

Material Safety Data Sheets

Product: Hardened Concrete

Material Safety Data Sheet Date: April 13, 2011

Product Name: Hardened Concrete & Concrete Products

Manufacturer: R. W. Sidley, Inc.

Address: 436 Casement Avenue

City: Painesville

State: OH

Zip: 44077

1. Product and Company Description

Emergency Phone Number:

440-352-9343

For Product Information:

broberti@rwsidley.com

Product Hazards:

Hardened Concrete and related products are not hazardous in the delivered state. The following potential hazards may result upon crushing, cutting, grinding or drilling the hardened concrete.

2. Hazardous Components

Component	CAS#	%Composition
Particulates not otherwise classified	NA	>35%
Portland Cement	65997-15-1	5-10%
Crystalline Silica (Quartz) (Concrete contains aggregate materials which may contain crystalline silica)	14808-60-7	>0.1%

3. Hazards Identification

Potential Health Effects:

Acute Eye:

Contact with concrete dust may cause irritation.

Acute Skin:

Skin contact with concrete dust may cause irritation.

Acute Inhalation:

Cutting, grinding, crushing, or drilling hardened concrete or concrete products may generate dust containing crystalline silica. Repeated exposures to very high levels of respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as six months have caused acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur.

Chronic effects:

Chronic bronchitis may result from chronic exposure to dust generated from cutting, grinding, crushing, or drilling hardened concrete. Chronic exposure to respirable limestone dust in excess of the ACGIH TLV has caused pneumoconiosis (Dusty Lung). Concrete dust may contain more than 0.1% crystalline silica, which is a cancer hazard if inhaled. Cancer risk depends on duration and level of exposure. Prolonged exposure to crystalline silica can cause silicosis, a progressive pneumoconiosis (lung disease).

4. First Aid Measures

First Aid Measures for Accidental:

Eye Exposure:

Immediately flush eyes with plenty of water. Get medical attention, if irritation persists. Remove contact lenses after flushing.

Skin Exposure:

Wash skin with cool water and pH neutral soap or mild detergent intended for use on skin. Get medical attention if irritation develops or persists.

Inhalation:

Remove from exposure to fresh air immediately. Encourage victim to cough, spit out,

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and blow nose to remove dust. Consult a physician immediately if irritation persists or later develops.

5. Fire Fighting Measures

Fire Hazard Data:

Flash Point: Not Combustible

6. Accidental Release Measures

Cleanup and Disposal of Spill:

The material is not listed as a hazardous waste under designations by the EPA or DOT.

7. Handling and Storage

Handling and Storage:

Respirable dust particles containing silica may be generated by crushing, cutting, grinding or drilling hardened concrete or concrete products. Follow protective controls defined in Section 8 when handling these products.

8. Exposure Controls/Personal Protection

Exposure Guidelines:

Component	OSHA-		
	PELs	ACGIH	NIOSH
Crystalline Silica (Quartz) (Concrete contains aggregate materials which may contain crystalline silica)	30/(%SiO ₂ +2)m g/m ³ (Total) 10/(%SiO ₂ +2) mg/m ³ (Respirable)	0.05 mg/m ³ (Respirable quartz)	30/(%SiO ₂ +3) mg/m ³ (Total) 0.05ms/m ³ mg/m ³ (Respirable)
Particulates not otherwise classified	15 mg/m ³ (Total)	10 mg/m ³ (Inhalable)	3 mg/m ³ (Respirable)
	5 mg/m ³ (Respirable)		10 mg/m ³ (Total)

Engineering Controls: When cutting, grinding, crushing, or drilling hardened concrete, provide general or local ventilation systems, as needed, to maintain airborne dust concentrations below the OSHA PELs,

MSHA PELs, and ACGIH TLV. Local vacuum collection is preferred since it prevents release of contaminants into the work area by controlling it at the source. Other technologies that may aid in controlling airborne respirable dust include wet suppression, ventilation, process enclosure, and enclosed employee work stations. When exposed to dust above recommended limits, wear a suitable NIOSH-approved respirator with a protection factor appropriate for the level of exposure. Seek guidance from a qualified industrial hygienist or safety professional, prior to respirator selection and use.

Eye/Face Protection: When cutting, grinding, crushing, or drilling hardened concrete, wear safety glasses with side shields or dust goggles in dusty environments.

9. Physical and Chemical Properties

Physical Appearance: Solid gray

Odor: Odorless

pH: ND

Specific Gravity: 1.9-2.4

Water Solubility: Insoluble

10. Stability and Reactivity

Chemical Stability: Stable

11. Toxicological Information

SILICOSIS

The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms: chronic (or ordinary), accelerated, or acute.

Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Advanced complicated silicosis or PMF may lead to death or heart disease secondary to the lung disease.

CANCER

The International Agency for Research on Cancer (IARC) concluded that "crystalline

silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)" _

Other conditions that may be caused by, or aggravated by exposure to airborne respirable silica include scleroderma, tuberculosis, and kidney failure.

12. Disposal Considerations

Waste Disposal Method:

Follow applicable Federal, State, and local regulations for disposal.

13. Transportation Information

US Department of Transportation Shipping Name:

Regulated under US DOT for cargo securement. Not considered a hazardous material under US DOT regulations.

14. Regulatory Information

Federal Regulations:

SARA Title III Hazard Classes:

Fire Hazard:	N
Reactive Hazard:	N
Release of Pressure:	N
Acute Health Hazard:	N
Chronic Health Hazard:	Y

TSCA:

Crystalline silica (quartz) appears on the EPA Toxic Substances Control Act inventory under the CAS No 14808-60-7.

CA Proposition 65: Crystalline silica (quartz) is classified as a substance known to the state of California to be a carcinogen.

The information contained herein is based on the data available to us and is believed to be correct. Neither The American Concrete Pipe Association, nor it's member companies, makes a warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.