

**Hanson Aggregates West – West Region**  
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Emergencies – Contact **CHEMTREC® - 800-424-9300**

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**MATERIAL SAFETY DATA SHEET**

**I. MATERIAL IDENTIFICATION/ HAZARDOUS INGREDIENTS:**

Name: Asphaltic Concrete  
Synonyms: Hot Mix Asphalt, Asphalt  
Chemical Family: Mixture

COMPONENT	CAS #	%	PEL	TLV	CARCINOGEN
Asphalt (asphalt fumes)	8052-42-4	5	10mg/m <sup>3</sup> *	5mg/m <sup>3</sup> TWA	No
Hydrogen Sulfide**	77	<1	20ppm	14mg/m <sup>3</sup> TWA	No
Crystalline Silica***	14808-60-7	8-10	<u>10mgm<sup>3</sup></u> %SiO <sub>2</sub> +2	0.1 mg/m <sup>3</sup>	Class 1 IARC

\*NIOSH recommended STEL

\*\*Byproduct of combustion/heating of mixture

\*\*\*Byproduct of cutting/release of dusts

**II. HAZARD IDENTIFICATION - FIRST AID MEASURES**

**HAZARD OVERVIEW**

Unhardened product is a black, hot, semi-plastic, clumping material with a petroleum odor. Hardened product is black to dark gray, hard and stone-like. Avoid inhalation of fumes of hot, unhardened product. Exposure limits of asphalt fumes and hydrogen sulfide apply to hot, unhardened product. Avoid skin contact with unhardened product. Crystalline Silica exposures apply to release of dusts (as in cutting or grinding) of hardened product. Avoid dusts of hardened product.

**Potential Effects of Acute Exposure/First Aid Measures**

Eye: Contact with heated material can cause rashes and permanent damage.

Skin: Skin contact with heated material may cause thermal alkali burns and/or contact dermatitis. Remove material after it has cooled. Wash affected areas with soap and water and seek medical attention for burns.

Ingestion: Ingestion of this product may cause slight gastrointestinal disturbance. Do not induce vomiting. Give 1-2 glasses of water and consult a physician.

Inhalation: Vapors containing hydrogen sulfide may accumulate during storage or transport. Exposure to accumulated vapors can cause serious lung damage. Seek medical attention if respiratory difficulty persists or develops. Inhalation of dusts from components of this product may cause mechanical irritation of the respiratory passages. Move affected person to fresh air. Consult a physician if symptoms persist.

**Potential Effects of Chronic Exposure**

If hardened product dusts are inhaled over an extended period of time, (as described in Hazard Overview), permanent lung injury may result. Permanent injury may include silicosis and/or cancer, depending on the concentration of hazardous ingredients present. Consult a symptom if symptoms manifest and/or persist.

**Hazardous Physical Properties:** Hardened Product

Hazardous Materials Identification System (HMIS) Ratings: Health 0 Fire 1 Reactivity 0

**Hazardous Physical Properties:** Heated, Unhardened Product

Hazardous Materials Identification System (HMIS) Ratings: Health 1 Fire 1 Reactivity 0

### III. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Black, semi-solid mixture, petroleum odor  
Specific Gravity (H<sub>2</sub>O = 1): 1.9 - 2.5  
Solubility In Water: Negligible  
Vapor Density: Greater than 5 (air=1)

Boiling point, vapor pressure, evaporation rate, melting point, viscosity rate, freezing point and other chemical or physical properties under this section are NOT APPLICABLE or NEGLIGIBLE

### IV. REACTIVITY DATA

Stability: Stable X Unstable \_\_\_\_\_  
Conditions to avoid: High temperature heating  
Hazardous Polymerization: Will not occur  
Hazardous Decomposition Materials: Heating product may produce hydrogen sulfide  
Incompatibility: Strong oxidizing agents such as chlorates, nitrates, peroxides

### V. FIRE AND EXPLOSION HAZARD DATA

#### FIRE HAZARD OVERVIEW

Material may burn under intense heat. Hydrogen sulfide may be produced when sufficiently heated.

Flash Point (Method used): Greater than 400<sup>0</sup> F (COC)  
Extinguishing Media: No restrictions  
Special Fire Fighting Procedures: Use NIOSH approved SCBA in confined spaces or as otherwise needed  
Unusual Fire and Explosion Hazards: Avoid breathing gas vapor, fumes or decomposition products

### VI. TRANSPORTATION AND STORAGE

Hydrogen sulfide gas may accumulate in storage tanks and bulk transport containers containing asphalts. Freshly batched material will be hot. Material should be transported in containers able to withstand high temperatures.

Storage Conditions: Keep adequate ventilation in outside storage. Containers must be able to withstand high temperatures.  
Shipping Information: DOT: HOT IATA/IMO: Not Restricted

### VII: HEALTH HAZARD/TOXICOLOGICAL INFORMATION - See Also Section II.

Primary Routes of Exposure/Entry: Skin, Inhalation.

Signs and Symptoms of Exposure/Medical Conditions aggravated by Exposure: The heated, unhardened product may cause burns to eyes and skin when exposed. Inhalation of the fumes from unhardened product may cause irritation of the respiratory passages and lungs when exposed.

Inhalation of dust from mechanical production of dusts (cutting/grinding) of hardened product will produce irritation of the respiratory passages.

#### VII: HEALTH HAZARD/TOXICOLOGICAL INFORMATION - Continued

Hot mix asphalt is a mixture of liquid asphalt oil and aggregates (sand and gravel). The aggregates contain

varying degrees of crystalline silica, a naturally occurring substance found in rock formations. If the mixture is cut or ground, small amounts of crystalline silica may be released.

Exposure to quartz (the most stable and common form of crystalline silica) is responsible for the majority of clinically diagnosed silicosis. Silicosis is a fibronodular lung disease that occurs after overexposure to crystalline silica for 5 years or longer. Inhalation of quartz dusts may cause shortness of breath, limitation of chest expansion, dry cough and a lessened capacity for work.

The International Agency for Research on Cancer (IARC) has classified Crystalline Silica as a "Group 1" carcinogen as an inhaled component. (Group 1: The agent is carcinogenic to humans. The exposure circumstance entails exposures that are carcinogenic to humans.) It should be noted that the release of silica occurs only during the alteration (hammering, grinding, breaking) of hardened product. Due to the low concentration of silica within the mixture overexposure is not anticipated under normal handling or altering of hardened product.

### **VIII. SPILL, LEAK AND DISPOSAL INFORMATION**

General: Avoid generating dusts when handling dusts of hardened product.

Large/Small Spills: Use clean-up methods that do not disperse dusts of hardened product. Unhardened product should be cleaned in accordance with applicable federal, state and local regulations however regulations generally prohibit material migrating to storm drains or other water courses. Use sand, earth or other absorbents to spill area.

Waste Disposal Method: Recycle as much of the recoverable product as possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations.

### **IX. PRECAUTIONARY MEASURES**

During mixing, placing and finishing of hot, unhardened product, protective clothing, gloves and boots should be worn to avoid prolonged skin contact. If sufficient fumes are present or if fumes have accumulated use appropriate respiratory protection to avoid over exposure to fumes. Use adequate ventilation to prevent exceeding exposure limits. After work is completed, worker should wash with soap and water.

Respirators: NIOSH or MSHA approved respirators should be used when exposed to dusts produced by components of product and the alteration (hammering, grinding, breaking) of hardened product and when exposed to excessive or accumulated fumes of hot, unhardened product.

Protective Gloves: Should be worn when any potential exists for skin contact to unhardened product.

Eye Protection: Chemical goggles or safety glasses if material is unhardened are recommended.

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**REVISION INFORMATION:** Updated 9/02