

# MATERIAL SAFETY DATA SHEET



Identity: CRUSHED CONCRETE

## SECTION I

Manufacturer's Name: RALPH CLAYTON & SONS  
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For Further Safety Information  
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## SECTION II-PRODUCT AND COMPONENT DATA

### PRODUCT DATA:

TRADE NAME: Crushed Concrete  
SYNONYMS: Recycled Hardened Concrete, Recycled Crushed Concrete  
DEPARTMENT OF TRANSPORTATION IDENTIFICATION NO.: None

### COMPONENT DATA:

COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NUMBER	% (APPROX.)
Aggregate (limestone, (calcium carbonate) granite, etc.)*mixture	(Limestone 1317-65-3)	60 – 95
*Composition varies naturally, typically contains crystalline silica.	14808-60-7	>1
Hydrated Portland Cement	65997-15-1	3 – 40

## SECTION III-PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	N/A	Specific Gravity: (H <sub>2</sub> O=1)	1.7-3.0
Vapor Pressure (mm Hg.):	N/A	Melting Point:	N/A
Vapor Density (AIR = 1):	N/A	Evaporation Rate:	N/A
Solubility in Water:	Negligible	Appearance and Odor:	Gray, solid mixture, faint odor

## SECTION IV-FIRE AND EXPLOSION HAZARD DATA

Flash Point:	N/A	Extinguishing Media:	N/A
Special Fire Fighting procedures:	None	Unusual Fire and Explosion Hazards:	NONE
Flammable Limits:	N/A	LEL:	N/A
UEL:	N/A		

## SECTION V-REACTIVITY DATA

Stability:	STABLE. AVOID CONTACT WITH INCOMPATIBLE MATERIALS.
Incompatibility:	WILL REACT WITH STRONG ACIDS.
Hazardous Decomposition or By-products:	WILL NOT SPONTANEOUSLY OCCUR. RESPIRABLE DUST PARTICLES MAY OCCUR FROM HANDLING DRY MATERIAL.
Hazardous Polymerization:	WILL NOT OCCUR. NO CONDITIONS TO AVOID.

## SECTION VI - HEALTH HAZARD DATA AND FIRST AID

### EXPOSURE LIMITS:

Unless specified otherwise, limits are expressed as a time-weighted average (TWA) concentration for a work shift or a 40-hour work week. Limits for cristobalite and tridymite (other forms of crystalline silica) are equal to one-half for quartz.

### Abbreviations:

ACGIH TLV: Threshold limit value of the American Conference of Governmental Industrial Hygienists (ACGIH). The Federal Mine Safety and Health Administration (MSHA) has adopted the TLVs established by ACGIH, as set forth in the 1973 edition of "TLVs Threshold Limit Values for Chemical Substances in Workroom Air Adopted by ACGIH for 1973."

mg/m<sup>3</sup>: Milligrams of substance per cubic meter of air.

NIOSH REL: Recommended exposure limit of the National Institute for Occupational Safety and Health (NIOSH), expressed as a TWA concentration for up to a 10-hour work day during a 40-hour work week.

OSHA PEL: Permissible exposure limit of the federal Occupational Safety and Health Administration (OSHA).

Calcium Carbonate: OSHA PEL (respirable fraction) 5 mg/m<sup>3</sup>, (total dust) 15 mg/m<sup>3</sup>; ACGIH TLV (total dust) 10 mg/m<sup>3</sup>; NIOSH REL (respirable) 5 mg/m<sup>3</sup> (total) 10 mg/m<sup>3</sup>.

Crystalline Silica SiO<sub>2</sub>: OSHA PEL (respirable) 10 mg/m<sup>3</sup> + (%SiO<sub>2</sub>+2), (total dust) 30 mg/m<sup>3</sup> + (% SiO<sub>2</sub>+2); ACGIH TLV 10 mg/m<sup>3</sup> + (% SiO<sub>2</sub>+2); NIOSH REL 0.05 mg/m<sup>3</sup>.

Portland Cement: OSHA PEL (respirable) 5 mg/m<sup>3</sup>, (total dust) 15 mg/m<sup>3</sup>; ACGIH TLV 10 mg/m<sup>3</sup>; NIOSH REL (respirable) 5 mg/m<sup>3</sup> (total) 10 mg/m<sup>3</sup>.

Other Particulates: OSHA PEL (total particulate, not otherwise regulated) 15 mg/m<sup>3</sup>, (respirable particulate, not otherwise regulated) 5 mg/m<sup>3</sup>; ACGIH TLV (nuisance particulates) 10 mg/m<sup>3</sup>.

### HEALTH HAZARDS:

Primary Route(s) of Entry: Inhalation: YES Skin: NOT LIKELY TO SKIN Ingestion: NO

### Acute:

Eye Contact: Direct contact with dust may cause irritation by mechanical abrasion. Exposure to wet material may be slightly caustic and cause irritation or injury.

Skin Contact: Direct contact with dust may cause irritation by mechanical abrasion. Exposure to wet material may be slightly caustic and cause irritation or injury.

Skin Absorption: Not expected to be a significant exposure route.

Ingestion: If ingested, the material may become slightly caustic and cause tissue irritation. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

Inhalation: Dusts may irritate the nose, throat and respiratory tract. Coughing, sneezing and shortness of breath may occur following exposures in excess of appropriate exposure limits.

### Chronic:

Inhalation: Chronic exposure to respirable dust in excess of appropriate exposure limits may cause lung disease. Silicosis may result from excessive exposure to respirable silica dust for prolonged periods. Not all individuals with silicosis will exhibit symptoms, Silicosis is progressive and symptoms can appear at any time, even after exposure has ceased. Symptoms may include shortness of breath, coughing or right heart enlargement and/or failure. Persons with silicosis have an increased risk of pulmonary tuberculosis infection. Tobacco smoking may increase the risk of developing lung disorders, including emphysema and lung cancer.

### Carcinogenicity:

Crushed concrete is not listed as a carcinogen by the National Toxicology Program (NTP), OSHA or the International Agency for Research on Cancer (IARC). However, crystalline silica is now classified by IARC as a known human carcinogen (Group 1). The NTP has characterized respirable silica as "reasonably anticipated to be (a) carcinogen" (Group 2). Prolonged and repeated breathing of silica may cause lung cancer.

### Exposure Signs & Symptoms:

Irritation of eyes, skin and/or respiratory system.

### Medical Conditions Generally Aggravated by Exposure:

Inhaling respirable dust may aggravate existing respiratory system disease(s) and/or dysfunctions such as emphysema or asthma. Exposure may aggravate existing skin and/or eye conditions.