

FOR LARGE SPILLS: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). NO SMOKING. Persons not wearing protective equipment (see Section 8) should be excluded from the area of the spill until clean-up has been completed. Stop spill at source. Prevent spilled material from contaminating soil or entering drains, sewers, streams or other bodies of water. Prevent spilled material from spreading. Immediately notify authorities of any reportable spill as may be required pursuant to regulations. See Section 15 for applicable CERCLA reportable quantities. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other waste materials to waste containers for disposal.

7. HANDLING AND STORAGE

Signal Word: WARNING

Handling Information: Avoid inhalation and contact with eyes, skin, and clothing. Wash hands thoroughly after handling and before eating or drinking. Remove and wash contaminated clothing before reuse. Use with adequate ventilation. Ground and bond containers when transferring the material to prevent static electricity sparks which could ignite the vapor. Use spark-proof tools and explosion-proof equipment. Consult your supplier of promoters and catalysts for additional instructions on proper mixing and usage.

Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed. See Section 13 for disposal considerations.

Storage Information: Keep away from ignition sources: flames, pilot lights, electrical sparks, and sparking tools. NO SMOKING. Do not store in direct sunlight. Store separate from oxidizing materials, peroxides, and metal salts. Keep container closed when not in use. To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 75°F (25°C). Copper or copper containing alloys should be avoided as containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: The Occupational Safety and Health Administration (OSHA), has established for styrene, a Permissible Exposure Limit (PEL) of 100 ppm for an 8 hour Time Weighted Average (TWA); 200 ppm for an acceptable ceiling concentration, and a 600 ppm concentration within a duration of 5 minutes in any 3 hours as an acceptable maximum peak above the acceptable ceiling concentration for an 8 hour shift. While the federal workplace exposure limit for styrene is 100 ppm, OSHA accepted the

Effective Date: 12/9/04

styrene industry's proposal to voluntarily meet a PEL of 50 ppm on an 8 hour TWA and a Short Term Exposure Limit (STEL) of 100 ppm, 15 minute exposure.

The American Conference of Governmental Industrial Hygienists (ACGIH) have established, for styrene, Threshold Limit Values (TLV) of 20 ppm or 85 mg/m³ TWA and 40 ppm or 170 mg/m³ Short Term Exposure Limit (STEL), 15 minute exposure, with a skin notation which indicates absorption through the skin which could add to the employees exposure.

The Occupational Safety and Health Administration (OSHA), has established for methyl methacrylate, a Permissible Exposure Limit (PEL) of 100 ppm, or 410 mg/m³ for an 8 hour Time Weighted Average (TWA).

The American Conference of Governmental Industrial Hygienists (ACGIH) have established, for Methyl Methacrylate, a Threshold Limit Value (TLV) of 50 ppm or 205 mg/m³ Time Weighted Average (TWA) for an 8-hour workday and a 40-hour work week and a Short Term Exposure Limit (STEL) 100 ppm or 410 mg/m³ for a 15 minute TWA.

Engineering Controls: Local ventilation may be required during certain operations to maintain concentrations below recommended exposure limits. Use explosion-proof ventilation equipment.

Eye Protection: Wear 1) safety glasses with side shields and a faceshield or 2) goggles and a faceshield. Facilities storing or utilizing this material should be equipped with an eyewash station and safety shower.

Skin Protection: Wear chemical resistant gloves such as polyvinyl alcohol or Viton®. If splashing is likely, wear impervious clothing and boots to prevent repeated or prolonged skin contact. Consult your supplier of personal protective equipment for additional instructions on proper usage.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Protection provided by air purifying respirators is limited. Use a positive pressure air-supplied respirator if 1) there is any potential for an uncontrolled release, 2) exposure levels are not known, or 3) during other circumstances where air purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to Slightly Hazy Liquid
Color:	Blue-grey
Odor:	Pungent
Odor Threshold:	0.2 ppm Styrene
Physical State:	Liquid
Solubility in Water:	Insoluble at 20°C (68 °F) Dispersion
Vapor Pressure:	6.12 (mm Hg) Styrene
Specific Gravity:	1.08 - 1.13 (Water = 1) at 25°C (77 °F)
Boiling Point:	295° F (146 °C) Styrene
Melting Point:	Not available
Freezing Point:	-22.7°F (-30.4 °C) Styrene
Evaporation Rate:	< 1 (BuAc=1)
Vapor Density:	3.6 (AIR=1) Styrene
% Volatile:	32.5 % by weight
VOC Content:	359 grams/liter (calculated)product as supplied
pH:	Not applicable
Coefficient of water/oil:	Not available

10. STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and storage conditions.

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Incompatibility: Avoid contact with strong acids, oxidizing agents (peroxides), metal salts and polymerization catalysts.

Hazardous Decomposition Products: Thermal decomposition may produce various hydrocarbons and irritating, acrid vapors.

Hazardous Polymerization: Product will undergo hazardous polymerization at temperatures above 150 F (65 C). Hazardous polymerization will occur if contaminated with peroxides, metal salts and polymerization catalysts.

11. TOXICOLOGICAL INFORMATION

Acute Eye Toxicity: Studies indicate that exposures to concentrations of styrene above 200 ppm cause irritation of the eyes. Styrene causes transient moderate eye irritation without corneal involvement.

Acute Skin Toxicity: Draize Skin Primary Irritation Score (range, 0-8) for a 4-hour exposure (rabbits) to styrene is 6.6. Styrene: dermal LD50 (rabbit), 5 g/kg. Styrene causes severe irritation at 72 hours. Methyl methacrylate: dermal LD50 (rabbit), > 5.0 g / kg.

Acute Inhalation Toxicity: Styrene: inhalation LC50 (rat), 24 g/m³ /4 hrs. Studies indicate that exposures to concentrations of styrene above 200 ppm cause irritation of the upper respiratory tract. Acute exposure to high concentrations of styrene may produce irritation of the mucous membranes of the upper respiratory tract, nose, and mouth, followed by symptoms of narcosis, muscular contraction, and death due to respiratory center paralysis. Methyl methacrylate: inhalation LC50 (rat), 7,094 ppm / 4 hr, 3750 ppm / 8 hr.

Acute Oral Toxicity: Styrene: oral LD50 (rat), 5 g / kg. Methyl methacrylate: oral LD50 (rat), > 5.0 g / kg.

Subchronic: Styrene: inhalation NOEL(rat) 200 ppm 6 hr / day 13 weeks, target organ effects: auditory response; inhalation LOEL (rat) 800 ppm 6 hr / day 3 - 13 weeks, target organ effects: auditory response.

Styrene has been shown to cause probable hearing loss in rats exposed for at least six hours per day for three to thirteen weeks to 800 ppm of styrene in the air, as indicated by a rise in the auditory brainstem response threshold and loss of hair cells of the inner ear. No effects were observed in rats exposed to styrene at 200 ppm for 13 weeks. Based on animal studies and human experience, no significant risk of hearing loss is expected in occupationally exposed persons.

Overexposure to styrene has been suggested as a cause of the following effects in laboratory animals and may aggravate pre-existing disorders of the following organs in humans; mild, reversible kidney effects, effects on hearing, respiratory tract damage, testis damage and liver damage.

Chronic/Carcinogenicity: The International Agency for Research on Cancer (IARC) has classified styrene in Group 2B, possibly carcinogenic to humans. IARC concluded that evidence of carcinogenicity from human health studies, was inadequate and based the classification on animal and other relevant data. The animal data included an increased incidence of cancer observed in a few studies in which rats and mice were given styrene by inhalation or by ingestion for their lifetimes. IARC considered the combined results of these cancer studies to provide "limited evidence" of carcinogenicity. Other scientists consider the results of these studies inadequate to assess human carcinogenicity because these studies had either negative or statistically inconclusive results or had serious problems such as poor study design or very high mortality. Other relevant data included results from in-vivo and in-vitro genotoxicity studies. IARC also relied on data on styrene oxide including the results of two studies demonstrating stomach tumors in rats that were fed styrene oxide for their lifetime. Several epidemiology studies involving workers in the styrene, polystyrene or reinforced plastics industries have been conducted. Together, these studies show no increased cancer risk from occupational exposure to styrene. Preliminary results of a recent inhalation study indicated that mice exposed to styrene showed an increased incidence of lung tumors, however no dose response relationship was observed. The relevance of these findings is uncertain since data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic.

The American Conference of Governmental Industrial Hygienists (ACGIH) has adopted the listing of Styrene as "A4-Not Classifiable as a Human Carcinogen." There is inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

The International Agency for Research on Cancer (IARC) has classified Methyl Methacrylate in Group 3, not classifiable as to its carcinogenicity to humans.

Effective Date: 12/9/04

The American Conference of Governmental Industrial Hygienists (ACGIH) has adopted the listing of Methyl Methacrylate as "A4-Not Classifiable as a Human Carcinogen." There is inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Sensitization: Methyl methacrylate showed a positive allergic response in humans.

Teratology: Styrene did not cause birth defects in orally-dosed rats, mice, rabbits and hamsters exposed by inhalation. Styrene given by inhalation for six hours a day during organ development has been shown to be toxic to fetal mice at 250 ppm and to fetal hamsters at 1000 ppm. Information from human experience and the results of animal studies suggest no significant risk of birth defects or reproductive toxicity of styrene to humans.

Studies indicate that methyl methacrylate did not cause birth defects, malformations, or fetal toxicity in pregnant rats inhaling concentrations up to 2028 ppm.

Mutagenicity: Styrene has given mixed positive and negative results in a number of mutagenicity tests. It was not mutagenic in the Ames test without metabolic activation but gave negative and positive mutagenic results with metabolic activation. It has also given negative mutagenic results in the Chinese Hamster Ovary Test, and the Forward Gene Mutation Test and positive results in the Sister Chromatid Exchange and the Chromosomal Aberration assay.

Additional Information: No toxicological data is available for this product. Based on properties and similar polymers, the polyester resin is not hazardous.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Styrene is toxic to aquatic organisms and should not be released to sewage, drainage systems and all bodies of water at concentrations exceeding approved limits under applicable regulations and permits. Styrene: LC50 (Sheepshead minnow), 9.1 mg / l / 96 hr.

Methyl methacrylate: LC50 (Rainbow trout), > 79 mg / l / 96 hr, LC50 (Daphnia magna), 69 mg / l, LC50 (Algae), 170 mg / l.

Environmental Fate: Styrene released to soil is subject to biodegradation. The results of one extensive biological screening study suggest that styrene will be rapidly destroyed by biodegradation in most aerobic environments, but the rate may be slow at low concentrations in aquifers and lake waters and in environments at low pH (6).

Methyl methacrylate, in a 28 day biodegradation study, was found to be ultimately biodegradable (88% within 28 days) under aerobic conditions.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: RCRA HAZARDOUS WASTE: This material and containers that are not empty, if discarded, would be regulated as a hazardous waste under RCRA. Treatment and/or disposal must be completed at a RCRA-permitted Treatment, Storage and Disposal Facility (TSD). The storage and transportation of RCRA hazardous wastes are also regulated by the USEPA.

EMPTY DRUMS: "Empty containers", as defined under 40 CFR 261.7 or other applicable state or provincial regulations or transportation regulations, are not classified as hazardous wastes.

RCRA Hazard Class: D001 (IGNITABLE): When discarded in its purchased form, this material would be regulated under 40 CFR 261.21 as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

14. TRANSPORT INFORMATION

DOT/IMDG: Bulk

Proper Shipping Name:

RESIN SOLUTION

Effective Date: 12/9/04

Hazard Class:	3
ID Number:	UN1866
Packing Group:	III
ERG Number:	127
DOT / IATA / IMDG: Non Bulk	
Proper Shipping Name:	RESIN SOLUTION
Hazard Class:	3
ID Number:	UN1866
Packing Group:	III
ERG Number:	127
TDG: Bulk and Non-Bulk	
Proper Shipping Name:	RESIN SOLUTION
Hazard Class:	3
ID Number:	UN1866
Packing Group:	III
ERG Number:	127

Additional Information: US regulations require the reporting of spills when the amount exceeds the Reportable Quantity (RQ) for specific components of this material. See CERCLA in Section 15, Regulatory Information, for the Reportable Quantities of specific components.

15. REGULATORY INFORMATION

Clean Air Act -Hazardous Air Pollutants (HAP): The following chemical(s) are listed as hazardous air pollutants (HAP) under the U.S. Clean Air Act Section 112(b)(1), (40 CFR 61): Styrene (CAS# 100-42-5) Methyl Methacrylate (CAS# 80-62-6) See Section 2 of this MSDS for amount.

Clean Water Act - Priority Pollutants (PP): Styrene (100-42-5) is listed under Section 311 as a Hazardous Substance. Methyl Methacrylate (80-62-6) is listed under Section 311 as a Hazardous Substance.

Occupational Safety and Health Act (OSHA): This material is classified as a hazardous chemical under the criteria of the US Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III: Section 304 - CERCLA: Styrene (CAS# 100-42-5): Reportable Quantity = 1,000 lb.
Methyl methacrylate (CAS# 80-62-6): Reportable Quantity = 1,000 lb.

SARA Title III: Section 311/312 - Hazard Communication Standard (HCS): This material is classified as an IMMEDIATE HEALTH HAZARD, DELAYED HEALTH HAZARD, FLAMMABILITY HAZARD, and REACTIVITY HAZARD under the US Superfund Amendment and Reauthorization Act (Section 311/312).

SARA Title III: Section 313 Toxic Chemical List (TCL): Styrene (100-42-5) Methyl Methacrylate (80-62-6)

TSCA Section 8(b) - Inventory Status: All components of this material are listed on the US Toxic Substances Control Act (TSCA) inventory.

TSCA Section 12(b) - Export Notification: 2,4-Pentanedione (CAS # 123-54-6), used at low levels as an initiator, is subject to the US Toxic Substances Control Act (TSCA) Section 12(b) Export Reporting requirements.

Canadian Inventory Status: All components of this material are listed on the Canadian Domestic Substances List (DSL).

Canadian WHMIS: This material is classified by the Canadian Workplace Hazardous Material Information System as: B2 (flammable liquid) D2A (materials causing other toxic effects, very toxic material) D2B (materials causing other toxic effects, toxic material) F (dangerously reactive material)

California Proposition 65: WARNING: This product contains a chemical(s) known to the State of California to cause cancer. Styrene Oxide

Additional Canadian Regulatory Information: The following chemicals are listed on the WHMIS Ingredient Disclosure List:
Methyl Methacrylate Monomer (CAS # 80-62-6)
Styrene Monomer (CAS# 100-42-5)

16. OTHER INFORMATION

MSDS No:	5042
Reason Issued:	Revised Sections 2, 11 and 15.
Prepared By:	Environment, Health and Safety Department
Approved Date:	12/09/04
Supersedes Date:	01/29/03

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Material Safety Data Sheet

Ultimate Suede Stone

MSDS No. 1008

Date of Preparation: 5/3/00

Revision: 10/5

Product/Chemical Name: Ultimate Suede Stone

General Use: Used in solid surface applications

Manufacturer: The R. J. Marshall Company

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Date Revised: 10/9/03

Preparer: Stephanie Nichols

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number
Alumina Trihydrate	21645-51-2
Polyamide Fiber	32131-17-2
Titanium Dioxide	13463-67-7

Exposure Limits:

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Alumina Trihydrate	none estab.	none estab.	none estab.	none estab.
Polyamide Fiber	none estab.	none estab.	none estab.	none estab.
Titanium Dioxide	15 mg/m ³	none estab.	10 mg/m ³	none estab.

Section 3 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

HMIS
H 1
F 0
R 0
PPE† E
†Sec. 8

Potential Health Effects

Primary Entry Routes: Inhalation, Eye, and Ingestion.

Acute Effects

Inhalation: Inhalation of high concentrations of this inert nuisance particulate can result in mild irritation of the respiratory tract.

Eye: May cause irritation through mechanical abrasion.

Skin: May cause irritation through mechanical abrasion.

Ingestion: Unlikely.

Carcinogenicity: Neither this product nor any of its components are considered carcinogenic by OSHA, IARC, NTP, ACGIH.

Medical Conditions Aggravated by Long-Term Exposure: n/a

Section 4 - First Aid Measures

Inhalation: If overcome by high dust concentrations, remove to a ventilated area. Seek medical attention for any symptoms that may develop.

Eye Contact: Flush eyes thoroughly for 15 minutes taking care to rinse under eyelids. Do not scrub. Abrasion may cause irritation. If discomfort continues, continue to wash with water. If irritation persists, consult a physician.

Skin Contact: Wash skin thoroughly with soap and water for at least 15 minutes. Consult a physician if irritation persists.

Ingestion: Consult a physician immediately.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: n/a

Special Precautions/Procedures: n/a

Section 5 - Fire-Fighting Measures**Flash Point:** n/a**Flash Point Method:** n/a**Burning Rate:** Not determined.**Auto-ignition Temperature:** Not determined.**Flammability Classification:** Non-flammable**Extinguishing Media:** Water spray, carbon dioxide, or other dry chemical.**Unusual Fire or Explosion Hazards:** None known.**Hazardous Combustion Products:** None.**Fire-Fighting Instructions:** Do not release runoff from fire control methods to sewers or waterways.**Fire-Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.**Section 6 - Accidental Release Measures****Spill /Leak Procedures:** Collect solids. Recycle if possible.**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).**Section 7 - Handling and Storage****Handling Precautions:** Avoid generating dust during handling.**Storage Requirements:** Keep material dry.**Section 8 - Exposure Controls / Personal Protection****Engineering Controls:****Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.**Administrative Controls:****Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.**Warning!** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.**Protective Clothing/Equipment:** Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.**Safety Stations:** Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.**Section 9 - Physical and Chemical Properties****Physical State:** powder**Appearance and Odor:** odorless, color varies**Odor Threshold:** n/e**Vapor Pressure:** n/a**Vapor Density (Air=1):** n/a**Formula Weight:** n/a**Density:** n/c**Specific Gravity (H₂O=1, at 4 °C):** 2.6**pH:** n/c**Water Solubility:** slight**Other Solubilities:** Soluble in concentrated acids and alkalis.**Boiling Point:** n/a**Freezing/Melting Point:** 2038C/250C**Viscosity:** n/a**Refractive Index:** n/a**Surface Tension:** n/a**% Volatile:** n/a**Evaporation Rate:** n/c

Section 10 - Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Strong acids and bases. Alumina Trihydrate reacts vigorously with strong acids and will dissolve in caustic solutions.

Conditions to Avoid: None known.

Hazardous Decomposition Products: Thermal oxidative decompositions may produce emissions of carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, chlorine gas, and hydrochloric acid.

Section 11 - Toxicological Information**Toxicity Data:**

Eye Effects: Nuisance dust. May cause irritation through mechanical abrasion. Flush with water for at least 15 minutes. Consult physician if irritation is persistent.

Skin Effects: Nuisance dust. May cause irritation through mechanical abrasion. Wash skin thoroughly with soap and water.

Acute Inhalation Effects: Overexposure to dust may cause irritation to the respiratory tract. Should this occur, remove affected individual to fresh air. If symptoms persist, consult a physician.

Acute Oral Effects: None known.

Chronic Effects: None known.

Carcinogenicity: Neither this product nor any of its components are considered carcinogenic by OSHA, IARC, NTP, or ACGIH.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Disposal: Recycle or landfill if possible. This substance is inert and does not require special disposal methods. Follow applicable Federal, state, and local regulations.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101): This product is not classified as dangerous under the transport regulations for road, rail, sea, or air transport.

Section 15 - Regulatory Information**EPA Regulations:**

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed

RCRA Hazardous Waste Classification: Not classified

CERCLA Hazardous Substance (40 CFR 302.4): Not listed

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

TSCA

This substance or all of its components are on the Chemical Substances Inventory of the Toxic Substance Control Act (TSCA Inventory [USA]). Please note that this product is not subject to any legal reporting requirements under these acts.

INTERNATIONAL REGULATIONS

Canadian Domestic Substances List: Components of this product are listed on the Canadian DSL.

European Community: Components of this product are listed on REOIN, the European Core Inventory (EC) market. EINECS, the European Inventory of Existing Chemical Substances: 244-492-7

Section 16 - Other Information

Prepared By: Stephanie Nichols

Revision Notes: 10/9/03

Product Grades Available from the R. J. Marshall Company (this list may be incomplete):

USS 200	USS 520	USS 660	USS 730
USS 280	USS 560	USS 710	USS 770
USS 370	USS 570	USS 720	USS 800

Note: This includes all EXP USS blends, USS SB blends, and USS CT blends.

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