

# MATERIAL SAFETY DATA SHEET

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## PRODUCT DETAILS

**PRODUCT NAMES:** Insul Cast – Delta Crete  
**COMMON NAME:** Insulating Refractory Concrete  
**CAS No:** Mixture

## PRODUCT COMPOSITION / HAZARDOUS INGREDIENTS

These products are composed of a blend of processed alumino-silicate earth minerals (including calcined and uncalcined clays and aggregates) that are bonded by a hydratable cement which when mixed with water forms an insulating concrete. Dust generated during manufacture, installation and tear-out may pose a respiratory hazard if exposure is sufficient.

See below for additional health hazard information.

INGREDIENT	CAS NO.	WEIGHT %	OSHA / PEL	ACGIH TLV	CARCINOGEN
Crystalline Silica forms	As below				NTP – yes IARC – Group 1
Quartz	14808-60-7	1 – 15	0.1 mg/M <sup>3</sup> (resp)	0.1 mg/M <sup>3</sup> (resp)	
Cristobalite	14464-46-1	0 – 5	0.05 mg/M <sup>3</sup> (resp)	0.05 mg/M <sup>3</sup> (resp)	
Tridymite	15468-32-3	Not detected	0.05 mg/M <sup>3</sup> (resp)	0.05 mg/M <sup>3</sup> (resp)	
Calcium Aluminate Cement	65997-16-2	15 – 50	15 mg/M <sup>3</sup> (total)	Not found	No

## PHYSICAL, CHEMICAL AND FIRE & EXPLOSION HAZARD INFORMATION

### PHYSICAL PROPERTIES:

Appearance/Odor - Granular solid, brown to buff color, no distinct odor  
Melting Point - Greater than 2000 °F  
Density (as shipped) - Specific gravity = 0.4 – 1.5 (water = 1)  
Solubility - Negligible  
pH - Slightly Basic

**CHEMICAL REACTIVITY:** -When combined with water – hardens in 1 to 8 hours with evolution of moderate heat  
-No other known hazardous reactions, decomposition products or polymerization

## PHYSICAL, CHEMICAL, FIRE & EXPLOSION HAZARD INFORMATION

- FIRE & EXPLOSION:
- Non-flammable; no applicable flash point
  - Hardened concrete which has not been properly dried is subject to explosion upon rapid heating due to internal steam pressure

### SAFE HANDLING PRACTICES AND EXPOSURE CONTROL MEASURES

- Care should be exercised to prevent generation of dust during handling, installation, use and tear-out. Avoid skin and eye contact and breathing of dust.
- Proper refractory practices must be followed for curing, dry-out and firing to service temperature.
- Wash skin and clothing with soap and water after contact with material.
- Appropriate control measures include dust prevention, dust contamination and ventilation supplemented by the use of appropriate NIOSH approved respirators for the exposure conditions.
- Safety glasses, impervious gloves, boots and protective clothing should be used as needed.
- Clean-up of spills should be done in a way to minimize dust, including vacuuming and wet methods.

### FIRST AID

- Respiratory Distress – Remove to fresh air. Give CPR and Oxygen if needed.
- Skin Irritation – Wash irritated areas gently with soap and water to avoid abrasion. Skin lotion may relieve irritation. If irritation is not relieved within several hours consult a physician.
- Eye Exposure – Flush eyes with water or eyewash solution for 15 minutes and get prompt medical attention if relief is not obtained immediately. **DO NOT RUB EYES!!** Injury due to abrasion may result.

### HEALTH HAZARDS

HAZARD	TYPE	ROUTE OF ENTRY
Dry skin, skin irritation, alkali burns and allergic dermatitis in hypersensitive individuals	Acute/chronic	Skin contact with product
Toxicological information – none found		
Eye irritation, eye abrasion <b>Serious eye injury can occur due to abrasion from rubbing eyes!!</b>	Acute	Eye contact with product
Physical injury due to steam spalling or explosion of cured product	Acute	Improper dry-out
Irritation or inflammation to the linings of the upper respiratory tract	Acute	Inhalation of dust
Over-exposure to crystalline silica over a period of years may lead to silicosis (a permanent and sometimes fatal lung disease) and possibly lung cancer. This product may aggravate existing respiratory conditions.	Chronic	Inhalation of dust

## ENVIRONMENTAL AND REGULATORY INFORMATION

**DISPOSAL:** Dispose in accordance with federal, state and local regulations.  
Dispose per 40 CFR 261 and 262.

### ECOLOGICAL

**INFORMATION:** This product is composed primarily of earth minerals and is not expected to have an ecotoxic effect other than that associated with the lime in the cement.

**TRANSPORTATION:** This product is not DOT classified.

### REGULATORY INFORMATION:

Canadian WHMIS: D2A

OSHA 29 CFR 1910. 1200 – considered hazardous

EPCRA Section 302 (Extremely Hazardous Substances) – not listed

CERCLA Section 304 (Title III) not subject to reporting

SARA 313 – not subject to reporting

SARA Hazard Category – “Chronic Health Hazard”

California Prop. 65 – “Contains crystalline silica, an ingredient known to cause cancer.”

This information is given in good faith. Suitability of the product for the application and installation conditions are critical to the safety of the product. These conditions are subject to the control of the user and all risks of use of the product are assumed by the user. For guidance on use in specific applications consult MT. SAVAGE SPECIALTY REFRACTORIES CO., INC.