

SAFETY DATA SHEET

Company Name: Superior Stone Products, Inc.

Product Name: Superior Fusion – Medium Brown

Issue Date: 8/6/18

Revision Date: 8/12/19

SDS Number: 200-31517



Section I – Product and Company Identification

Product Identifier: Superior Fusion – Medium Brown – Part A

Product Description/Use: Vinyl Ester/Acrylic Adhesive and Filler

Product Restrictions: None Known

Product Code: 10410

Chemical Family: Vinyl Ester

Company:

Superior Stone Products, Inc.

8580 Byron Commerce Drive

Byron Center, MI 49546

Phone: (616) 583-0171

**24 Hour Emergency Telephone Number:
CHEMTREC 800-424-9300**

Section II – Hazards Identification

GHS Hazard Classification(s):

Flammable Liquid: Category 2

Skin Irritation: Category 2

Eye Irritation: Category 2A

Carcinogenicity: Category 2

Aspiration Hazard: Category 1

Specific Target Organ Systemic Toxicity - Single Exposure: Category 1, Central Nervous System

Specific Target Organ Systemic Toxicity - Single Exposure: Category 3, Respiratory Tract Irritation

Specific Target Organ Systemic Toxicity - Repeated Exposure: Category 1, Blood System, Liver, Nervous System, Respiratory tract/organ

Acute Toxicity: Category 4, Inhalation

Skin Sensitization: Category 1

Germ Cell Mutagenicity: Category 2

Reproductive Toxicity: Category 1B

Acute Aquatic Toxicity: Category 1



Symbols:

Hazard Statements:

H225: Highly flammable liquid and vapor.

H304: Maybe fatal if swallowed and enters airways.

H315: Causes skin irritation.

H317: May cause allergic skin reaction.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

H341: Suspected of causing genetic defects.

Precautionary Statements:

P201: Obtain special instruction before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

Signal Word(s): Danger

H351: Suspected of causing cancer.

H360: May damage fertility or unborn child.

H370: Causes damage to organs (Central Nervous System)

H372: Causes damage to organs (blood system, Liver, Nervous system, respiratory tract/organ) through prolonged or repeated exposure.

H401: Toxic to aquatic life.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P260: Do not breathe dust/fume/gas/mist/vapor/spray.

P264: Wash skin thoroughly after handling.

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P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

Precautionary Statements: - Response:

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P312: Call a POISON CENTER or physician if you feel unwell.

P301+P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements: - Storage:

P403+235: Store in a well-ventilated place. Keep cool.

Precautionary Statements: - Disposal:

P501: Dispose of contents and container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified: Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

Section III – Composition/Information on Ingredients

Substance/Mixture: Mixture

<u>Ingredient</u>	<u>Synonym(s)</u>	<u>% (By Weight)</u>	<u>CAS#</u>	<u>EINECS No.</u>
Unsaturated Resin	N/A	30-50%	N/A	N/A
Styrene	Phenylethene, Ethenyl benzene, Ethenylbenzene, Vinyl Benzene, Styrol, Styrolene, Cinnamene, Cinnamenol, Cinnamol	5-10%	100-42-5	202-851-5
Methyl Methacrylate	Methylacrylate Monomer, Methyl Ester of Methacrylic Acid, Methyl-2-methyl-2-propenoate	20-25%	80-62-6	201-297-1
Ethylbenzene	Phenylethane, EB, Ethylbenzol	<1%	100-41-4	202-849-4
Hydrophobic Amorphous Fumed Silica	Hydrophobized Dispersed Silica, Synthetic Silica, X-ray Amorphous Silicon Dioxide	1-5%	67762-90-7	N/A

Section IV – First Aid Measures

If Swallowed: DO NOT INDUCE VOMITING (aspiration hazard). Seek immediate medical aid.

Skin Contact: Remove contaminated clothing. Wash with soap and water. Consult a physician if any signs or symptoms described in this document occur. Wash contaminated clothing.

If Inhaled: Remove victim from exposure. If victim is unconscious, administer artificial respiration and/or oxygen as needed. Seek medical aid.

Eyes: Flush with copious amounts of water for 15 minutes. Seek immediate medical aid.

Note to Physicians: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

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Section V - Fire Fighting Measures

Suitable Extinguishing Media: Water Spray, foam, dry chemical, carbon dioxide or any Class B extinguishing agent.

Unsuitable Extinguishing Media: Do not use water jet.

Special Fire Fighting Procedures: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.

Unusual Fire and Explosion Hazards: At elevated temperatures, such as in a fire, polymerization may take place. If polymerization takes place in a closed container, there is the possibility of violent rupture of the container. Product vapors may form an explosive mixture in air.

Hazardous Products of Combustion: Decomposition products may include the following material: carbon oxides, nitrogen oxides.

Other Remarks: Liquid and vapor may cause flash fire or ignite explosively. Vapor is heavier than air and may settle in low places or spread long distances to a source of ignition and flashback. Explosive atmospheres may linger. Closed containers can rupture and release toxic vapors or decomposition products.

Section VI - Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Provide adequate ventilation.

For Emergency Responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. See also the information for non-emergency personnel.

Methods and Materials for Containment and Cleaning Up

Small Spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section VII - Handling and Storage

Precautions for Safe Handling

Protective Measures: Put on appropriate personal protection equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not breath vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined space unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks open flame or any other ignition source. Use explosion-roof electrical (ventilating, lighting and material handling) equipment. Use only on-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do no reuse container.

Advice on General Occupational Health: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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Conditions for Safe Storage, Including and Incompatibles: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Segregate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Refer to the product label and/or technical data sheet for further information.

Section VIII - Exposure Controls/Personal Protection

Likely Routes of Exposure: Inhalation, Dermal, Ingestion.

Control Parameters

Occupational exposure Limits:

	United States						Australia	
	OSHA-PEL		ACGIH-TLV		NIOSH-REL		SWA	
	TWA	Ceiling	TWA	STEL	TWA	STEL	TWA	STEL
Styrene	100 ppm	200/600 ppm*	20 ppm	40 ppm	50 ppm	100 ppm	50 ppm	100 ppm
Ethylbenzene	100 ppm	N/A	20 ppm	N/A	100 ppm	125 ppm	100 ppm	125 ppm
Methyl Methacrylate	100 ppm	N/A	50 ppm	100 ppm	100 ppm	N/A	50 ppm	N/A

**200ppm; 600 ppm (Peak) for a single time period up to 5 minutes in any 3 hours.*

Engineering Controls: Use only with adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard. Engineering controls also need to keep gas vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental Exposure Controls: Emissions from ventilation of work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. .

Individual Protection Measures

Hygiene Measures: Wash Hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gasses or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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Respiratory Protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section IX – Physical and Chemical Properties

Physical State: Paste

Color: Brown

Odor: Styrene/Sweet, Acrid

Odor Threshold (Styrene): 0.017~1.9 ppm (Detect)
0.15 ppm (Recognition)

pH: Not Available

Melting Point: -23.8°F/-30.6°C (Styrene)

Boiling Point: 293°F/145°C (Styrene)

Flash Point: Closed Cup: >75°F/24°C

Burning Time: Not Applicable

Burning Rate: Not Applicable

Evaporation Rate: <1 (Butyl acetate) = 1)

Flammability (solid, gas): Not Available

Lower and Upper Explosive (Flammable) Limits: Lower: 1.1% (Styrene)
Upper: 6.1% (Styrene)

Vapor Pressure: Not Available

Vapor Density: 3.6 (Air = 1) (Styrene)

Relative Density: 1.11 (Water = 1)

Solubility: Immiscible in water

Partition Coefficient: n-Octanol/water: Not Available

Auto-Ignition temperature: Not Available

Decomposition Temperature: Not Available

SADT: Not Available

Viscosity: Not Available.

Section X - Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability: Material is stable

Hazardous Polymerization: Yes

Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatibility (materials to avoid): Strong acids, bases, oxidizing, reducing agents. Free Radical initiators.

Hazardous Decomposition: Heating of this material to decomposition may cause the emission of irritating, acrid fumes containing organic acids, carbon dioxide and carbon monoxide. Under normal storage conditions and use, hazardous decomposition products should not be produced.

Section XI - Toxicological Information

Acute Toxicity:

<u>Product/Ingredient Name</u>	<u>Result</u>	<u>Species</u>	<u>Dose</u>	<u>Exposure</u>
Methyl Methacrylate	LC50 Inhalation	Rat	78,000 mg/m ³	4 hours
	LD50 Oral	Rat	7,872 mg/kg	-
	LD50 Dermal	Rat	>5,000 mg/kg	-
Styrene	LC50 Inhalation Gas	Rat	2770 ppm	4 hours
	LC50 Inhalation Vapor	Rat	11,800 mg/m ³	4 hours

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Ethylbenzene	LD50 Oral	Rat	2,650 mg/kg	-
	LD50 Oral	Rat	1,000 mg/kg	-
	LC50 Inhalation Vapor	Rat	17.2 mg/l	-
	LD50 Dermal	Rabbit	15,400 mg/kg	-

Irritation/Corrosion:

<u>Product/Ingredient Name</u>	<u>Result</u>	<u>Species</u>	<u>Score</u>	<u>Dose</u>	<u>Observation</u>
Styrene	Eyes - Mild Irritant	Human	-	50 ppm	-
	Eyes - Moderate Irritant	Rabbit	-	24 hours-100 mg	-
	Eyes - Severe Irritant	Rabbit	-	100 mg	-
	Skin - Mild Irritant	Rabbit	-	500 mg	-
	Skin - Moderate Irritant	Rabbit	-	100%	-

Sensitization: Not available

Mutagenicity: Not available

Carcinogenicity: Not available

Conclusion/Summary: Styrene manufacturers have determined that the GHS Hazard Classification criteria has not been met.

Classification:

<u>Product/Ingredient Name</u>	<u>OSHA</u>	<u>IARC</u>	<u>NTP</u>
Methyl Methacrylate	No Component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA	3	No Component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP
Ethylbenzene	-	2B	Not Listed
Styrene	-	2B*	Reasonably anticipated to be a human carcinogen.

* *The International Agency for Research on Cancer (IARC) has classified styrene as possibly carcinogenic to humans (class 2B). The IARC 2B classification is not based on significant new evidence that styrene might be a carcinogen, but on a revised IARC classification scheme and new data on styrene oxide. The Styrene Information and Research Center does not agree with the reclassification and has published the following statement: "Recently published studies tracing 50,000 workers exposed to high occupational levels of styrene over a period of 45 years showed no association between styrene and cancer, no increase in cancer among styrene workers (as opposed to the average among all workers), and no increase in mortality related to styrene."*

Reproductive Toxicity: Not available

Teratogenicity: Not available

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure): Not available

Aspiration Hazard: Not available

Likely Routes of Exposure: Inhalation, Dermal, Ingestion.

Potential Acute Health Effects:

- Eye Contact: Causes serious eye irritation.
- Inhalation: Harmful if inhaled.
- Skin Contact: Causes skin irritation.
- Ingestion: Irritating to mouth, throat and stomach.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics:

- Eye Contact: Adverse symptoms may include the following - Pain or Irritation. Watering. Redness.
- Inhalation: No specific data.
- Skin Contact: Adverse symptoms may include the following - Irritation. Redness.

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Ingestion: No specific data.

Delayed and Immediate Effects and also Chronic Effects from Short and Long Term Exposures:

Short Term Exposures:

Potential Immediate Effects: Not available.

Potential Delayed Effects: Not available.

Long Term Exposures:

Potential Immediate Effects: Not available.

Potential Delayed Effects: Not available.

Potential Chronic Health Effects: Not Available.

General: Not available.

Carcinogenicity: Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental Effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical Measures of Toxicity:

Acute Toxicity Estimates

<u>Route</u>	<u>ATE Value</u>
Oral	2,650.8 mg/kg
Inhalation (gases)	2,770.9 ppm
Inhalation (vapors)	11.8 mg/l

Section XII - Ecological Information

Toxicity:

<u>Product/Ingredient Name</u>	<u>Result</u>	<u>Species</u>	<u>Exposure</u>
Methyl Methacrylate	EC50 170 µg/l Fresh Water	Algae - Pseudokirchneriella subcapitata	96 hours
	EC50 720 µg/l Fresh Water	Daphnia - Daphnia magna	-
Styrene	LC50 125.5-275.0 µg/l Fresh Water	Fish - Pimephales promelas	96 hours
	Acute EC50 1400 µg/l Fresh Water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 720 µg/l Fresh Water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4700 µg/l Fresh Water	Daphnia - Daphnia magna	48 hours
	Acute LC50 13000 µg/l Fresh Water	Crustaceans - Hyalella azteca	48 hours
	Acute LC50 4020 µg/l Fresh Water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 63 µg/l Fresh Water	Algae - Pseudokirchneriella subcapitata	96 hours

Persistence and Degradability: Not Available

Bioaccumulative Potential:

<u>Product/Ingredient Name</u>	<u>LogPow</u>	<u>BCF</u>	<u>Potential</u>
Styrene	0.35	13.49	low

Mobility in Soil:

Soil/water Partition Coefficient (Koc): Not available

Other Adverse Effects: No known significant effects or critical hazards.

Section XIII - Disposal Considerations

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The information in this section contains generic advice and guidance. The list of identified uses in Section 1 should be consulted for any available use-specific information.

Disposal Methods: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. Disposal of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid disposal. Attempt to use product completely in accordance with intended use. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is no feasible.

Special Precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, water ways, drains and sewers.

Section XIV - Transportation Information

DOT (DEPARTMENT OF TRANSPORTATION)

Technical Name: Adhesives containing flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

Marine Pollutant: No

Please refer to DOT regulations for more info

Canada (TDG)

Technical Name: Adhesives containing flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

Please refer to TDG Regulations for more info

International Air Transport Association (IATA)

Technical Name: Adhesives containing flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

ERG Code: 3L

Marine Pollutant: No

Please refer to IATA regulations for more info.

International Maritime Organization (IMO)

Technical Name: Adhesives containing flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

EmS: F-E, S-D

Marine Pollutant: No

Please refer to IMO regulations for more info.

Special Precautions for User: Transport within users' premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the products know what to do in the event of an accident or spillage.

Section XV - Regulatory Information

United States Federal Regulations:

Sara Title III - Section 311/312

<u>Criteria</u>	<u>Yes/No</u>
Immediate (Acute) Health Effects:	Yes
Chronic (Delayed) Health Effects:	Yes
Fire Hazard:	Yes
Sudden Release of Pressure Hazard:	No
Reactivity:	No

Sara Title III - Section 313

<u>Criteria</u>	<u>Product/Ingredient Name</u>	<u>CAS Number</u>	<u>%</u>
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Form R - Reporting Requirements	Styrene	100-42-5	30-35
	Ethylbenzene	100-41-4	<1%
	Methyl Methacrylate	80-62-6	25-30%
Supplier Notification	Styrene	100-42-5	30-35
	Methyl Methacrylate	80-62-6	25-30%

State Regulations:


Massachusetts: The following components are listed: Styrene Monomer, Methyl Methacrylate

New York: The following components are listed: Styrene, Methyl Methacrylate

New Jersey: The following components are listed: Styrene Monomer, Methyl Methacrylate

California: SCAQMD Rule 1162 establishes specific process, control, housekeeping, and recordkeeping requirements for fabrication operations using polyester resin materials. It is the responsibility of the fabricator to ensure compliance with these requirements.

Proposition 65 Statement:

 **WARNING** – This product can expose you to chemicals including Styrene & Ethylbenzene, which are known to the state of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Section XVI - Other Information

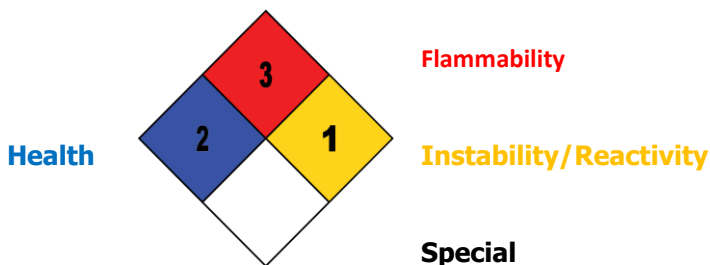
Hazardous Material Information System (United States):

Health	2
Flammability	3
Physical Hazards	1

Caution: HMIS® rating are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating are not required on SDSs under 29 CFR 19101200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (United States):



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Section I – Product and Company Identification

Product Identifier: Superior Fusion – Medium Brown - Part B

Product Description/Use: Organic Peroxide Activator

Product Restrictions: None Known

Product Code: 31000

Chemical Family: Organic Peroxide

Company:

Superior Stone Products, Inc.
8580 Byron Commerce Drive
Byron Center, MI 49546
Phone: (616) 583-0171

**24 Hour Emergency Telephone Number:
CHEMTREC 800-424-9300**

Section II – Hazards Identification

GHS Hazard Classification(s):

Organic Peroxides: Type E

Flammable Liquid: Category 3

Skin Sensitization: Category 1

Mutagenic: Category 2

Skin Corrosion/Irritation: Category 2

Serious Eye Damage/Irritation: Category 2A

Reproductive Toxicity: Category 2

Chronic hazards to the aquatic environment: Category 2



Symbols:

Signal Word(s): Warning

Hazard Statements:

H226: Flammable Liquid and Vapor.

H242: Heating may cause a fire

H315: Causes skin irritation.

H317: May cause an allergic skin reaction

H319: Causes serious eye irritation.

Precautionary Statements: Prevention

P201: Obtain special instructions before use.

P202: Do not handle until all safety pre-cautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking.

P220: Keep/Store away from clothing/combustible materials.

P233: Keep container tightly closed.

P234: Keep only in original container.

Precautionary Statements: Response:

P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P331: Do NOT induce vomiting.

H336: May cause drowsiness or dizziness.

H341: Suspected of causing genetic defects.

H361d: Suspected of damaging the unborn child.

H411: Toxic to aquatic life with long lasting effects.

P241: Use explosive-proof electrical equipment.

P242: Use only non-sparking tools.

P261: Avoid breathing fume/gas/vapor.

P264: Wash skin thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P332+313: If skin irritation occurs: Get medical advice/attention.

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P362+364: Take off contaminated clothing and wash before reuse.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
P337+313: If eye irritation persists: Get medical advice/attention.
P333+313: If skin irritation or rash occurs: Get medical advice/attention.
P308+313: If Exposed or concerned: Get medical advice/attention.

P391: Collect spillage.
P405: Store locked up.
P410: Protect from sunlight.
P411+235: Store at temperatures not exceeding 38°C/100°F. Keep cool
P501: Dispose of contents/container in accordance with all International, Federal, State and local regulations.

Hazards not otherwise classified: None known.

Section III – Composition/Information on Ingredients

Substance/Mixture: Mixture

<u>Ingredient</u>	<u>% (By Weight)</u>	<u>CAS#</u>	<u>EINECS No.</u>
Bisphenol A/Epichlorohydrin Based Epoxy Resin	<30%	25068-38-6	500-033-5
2,2,4-trimethyl-1,3,-pentanediol diisobutyrate	<30%	6846-50-0	229-934-9
Isopropyl Alcohol	15-20%	67-63-0	200-661-7
Hydrophobic Amorphous Fumed Silica	<10%	67762-90-7	N/A
Dibenzoyl Peroxide	5-10%	94-36-0	202-327-6
Benzoic acid, C9-1-branched alkyl esters	1-5%	131298-44-7	N/A
2,3-epoxypropyl o-totyl ether	0-3%	2210-79-9	218-645-3

Section IV – First Aid Measures

If Swallowed: Rinse mouth. DO NOT INDUCE VOMITING. Call a POISON CENTER or doctor if you feel unwell.

Skin Contact: Remove immediately all contaminated clothing. Rinse skin with water.

If Inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER OR doctor/physician.

Eyes: Flush with copious amounts of water for at least 10 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Seek immediate medical aid.

Section V - Fire Fighting Measures

Suitable Extinguishing Media: Water Spray, foam, dry chemical, carbon dioxide or any extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media: None known.

Special Fire Fighting Procedures: Burning produces heavy smoke. Fire may produce irritation and/or toxic gasses. In the event of fire and/or explosion, do not breathe fumes. May cause sensitization by skin contact. Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Products of Combustion: Toxic fumes may be formed.

Section VI - Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Do not touch or walk through spilled material. Provide adequate ventilation.

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For Emergency Responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment to avoid contact with skin, eyes or clothing. See also the information for non-emergency personnel.

Methods and Materials for Containment and Cleaning Up: Stop leak if without risk. Move containers from spill area. Clean with detergents. Avoid solvent cleaners. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Take up mechanically, placing in appropriate containers for disposal. Dispose of via a licensed waste disposal contractor. Do not allow into any sewer, on the ground or any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

Section VII - Handling and Storage

Precautions for Safe Handling

Protective Measures: Put on appropriate personal protection equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not breath vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined space unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks open flame or any other ignition source. Empty containers retain product residue and can be hazardous. Do no reuse container.

Advice on General Occupational Health: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage, Including and Incompatibles: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Segregate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do no store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Refer to the product label and/or technical data sheet for further information.

Do not store in temperatures greater than 100°F.

Shelf Life: One (1) year when stored at room temperatures.

Section VIII - Exposure Controls/Personal Protection

Likely Routes of Exposure: Dermal, Ingestion.

Control Parameters

Occupational exposure Limits:

	United States					Australia	
	OSHA-PEL	ACGIH-TLV		NIOSH-REL		SWA	
	TWA	TWA	STEL	TWA	STEL	TWA	STEL
Dibenzoyl Peroxide	5 mg/m ³	5 mg/m ³	N/A	5 mg/m ³	N/A	5 mg/m ³	N/A
Isopropyl Alcohol	400 ppm	200 ppm	400 ppm	400 ppm	500 ppm	400 ppm	500 ppm

Engineering Controls: Use only with adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard. Engineering controls also need to keep gas vapor or dust concentrations below any lower explosive limits.

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Environmental Exposure Controls: Emissions from ventilation of work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. .

Individual Protection Measures

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gasses or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section IX – Physical and Chemical Properties

Physical State: Viscous Liquid

Color: Translucent/White

Odor: Alcohol Like

Odor Threshold: Not Available

pH: Not Available

Melting Point: Not Available

Boiling Point: >95.0°F/>35.0°C

Flash Point: >73.0°F/23.0°C

Burning Time: Not Available

Burning Rate: Not Available

Evaporation Rate: Not Available

Flammability (solid, gas): Not Available

Lower and Upper Explosive (Flammable) Limits: Not Available

Vapor Pressure: Not Available

Vapor Density: Not Available (Air = 1)

Relative Density: >1.0 (Water = 1)

Solubility: Partially Soluble in Water

Partition Coefficient: n-Octanol/water: Not Available

Auto-Ignition temperature: Not Available

Decomposition Temperature: Not Available

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SADT: Not Available

Viscosity: Not Available

Molecular Weight: Not Available

Section X - Stability and Reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability: Material is stable at normal temperature and pressure.

Conditions to avoid: Avoid excessive heating. Avoid contact with strong oxidizing agent, heat, spark and flames.

Incompatibility (materials to avoid): Strong acids, amines, bases, and oxidizing agents.

Hazardous Decomposition: May produce hazardous carbon oxides, chloro hydrogen.

Section XI - Toxicological Information

Acute Toxicity:

<u>Product/Ingredient Name</u>	<u>Result</u>	<u>Species</u>	<u>Dose</u>	<u>Exposure</u>
Bisphenol	LD50 Oral	Rat	11,400 mg/kg	-
A/Epichlorhydrin Based Epoxy Resin	LD50 Dermal	Rat	2,000 mg/kg	-
Dibenzoyl peroxide	LD50 Oral	Rat	7,710 mg/kg	-

Irritation/Corrosion:

<u>Product/Ingredient Name</u>	<u>Result</u>	<u>Species</u>	<u>Score</u>	<u>Dose</u>	<u>Observation</u>
Bisphenol	Skin - Erythema/Eschar 404	Rabbit	1.5-2	-	-
A/Epichlorhydrin Based Epoxy Resin	Acute Dermal Irritation/Corrosion				
	Skin - Edema 404 Acute Dermal Irritation/Corrosion	Rabbit	1.0-1.5	-	-
	Eyes - 405 Acute Eye Irritation/Corrosion	Rabbit	0	-	-
	Eyes - Redness of the Conjunctiva	Rabbit	0.7	-	-
	Skin - Mild Irritant	Rabbit	-	24 hours	-
	Skin - Severe Irritant	Rabbit	-	24 hours	-
	Eyes - Mild Irritant	Rabbit	-	-	-

Sensitization: May cause skin sensitization or an allergic reaction when in contact with skin.

Mutagenicity: Not classified.

Carcinogenicity: Not available

Reproductive Toxicity: No indications of any adverse effects on reproduction.

Teratogenicity: Not available.

Specific Target Organ Toxicity (Single Exposure): No data.

Specific Target Organ Toxicity (Repeated Exposure): Bisphenol A/Epichlorhydrin Based Epoxy Resin - Slight body weight effects (250 mg/kg/day and higher). Enlarged cecum (necropsy, male rats, 250 mg/kg/day) Single histopathologic changes (the adrenal gland, cecum and kidney, rats (250 mg/kg/day) A 3% decrease in body weight (female rats, 50 mg/kg/day)

Aspiration Hazard: Not available

Likely Routes of Exposure: Inhalation, Dermal, Ingestion.

Potential Acute Health Effects:

Eye Contact: Causes serious eye irritation.

Inhalation: May cause respiratory irritation.

Skin Contact: Causes skin irritation. May cause an allergic skin reaction.

Ingestion: Not applicable

Potential Chronic Health Effects: Not Available.

Numerical Measures of Toxicity:

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Acute Toxicity Estimates: Not available.

Section XII - Ecological Information

Toxicity:

<u>Product/Ingredient Name</u>	<u>Result</u>	<u>Species</u>	<u>Exposure</u>
Bisphenol	Acute LC50 1.3 mg/l - 203 Fish,	Fish - Fish	96 hours
A/Epichlorhydrin Based Epoxy Resin	Acute Toxicity Test		
	Acute EC50 2.1 mg/l - 202 Daphnia sp. Acute Immobilization Test and Reproduction Test.	Aquatic invertebrates. Water Flea.	48 hours
	Acute NOEC 0.3 mg/l - 211 Daphnia Magna Reproduction Test	Aquatic invertebrates. Water Flea	21 days
	Acute LC50 11 mg/l	Aquatic plants - Algae	72 hours

Persistence and Degradability: Not Available

Bioaccumulative Potential:

<u>Product/Ingredient Name</u>	<u>LogPow</u>	<u>BCF</u>	<u>Potential</u>
Bisphenol	2.64-3.78	3-31 31.00	low
A/Epichlorhydrin Based Epoxy Resin			

Mobility in Soil:

Soil/water Partition Coefficient (Koc): Not available

Other Adverse Effects: No known significant effects or critical hazards.

Section XIII - Disposal Considerations

The information in this section contains generic advice and guidance. The list of identified uses in Section 1 should be consulted for any available use-specific information.

Disposal Methods: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. Disposal of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid disposal. Attempt to use product completely in accordance with intended use. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is no feasible.

Special Precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, water ways, drains and sewers.

Section XIV - Transportation Information

DOT (DEPARTMENT OF TRANSPORTATION)

Technical Name: Adhesives containing
flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

Marine Pollutant: No

Canada (TDG)

Technical Name: Adhesives containing
flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

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Please refer to DOT regulations for more info

Please refer to TDG Regulations for more info

International Air Transport Association (IATA)

Technical Name: Adhesives containing flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

ERG Code: 3L

Marine Pollutant: No

Please refer to IATA regulations for more info.

International Maritime Organization (IMO)

Technical Name: Adhesives containing flammable liquid

Hazard Class: 3

NA/UN Number: 1133

Packing Group: III

EmS: F-E, S-D

Marine Pollutant: No

Please refer to IMO regulations for more info.

Special Precautions for User: Transport within users' premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the products know what to do in the event of an accident or spillage.

Section XV - Regulatory Information

United States Federal Regulations:

Sara Title III - Section 311/312

<u>Criteria</u>	<u>Yes/No</u>
Immediate (Acute) Health Effects:	Yes
Chronic (Delayed) Health Effects:	Yes
Fire Hazard:	Yes
Sudden Release of Pressure Hazard:	No
Reactivity:	Yes

State Regulations:

Rule 66 Status: Not photochemically reactive.

Section XVI - Other Information

Hazardous Material Information System (United States):

Health	2
Flammability	1
Physical Hazards	1

Caution: HMIS® rating are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating are not required on SDSs under 29 CFR 19101200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

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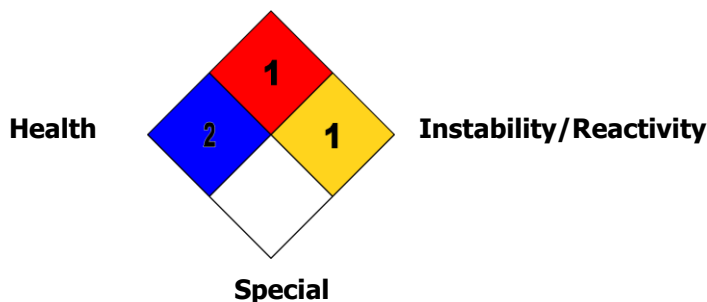
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National Fire Protection Association (United States):

Flammability



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