

MSDS

CHARCOAL

TERRON REPAIR KITS PART NUMBER S65-117K

&

TERRON JOINT KITS PART NUMBER S65-169K

CONSISTS OF:

CATALYST	CASTOLITE	ISSUED 08/02/1993	PAGES 4
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PIGMENT	H K RESEARCH	ISSUED 07/25/2006	PAGES 5
FILLER	R J MARSHALL	ISSUED 03/09/2006	PAGES 4

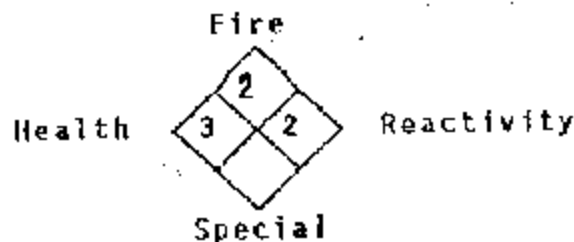
THE **CASTOLITE** COMPANY

4915 DEAN STREET • WOODSTOCK, ILLINOIS 60086

CAS NO:1338-23-4

NEPA 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
 (9% active oxygen max.)
 dimethylphthalate

<u>%</u>	<u>CAS #</u>
38 +/-2	1338-23-4
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 68°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 gus 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 (160°F)
 1 gal: 75°C (166°F)

(Continued on next page)

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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) Setaflash 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)

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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 RIX 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

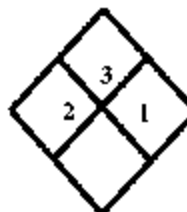
MSDS No: 5042

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:	

HMS 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	20 ppm	40 ppm	100 ppm	NE	NE	Yes	NR	NR
	Common Name: Concentration	Styrene Monomer 27.50 wt%								
	Proprietary Concentration	Polyester Resin 66.50 wt%	NE	NR	NE	NE	NE	NR	NR	NR
*	80-62-6	Methyl 2-Methyl-2-Propenoate	50 ppm	100 ppm	100 ppm	NE	NR	NR	NR	NR
	Common Name: Concentration	Methyl Methacrylate 5.00 wt%								

NE = 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.

Effective Date: 12/9/04

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

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.

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.

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 E1A (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
TDC: 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)

Effective Date: 12/9/04

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:	Revise 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
REVISION DATE : JULY 25, 2006

HK RESEARCH CORPORATION
PO Box 1809
908 Lenoir Road
Hickory, NC 28603
(828) 328-1721

EMERGENCY TELEPHONE

828-328-1721

***** PRODUCT IDENTIFICATION *****

TRADE NAME: POLYESTER PIGMENT DISPERSION

CAS NUMBER: MIXTURE PRODUCT CODE: HBK-3020
PRODUCT DESCRIPTION: BLACK D-COLOR PASTE
CHEMICAL FAMILY: NA DOT CLASS: PIGMENT, NO1 LIQUID OR PASTE
MOLECULAR FORMULA: NA DOT SHIP NAME: Item 149980 Sub 2
MOLECULAR WEIGHT: NA

***** PRODUCT HAZARD SUMMARY *****

HMIS <CODE>
HEALTH: . <1>
* CAUTION!
* MAY BE HARMFUL IF SWALLOWED OR INHALED
* MAY BE IRRITATING TO THE SKIN EYES AND RESPIRATORY TRACT
* MAY CAUSE ALLERGIC SKIN REACTION
* HEATED MATERIAL MAY CAUSE THERMAL BURNS

FLAMMABILITY: <1>
* WARNING! KEEP AWAY FROM OPEN FLAME!

REACTIVITY: <1>
* CAUTION! UNSTABLE AT HIGH TEMPERATURES

SPECIFIC HAZARD: <--->

***** IMPORTANT COMPONENTS *****

INGREDIENT	CAS #	%	OSHA PEL	ACGIH-
UNSATURATED POLYESTER RESIN	MIXTURE	91 - 99	NO DATA	NO DA
CARBON BLACK	001333-86-4	1 - 8	3.5mg/m3	3.5mg

REMAINING COMPONENTS NOT DETERMINED TO BE HAZARDOUS AND/OR HAZARDOUS COMPONENTS PRESENT AT LESS THAN 1.0% (0.1% FOR CARCINOGENS)

***** PHYSICAL DATA *****

BOILING POINT, °C (°F): Non Volatile
VAPOR PRESSURE, mm Hg: <5 @ 20°C (68°F)
VAPOR DENSITY (AIR=1): NA
SOLUBILITY IN WATER: NEGLIGIBLE
SPECIFIC GRAVITY (H2O=1): 1.09 +/- 5% @ 25°C
PERCENT VOLATILE: <1
EVAPORATION RATE (n-Bu AC=1): <1
APPEARANCE/ODOR: BLACK LIQUID WITH SLIGHT ODOR

***** FIRE AND EXPLOSION HAZARD DATA *****

FLASH POINT °C (°F): GREATER THAN 93°C (200 °F)
FLAMMABILITY CLASSIFICATION: PLASTIC LIQUID OR PASTE - NOT REGULATED
AUTOIGNITION TEMPERATURE, °C (°F): 490 (914)
FLAMMABILITY LIMITS IN AIR (% by volume): NA UPPER: NA
BASIC FIREFIGHTING PROCEDURES:

Use dry chemical, all purpose or polar AFFF foam or water spray to extinguish fire. Water or foam may cause frothing, with further application leading to boilover. Foam may have limited effectiveness on three dimensional fires. Use water spray to cool fire-exposed containers, structures and to protect personnel. Use water to flush spills away from source of ignition. Do not flush down public sewers.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Fire may produce poisonous or irritating gas, fumes or vapor. Containers may explode in heat of fire. Exposed firefighters should wear MSHA/NIOSH approved self-contained breathing apparatus, with full face mask and full protective equipment.

***** PRODUCT HEALTH HAZARD INFORMATION *****

ROUTE OF EXPOSURE

INGESTION:

Moderately Toxic. May cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea. Seek immediate medical attention if ingested.

SKIN:

Moderately Irritating. Repeated or prolonged skin contact may cause reddening, inflammation or blistering. May cause allergic reactions in some individuals. Contact with heated material may cause thermal burns.

EYE:

Moderately Irritating. Direct contact may cause temporary corneal lesions. Contact with heated material may cause thermal burns.

INHALATION:

NOT APPLICABLE/MEANINGFUL FOR COLOR PASTE DISPERSIONS.

******* EMERGENCY AND FIRST AID *******

INGESTION:

DO NOT INDUCE VOMITING BECAUSE OF DANGER OF ASPIRATING LIQUID INTO LUNGS AND/OR BURNING (IRRITATING) ESOPHAGUS AGAIN. If spontaneous vomiting occurs, monitor for breathing difficulty. Keep affected person warm and at rest. Get immediate medical attention.

SKIN CONTACT:

Wash area of contact thoroughly with soap and water. Remove contaminated clothing immediately. Place contaminated clothing in closed container for storage until laundered or discarded. If clothing is to be laundered, inform person performing operation of contaminant's hazardous properties. Get medical attention if irritation persists.

EYE CONTACT:

Flush immediately with large amounts of water. Eye lids should be held away from the eyeball to insure thorough rinsing. Get medical attention if irritation persists.

INHALATION:

Remove affected person from source of exposure. If breathing is difficult, give oxygen. Keep affected person warm and at rest. Get immediate medical attention.

******* REACTIVITY DATA *******

STABILITY/INCOMPATIBILITY:

Stable under normal conditions of use. Avoid contact with strong oxidizers. Mixtures with uninhibited monomers may result in auto-polymerization.

HAZARDOUS REACTIONS/DECOMPOSITION PRODUCTS:

Thermal decomposition products may be hazardous. Reacts vigorously with oxidizing agents.

******* SPILL OR LEAK PROCEDURES *******

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

No flares, smoking, flames, sparks & other sources of ignition in hazardous area. Stop leak if you can do it without risk. Use water spray to reduce vapors.

--SMALL SPILLS--Take up with sand or other noncombustible absorbent material or other sorbent known to be compatible, then flush area with water.

--LARGE SPILLS--Dike far ahead of spill for later disposal.

WASTE DISPOSAL METHOD:

Incinerate in an approved incinerator or dispose of in a chemical dump in accordance with local, state and federal regulations.

MATERIAL SAFETY DATA SHEET ADDENDUM

California Proposition 65 Statement

California Proposition 65 involving warnings of the presence of certain listed chemicals is now in effect.

HK Research Corporation believes the law requires us to inform you that detectable amounts of any of the listed chemicals might be present in HK Research products. Based on a review of the list, HK Research products, like all synthetic and naturally occurring chemical substances, may conceivably contain trace contaminants of some of the listed substances. While not necessarily added to HK Research Corporation products as ingredients, some of the listed chemicals may be present in the raw materials as received from suppliers over which we have no control.

In order to comply with the California Law, even though some of the listed substances may not represent a significant risk as defined by the regulations, we feel obligated to make the following statement:

"Warning: HK Research Corporation products may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive Toxicants."

***** PERSONAL PROTECTION INFORMATION *****

EYE PROTECTION:

Wear safety glasses or chemical goggles to prevent eye contact. Do not wear contact lenses when working with this substance. Have eye baths readily available where eye contact can occur.

SKIN PROTECTION:

Wear impervious gloves and protective clothing to prevent skin contact. Suggested protective materials are: Polyvinyl alcohol, Polyethylene and Viton. Provide safety showers at any location where skin contact can occur.

RESPIRATORY PROTECTION:

Use NIOSH or MSHA approved equipment when airborne exposure limits are exceeded. NIOSH/MSHA approved breathing equipment may be required for non-routine and emergency use. Ventilation may be used to control or reduce airborne concentrations.

***** SPECIAL PRECAUTIONS *****

HANDLING/STORAGE:

Store in tightly closed containers in cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles.

"Empty" containers may contain toxic, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken against these hazards.

Information contained herein is presented in good faith and is based on data believed to be accurate. However, no warranty is expressed or implied regarding this information or the results obtained from the use of this Material Safety Data Sheet whether it originated with HK Research Corporation or not. This Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use with any other material or process. This information is supplied with the condition that the user will make the appropriate determination as to its suitability for their purposes prior to use. HK Research Corporation assumes no legal responsibility for use or reliance upon this information.

Material Safety Data Sheet

Densified Granite Effect Series & Luxury Series Granite

MSDS No. 9623

Date of Preparation: 7/16/96

Revision: 3/9

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Densified Granite Effect, all colors

General Use: Used in solid surface applications

Manufacturer: The R. J. Marshall Company
26776 W. 12 Mile Road
Southfield, MI 48034-7807
(248) 353-4100

Emergency Phone: (800) 424-9300

Date Revised: 3/9/06

Prepared By: Stephanie Nichols

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number
Alumina Trihydrate	21645-51-2
Filled Polyester	-----

Trace Impurities:

Ingredient	OSHA	PEL	ACGIH	TLV
	TWA	STEL	TWA	STEL
Alumina Trihydrate	none estab.	none estab.	None estab.	none estab.
Filled Polyester	none estab.	none estab.	None estab.	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 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: IARC, OSHA, and NTP do not list this product or any of its components as a carcinogen.

Chronic Effects: 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.

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.

Autoignition 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: May include carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, and styrene.

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 facepiece 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 an MSIA/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.

Protective Clothing/Equipment: 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.

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/c

Vapor Pressure: n/a

Vapor Density (Air=1):n/a

Formula Weight: n/a

Density: n/c

Specific Gravity (H₂O=t, at 4 °C):2.2-2.3

pH: n/c

Water Solubility: Slight.

Other Solubilities: n/a

Boiling Point: n/a

Freezing/Melting Point:n/a

Viscosity: n/a

Refractive Index: n/a

Surface Tension: n/a

% Volatile: n/a

Evaporation Rate: n/c

Section 10 - Stability and Reactivity

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

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Strong alkaline may destroy surface appearance.

Conditions to Avoid: None known.

Hazardous Decomposition Products: Thermal oxidative decomposition of DGE may produce carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, and styrene.

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 listed as carcinogens by IARC, NTP, OSHA, or ACGIH.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. 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 regulation for road, rail, sea, or air transport.

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

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

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 ECHOIN, the European Core Inventory (EC) market.

Section 16 - Other Information

Prepared By: Stephanie Nichols

Revision Notes: Updated SPC, SPR Series codes

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

DGE 200	DGE 500	LXS 319	LXX905	EM016	MSS002	SPR200
DGE 205	DGE 620	LXS 320		EM017	MSS003	SPR250
DGE 207	DGE 622	LXS 322	EM001	EM018	MSS004	SPR310
DGE 209	DGE 625	LXS 345	EM002	EM019	MSS006	SPR330
DGE 210	DGE 650	LXS 355	EM003	EM020	MSS011	SPR350
DGE 300	DGE 725	LXS 365	EM004	EM021		SPR430
DGE 305	DGE 750	LXS 370	EM005	EM022	DGE330B	SPR570
DGE 307	DGE 800	LXS 450	EM006	EM023	DGE 390B	SPR670
DGE 310	DGE 805	LXS 630	EM007	EM024	DGE622B	
DGE 320		LXS 720	EM008	EM025	LXX202B	
DGE 321	LXS 203	LXS 850	EM009	EM026		
DGE 330	LXS 206		EM010	EM027	SPC213	
DGE 335	LXS 212	LXX 202	EM011	EM028	SPC214	
DGE 340	LXS 230	LXX 336	EM012	EM029	SPC260	
DGE 390	LXS 235	LXX 745	EM013	EM030	SPC324	
DGE 400	LXS 309	LXX903	EM014	EM031	SPC626	
DGE 420	LXS 315	LXX904	EM015	MSS001	SPC807	

Note: This includes all EXP DGE blends and all DGE SB, DGE F, LXSSB, and GRN special blends.

Disclaimer: Information contained herein is presented in good faith and is based on data believed to be accurate. However no warranty is expressed or implied regarding this information or the results obtained from the use of this Material Safety Data Sheet, whether it originates with the R. J. Marshall company or others. This Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use with other material or processes. This information is supplied with the condition that the user will make appropriate determination as to its suitability for their purpose prior to using it.