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# MATERIAL SAFETY DATA SHEET

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**SECTION I - Product Identification:** FIVE STAR® CONCRETE PATCH, FIVE STAR® VERTICAL PATCH, FIVE STAR® SHOTCRETE, FIVE STAR® HIGHWAY PATCH, FIVE STAR® HIGHWAY PATCH-L, FIVE STAR® HIGHWAY PATCH ES, FIVE STAR® RAPID PATCH, FIVE STAR® SHOTCRETE WP, FIVE STAR® PLUG, FIVE STAR® RUNWAY PATCH-MILITARY, FIVE STAR® SHOTCRETE WP/FS, FIVE STAR® RAPID PATCH ES, FIVE STAR® HIGHWAY PATCH-F, FIVE STAR® NONSHRINK CONCRETE, FIVE STAR® HIGHWAY PATCH FDOT, FIVE STAR® HIGHWAY PATCH WINTER GRADE, FIVE STAR® PTP CEMENT

## SECTION II - Hazardous Ingredients/Identity Information

Components:	C.A.S. No.:	OSHA PEL:	ACGIH TLV:	Other Limits:
Hydraulic Cement	65997-15-1	5 mg/m <sup>3</sup> * 15 mg/m <sup>3</sup> **	10 mg/m <sup>3</sup> **	50 MPPCF

Silicon Dioxide, Crystalline Silica, Silica Sand SiO<sub>2</sub> 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/m<sup>3</sup> and 29 CFR 1910.1000 Table Z-1-A, Air Contaminants, specifically: Crystalline Quartz (Respirable) 10 mg/m<sup>3</sup> / %SiO<sub>2</sub>+2

ACGIH TLV (Threshold Limit Value): Crystalline Quartz TLV-TWA = 0.05 mg/m<sup>3</sup> (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/m<sup>3</sup> (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 = 1 Personal Protection = E

## SECTION III: - Physical/Chemical Characteristics

<u>Boiling Point</u> (°F):	N/A	<u>Specific Gravity</u> (H <sub>2</sub> O = 1):	2.7
<u>Vapor Pressure</u> (mm Hg.):	N/A	<u>Melting Point</u> (°F):	N/A
<u>Vapor Density</u> : (AIR = 1):	N/A	<u>Evaporation Rate</u> :	None (Butyl Acetate = 1)
<u>Solubility in Water</u> :	Negligible.	<u>Appearance and Odor</u> :	Gray, finely ground solid--no odor.

## 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. Acute: Wet cement, especially as an ingredient in plastic (unhardened) concrete, mortar or slurries, can dry the skin and cause alkali burns. Cement dust can irritate the eyes and upper respiratory system. Chronic: Cement dust can cause inflammation of the lining tissue in the interior of the nose and inflammation of the cornea. 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, dryness, burns. 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. Product may harden on contact with water. **See physician.**

## SECTION VII - Precautions for Safe Handling and Use

Steps To Be Taken in Case Material is Released or Spilled: Avoid breathing dust. Avoid creating additional dust. Vacuum or sweep, using methods that do not disperse dust. Emergency procedures are not required. Waste Disposal Method: May be disposed of in an unrestricted sanitary landfill. Precautions To Be Taken in Handling and Storing: Keep dry until used to preserve product utility. Avoid contact with eyes and skin. Wash thoroughly after handling. Other Precautions: None.

## SECTION VIII - Control Measures

Respiratory Protection: Dust mask. OSHA, MSHA or NIOSH-approved respirator. Ventilation: Local Exhaust: May be used if necessary. Mechanical (General): May be used if necessary. Special: None. Other: None. Protective Gloves: Barrier creams or impervious gloves to protect skin. Eye Protection: OSHA, MSHA or NIOSH-approved tight-fitting goggles or masks. Other Protective Clothing or Equipment: Impervious clothing to protect skin from burns. Work/Hygienic Practices: Wash exposed skin thoroughly.

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