

MATERIAL SAFETY DATA SHEET

FIVE STAR PRODUCTS, INC.

750 Commerce Drive
Fairfield, CT 06825
203-336-7900



EMERGENCY TELEPHONE NO. 1-(800) 255-3924

Issue Date: 12/20/08 Supercedes: 1/11/05

**FOR CHEMICAL
EMERGENCY**
Call Chem-Tel
1-800-255-3924
Outside US Call
1-813-248-0585
24 hrs./7days per week

SECTION I - Product Identification: FIVE STAR ELASTOMERIC GROUT/COMPONENT A

SECTION II - Composition / Information On Ingredients

Components: Polyurethane Polymer (>99.9%, Non-Hazardous) **C.A.S. No.:** TS **OSHA PEL:** None Established **ACGIH TLV:** None Established **Other Limits:** None Established

Chemical Family: Polyurethane Polymer

SARA Sections 13 Listed Ingredients : None

DOT Shipping: Not Regulated

UN #: None

Listed on TSCA inventory.

Hazard Class: None

HMS: Health = 1 Fire = 1 Reactivity = 1

SECTION III: - Physical/Chemical Characteristics

Boiling Point : >482°F (>250°C) **Specific Gravity (H₂O = 1):** 1.05

Vapor Pressure : <1.00mm Hg **Melting Point (°F):** N/A

Vapor Density: (AIR = 1): N/A **Evaporation Rate:** N/A

(Butyl Acetate = 1)

Solubility in Water: Reacts slightly with water. **Appearance and Odor:** Viscous, colorless, odorless resin.

SECTION IV - Fire and Explosion Hazard Data

Flash Point: >320°F (>160°C) **Flammable Limits:** Class 3B, **LEL:** N/A, **UEL:** N/A.

Extinguishing Media: Alcohol-resistant foam, Carbon Dioxide (CO₂), Dry Chemical. Limestone powder.

Specific Hazards: Incomplete combustion may form carbon monoxide (CO). Burning produces obnoxious and toxic fumes.

Special Fire Fighting Procedures: Use personal protective equipment. Wear self-contained breathing apparatus for fire fighting if necessary. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION V - Reactivity Data

Stability: **Unstable:** () **Stable:** (X)

Conditions to Avoid: Heat and sources of ignition. **Incompatibility (Materials to Avoid):** Strong oxidizing agents.

Alcohols. Preparation reacts slowly with water resulting in the evolution of CO₂. Reaction with water or contaminants or excessive heat may results in sufficient pressure to burst sealed containers.

Hazardous Decomposition or Byproducts:

Carbon monoxide (CO), Carbon dioxide (CO₂).

Hazardous Polymerization: May occur: () Will not occur: (X)

"This information is furnished without warranty of any kind, expressed or implied. Five Star Products, Inc. bases the information and recommendations in this document on data believed to be current and accurate."

SECTION VI - Health Hazard Data

Potential Health Effects

Eye contact: Contact with eyes may cause irritation.

Skin Contact: Mild skin irritation

Chronic Health Hazard: This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater.

EMERGENCY AND FIRST AID PROCEDURES:

Remove patient from area. Eyes: Immediately flush eyes with water for at least 15 minutes. **Call a physician.** Skin: Promptly wash with mild soap and water. Ingestion: If conscious, give large quantities of water. Induce vomiting. Prevent aspiration of vomit. Turn victim's head to the side. **Call a physician.** Inhalation: Remove to fresh air. Give oxygen if breathing is difficult. **Call a physician.** Other: Promptly remove wet, contaminated clothing. Wash before reuse.

SECTION VII - Precautions for Safe Handling and Use

Steps To Be Taken in Case Material is Released or Spilled: Ventilate area. Absorb spill with suitable absorbent material and place into a closed container. For large spills, dike area and pump into closed container. Prevent this material from entering waterways. Wear protective equipment during cleanup. Waste Disposal Method: At this time, this material or its containers are not considered hazardous wastes as defined under the Federal RCRA Regulations (40 CFR 261) if discarded. Care should be taken to ensure that the material or its containers are disposed of in an approved facility in accordance with current Federal, state and local regulation. For further information, contact your state or local waste agency, the United States Environmental Protection Agency's RCRA hotline (1-800-424-9346) or (202-382-3000). Precautions To Be Taken in Handling and Storing: Wear protective clothing, eye protection and gloves. Keep containers tightly closed in a dry, cool and well-ventilated place. When using do not eat, drink or smoke. Other Precautions: Provide readily accessible eyewash stations and safety showers. Wash at the end of each workshift and before eating, smoking or using the toilet.

SECTION VIII - Control Measures

Respiratory Protection: Should be worn to avoid breathing spray mist and heated vapors. (MSA organic) Ventilation: Local Exhaust: Local exhaust and general ventilation recommended. Mechanical (General): As needed. Special: None. Other: None. Protective Gloves: Chemical-resistant plastic or rubber. Eye Protection: Chemical goggles or full face mask. Other Protective Clothing or Equipment: Wear protective equipment. Work/Hygienic Practices: Avoid skin contact. Practice good hygiene. Do not let contaminated clothing contact skin. If after material is cured, a sanding operation is undertaken, a respirator program consistent with the Standards of the American National Standards Institute (ANSI) Z88.2-1969, the Occupational Safety and Health Administration (OSHA) 29 CFR Part 1910.134 and the Mine Safety and Health Administration 30 CFR Part 56, must be instituted.

SECTION IX - U.S. Federal Regulations

TOXIC SUBSTANCES CONTROL ACT (TSCA)-All components of this product are registered under the regulations of The Toxic Substances Control Act EPA SARA Title III Section 313 (40CFR372) toxic chemicals above "deminimis" level are None. No OSHA hazards.

SECTION X - Transportation Information

Not regulated under CFR, IATA, IMDG, and CTC.

SECTION XI - State Regulations

CALIFORNIA PROPOSITION 65: Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986: This product does not contain known levels of any chemical known to the state of California to cause cancer or reproductive damage.

SECTION XII - International Regulations

EUROPEAN ECONOMIC COMMUNITY (EEC) EINICS MASTER INVENTORY Polymeric substance; monomers included on Inventory of EINECS, TSCA, DSL, AICS, ECL, SEPA and PICCS.

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SECTION I - Product Identification: FIVE STAR® ELASTOMERIC GROUT/COMPONENT B

SECTION II - Hazardous Ingredients/Identify Information

<u>Components:</u>	<u>C.A.S. No.:</u>	<u>OSHA PEL:</u>	<u>ACGIH TLV:</u>	<u>Other Limits:</u>
Mixture Benzoate Esters/Aromatic Amines	CAS# TS	None Established	None Established	

Chemical Family: Mixture of aromatic amines.

HMIS: Health Rating = 2 Flammability = 1 Reactivity = 0

SECTION III: - Physical/Chemical Characteristics

Boiling Point (°F): Decomposes @ >270°C (518°F) without boiling Specific Gravity (H₂O = 1): -0.98
Vapor Pressure (mm Hg.): 0.0000012 Melting Point (°F): Liquid
Vapor Density: 11.8 (AIR = 1): Evaporation Rate: <1 (Butyl Acetate = 1)
Solubility in Water: 8.96 mg/l based on Benzoate Ester Appearance and Odor: Clear oily liquid sulfur odor

SECTION IV - Fire and Explosion Hazard Data

Flash Point: 377.6°F. (192°C) closed cup. Flammable Limits: Combustible LEL: N/A, UEL: N/A. Extinguishing Media: Dry chemicals, CO₂, water spray or foam. Water or foam may cause frothing. Special Fire-Fighting Procedures: Use full protective clothing, self-contained breathing apparatus to avoid inhalation of smoke and vapors. Unusual Fire and Explosion Hazards: Decomposition and combustion products may contain oxides of carbon and nitrogen and sulfur.

SECTION V - Reactivity Data

Stability: Unstable: () Stable: (X)
Conditions to Avoid: Exposure to air, or high heat. Store in well-ventilated, cool, dry area.
Incompatibility (Materials to Avoid): Strong acids, oxidizing material, alkalis.
Hazardous Decomposition or Byproducts: Carbon, nitrogen and sulfur oxides.
Hazardous Polymerization: May occur: () Will not occur: (X)

SECTION VI - Health Hazard Data

Routes of Entry: Inhalation: Yes. Skin: Yes. Ingestion: Yes. Health Hazards (Acute and Chronic): Eye irritant. Skin irritant. Carcinogenicity: NTP? No. IARC Monographs? No. OSHA Regulated? No. TLV AND SOURCE: None established by ACGIH or OSHA. Acute Effects of Overexposure: Swallowing Rats given large doses of components in this material showed increase metabolic activity Skin Absorption: Prolonged or repeated exposure may result in the absorption of harmful amounts of material. Inhalation: Not expected to be a problem due to low vapor pressure. Skin Contact: Causes chemical burns and may result in sensitization. Eye Contact: Causes moderate corneal injury. Chronic Effects of Overexposure: Rats given large doses of aromatic amines showed increase liver metabolic activity effects similar to rats given hydrocarbons. Also, rats given aromatic amine in a two year feeding study caused effects in the pancreas, liver, thyroid and eyes.. Also, an increase in the number of tumors in the liver and thyroid of male rats and in the liver and possibly mammary glands of female rats was found. Toxicity data: Oral LD50 rat of Ester component: 5,313 mg/Kg, practically non-toxic; Oral LD50 rat for an amine component: 1515 mg/Kg. Other Health Hazards: Exposure may result in sensitization of the skin. Medical Conditions Aggravated by Exposure: Amine sensitivity.

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EMERGENCY AND FIRST AID PROCEDURES:

Swallowing: Induce vomiting immediately by giving two glasses of water and sticking fingers down throat. Never give anything by mouth to an unconscious person. **Call a physician.** Skin: Remove contaminated clothing and flush skin with plenty of water. **Call a physician.** Inhalation: Remove to fresh air. If breathing is difficult, give oxygen and **call a physician.** Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. **Get medical attention promptly.** Notes to Physician: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition.

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SECTION VII - Precautions for Safe Handling and Use

Steps To Be Taken in Case Material is Released or Spilled: Ventilate area. Absorb spill with suitable absorbent material and place into a closed container. Wear protective equipment during cleanup. Waste Disposal Method: Collect in absorbent material and burn in adequate incinerator or bury in approved landfill. Contact your state or local waste agency, or contact the United States Environmental Protection Agency's RCRA Hotline **(1-800-424-9346) or (202-382-3000).** Precautions To Be Taken in Handling and Storing: Do not get in eyes, on skin, or clothing. Avoid breathing vapors. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Other Precautions: For industrial use only.

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SECTION VIII - Control Measures

Respiratory Protection: MSA approved organic mask. Ventilation: Local Exhaust: Require good ventilation. Mechanical (General): Recommended Special: N/A. Other: N/A. Protective Gloves: Rubber or polyethylene. Eye Protection: Safety glasses with side shields or full face mask. Other Protective Clothing or Equipment: Clean, long-sleeve shirt and long leg pants. Work/Hygienic Practices: Practice good housekeeping to avoid skin contact and to avoid breathing vapors.

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SECTION IX - U.S. Federal Regulations

TOXIC SUBSTANCES CONTROL ACT (TSCA)-All components of this product are registered under the regulations of The Toxic Substances Control Act. OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es). Toxic by skin absorption and ingestion. EPA SARA Title III Section 312 (40CFR370) hazard class - Immediate Health Hazard. EPA SARA Title III Section 313 (40CFR372) toxic chemicals above "deminimis" level are None.

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SECTION X - Transportation Information

DOT: NOT REGULATED FOR TRANSPORTATION

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SECTION XI - State Regulations

CALIFORNIA PROPOSITION 65: Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986: This product does not contain known levels of any chemical known to the state of California to cause cancer or reproductive damage.

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SECTION XII - International Regulations

EUROPEAN ECONOMIC COMMUNITY (EEC) EINICS MASTER INVENTORY Polymeric substance; monomers included on Inventory. EEC SYMBOL – (1)IRRITANT. (2)DANGEROUS FOR THE ENVIRONMENT. EEC COUNCIL DIRECTIVES RELATING TO THE CLASSIFICATION, PACKAGING AND LABELING OF DANGEROUS SUBSTANCES AND PREPARATIONS RISK (R) AND SAFETY (S) PHRASES Harmful if contact with skin and if swallowed (R21/22). Causes burns (R34). Avoid contact with skin, eyes and clothing. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26). Wear suitable protective clothing, gloves and eye/face protection (S36/37/39).

IMO SHIPPING DATA: Not Regulated.

ICAO/IATA SHIPPING DATA: Not Regulated.

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SECTION I - Product Identification: FIVE STAR® ELASTOMERIC GROUT AGGREGATE/COMPONENT C

SECTION II - Hazardous Ingredients/Identity Information

Components:

Silicon Dioxide, Crystalline Silica, Silica Sand SiO₂, C.A.S. No. 14808-60-7

OSHA PEL (Permissible Exposure Limit): Exposure to airborne crystalline silica shall not exceed an 8-hour time-weighted limit as stated in MSHA Standards, Subpart D, Section 56.5001 on air quality specifically "Silica: Crystalline: Quartz (respirable) PEL - TWA = 0.1 mg/m³ and 29 CFR 1910.1000 Table Z-1-A, Air Contaminants, specifically: Crystalline Quartz (Respirable) 10 mg/m³ / %SiO₂+2

ACGIH TLV (Threshold Limit Value): Crystalline Quartz TLV-TWA = 0.05 mg/m³ (Respirable Dust). See Threshold Limit Value and Biological Exposure Indices for 1991-1992. American Conference of Governmental Industrial Hygienists.

Other Limits Recommended: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration = 0.05 mg/m³ (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour week.

*Respirable Dust **Total Dust

HMIS: Health = 1 Fire = 0 Reactivity = 0 Personal Protection = E

SECTION III: - Physical/Chemical Characteristics

Boiling Point (°F):	N/A	Specific Gravity (H ₂ O = 1):	2.7
Vapor Pressure (mm Hg.):	N/A	Melting Point (°F):	N/A
Vapor Density: (AIR = 1):	N/A	Evaporation Rate:	None

(Butyl Acetate = 1)

Solubility in Water: Negligible.

Appearance and Odor: Tan to black.

SECTION IV - Fire and Explosion Hazard Data

Flash Point: Noncombustible. Flammable Limits: LEL: N/A, UEL: N/A.

Extinguishing Media: N/A. Special Fire-Fighting Procedures: Not applicable. Unusual Fire and Explosion Hazards: None.

SECTION V - Reactivity Data

Stability: Unstable: () Stable: (X)

Conditions to Avoid: N/A. Incompatibility (Materials to Avoid): Strong acids. Hazardous Decomposition or Byproducts: None known. Hazardous

Polymerization: May occur: () Will not occur: (X)

SECTION VI - Health Hazard Data

Routes of Entry: Inhalation: Yes Skin: Yes Ingestion: Yes

Health Hazards (Acute and Chronic): Prolonged overexposure to Crystalline Free Silica Dust above the threshold limit may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury silicosis may result from breathing free silica. Carcinogenicity: NTP? Yes. "Known to be a human carcinogen." IARC Monographs? Yes. OSHA Regulated? No. IARC Group 1. "IARC states there is 'sufficient evidence' for the carcinogenicity of inhaled crystalline silica to humans." Signs and Symptoms of Exposure: May cause coughing, sneezing and nasal irritation. May cause skin irritation and dryness. Medical Conditions Aggravated by Exposure: Respiratory ailments. Emergency and First Aid Procedures: Remove to fresh air. Immediately flush eyes with plenty of water for at least 15 minutes. Wash exposed areas with water thoroughly after handling. See physician.

SECTION VII - Precautions for Safe Handling and Use

Steps To Be Taken in Case Material is Released or Spilled: Cleanup with dustless method (use vacuum or wet sweeping). Provide ventilation.

Waste Disposal Method: Follow state and local regulations for solid waste. If there is a question as to disposal, call the United States

Environmental Protection Agency's RCRA Hot Line (1-800-424-9346) or (202-382-3000). Precautions To Be Taken in Handling and Storing:

Use dustless system of storage and handling. Other Precautions: Use good housekeeping techniques.

SECTION VIII - Control Measures - Respiratory Protection:

When the Permissible Exposure Limit (PEL) or the Threshold Limit Value (TLV) is exceeded on a time weighted average, a respirator program consistent with the Standards of the American National Standards Institute (ANSI) Z88.2-1969, the Occupational Safety and Health Administration (OSHA) 29 CFR Part 1910.134 and the Mine Safety and Health Administration 30 CFR Part 56, must be instituted. Ventilation: Local Exhaust: Recommended as appropriate. Mechanical (General): Recommended as appropriate. Special: Engineering controls (e.g. mechanical exhaust) should be in place in order to ensure that the employee exposure to respirable silica dust does not exceed the permissible exposure limits. Other: None. Protective Gloves: Yes. Eye Protection: Enclosed eye goggles. Other Protective Clothing or Equipment: N/A. Work/Hygienic Practices: Use good housekeeping techniques.

"This information is furnished without warranty of any kind, expressed or implied. Five Star Products, Inc. bases the information and recommendations in this document on data believed to be current and accurate."