

Material Safety Data Sheet (MSDS)



Product Identifier: **ULTRA-STICK HYBRID SHOTCRETE**

Product Use: Ground Support, Construction and Maintenance of Concrete

Manufacturer

Thiessen Team
1840 Sharps Access Rd.
PO Box 40
Elko, Nevada 89803
Telephone: (775) 777-1205

Supplier

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Section 2 – Hazardous Ingredients

Ingredient:	%	CAS Number	LD	LC
<i>Portland Cement, giving</i>		65997-15-1		
<i>Calcium Oxide</i>	0.1-0.3	1305-78-8	n/a	n/a
<i>Calcium Silicates</i>	12-17	-	n/a	n/a
<i>Silica Fume (amorphous)</i>	2-3	007-631-869	n/a	n/a
<i>Con/Sand and Coarse Aggregate</i>	80	<i>Dust may contain respirable crystalline silica</i>		

Section 3 – Physical Data

<i>Physical State:</i>	<i>Solid</i>		
<i>Odor/Appearance:</i>	<i>Grey powder, with rock and sand particles, no color</i>		
<i>Vapor Pressure:</i>	<i>n/a</i>	<i>Vapor Density:</i>	<i>n/a</i>
<i>Evaporation Rate:</i>	<i>n/a</i>	<i>Boiling Point:</i>	<i>n/a</i>
<i>Freezing Point:</i>	<i>n/a</i>	<i>pH:</i>	<i>10-12</i>
<i>Specific Gravity:</i>	<i>2.7-2.8</i>	<i>Coeff. Water/Oil Dist:</i>	<i>n/a</i>

Section 4 – Fire & Explosion

<i>Flammability:</i>	<i>Not flammable</i>	<i>Means of Extinction:</i>	<i>n/a</i>
<i>Flash Point:</i>	<i>n/a</i>	<i>Upper/Lower Flam Limit:</i>	<i>n/a</i>
<i>Autoignition:</i>	<i>n/a</i>	<i>Hazardous Comb. Prod:</i>	<i>none</i>
<i>Silica Fume (amorphous)</i>	2-3		

Explosion Data

Sensitivity to Impact: none

Sensitivity to Static Discharge: none

Section 5 – Reactivity Data

Chemical Stability: Stable

Incompatibility with other substances: Inorganic Acids

Reactivity, and under what conditions: Reacts with inorganic acids, giving carbon dioxide gas.

Section 6 – Toxicological Properties

Skin Contact: Yes

Skin Absorption: Yes

Eye Contact: Yes

Inhalation: Yes

Ingestion: Yes

EFFECTS OF ACUTE EXPOSURE TO PRODUCT

- Irritation of eyes and upper respiratory tract
- Caustic burns to skin and eyes can occur if contact prolonged

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT

- Cement dust can cause inflammation of eyes and nasal passages
- Prolonged contact under moist conditions can cause caustic burns
- Excessive inhalation of crystalline silica dust may result in respiratory disease, including silicosis, pneumoconiosis and pulmonary fibrosis

EXPOSURE LIMIT

10mg total dust m³ for a work shift up to 10 hours per day, 40 hours per week

IRRITANCY OF PRODUCT

Dust can irritate eyes and upper respiratory tract. Skin irritation can occur under moist or wet conditions.

SENSITIZATION TO PRODUCT

Hypersensitive reaction may cause allergic dermatitis

Carcinogenicity	NTP	IARC Monographs	OSHA Regulate
	no	no	no
Teratogenicity	n/a	Reproductive Toxicity	n/a
Mutagenicity	n/a	Synergistic Products	None known

Section 7 – Prevention Measures

PERSONAL PROTECTION REQUIRED

Where the prevention of dust is unavoidable, use conventional NIOSH approved or equivalent respiratory protection equipment based on consideration of airborne concentration and duration of exposure.

GLOVES: *Impervious to moisture*

EYE: *Use appropriate eye protection to minimize contact with dust from dry product after mixing with water.*

OTHER: *Wear appropriate clothing and footwear for the specific application. Clean clothing that has become dusty.*

ENGINEERING CONTROLS: *Use adequate ventilation. Do not permit dust to accumulate in work area.*

LEAK AND SPILL PROCEDURE: *If uncontaminated, collect for reuse or disposal. Use dustless procedures. If contaminated, use appropriate method and container for containment.*

WASTE DISPOSAL: *If uncontaminated, dispose as a non-metallic mineral. If contaminated, use appropriate method for containment in accordance with application regulations.*

HANDLING PROCEDURES AND EQUIPMENT: *Avoid creation of respirable dust if possible. Use adequate ventilation and dust collection. Avoid contact with wet product during use.*

STORAGE REQUIREMENTS: *Store in a dry place.*

Section 8 – First Aid Measures

EYES: Flush with running water for at least 15 minutes. Obtain medical attention.

SKIN: Wash with soap and water. For caustic burns to skin, consult a doctor.

INGESTION: Drink large amounts of water. Do not induce vomiting. Seek immediate medical attention.

GROSS: Remove to fresh air. Give oxygen with artificial respiration as needed.

INHALATION OF DUST: Obtain medical attention for treatment, observation and support as needed.

Ultra-Stick Hybrid Shotcrete

Prepared by: Thiessen Team USA

Phone: (775) 777-1205

Date: October 2008

The information in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information given is based on technical data that we believe to be reliable. Because conditions of use are outside our controls, it is the responsibility of the user to verify safety data for the combination with other materials, or for use in a specific process.

n/a – not applicable or not available