

Material Safety Data Sheet



I – PRODUCT IDENTIFICATION	
MANUFACTURER: Fred Weber Inc.	PRODUCT NAME: Concrete (Ready-mix, Portland Cement Concrete)
ADDRESS: 2320 Creve Coeur Mill Rd. Maryland Heights, MO 63043	DATE OF REVISION: June 18, 2008
INFORMATIONAL TELEPHONE:	314-344-0070

II – PRODUCT AND COMPONENT DATA			
COMPONENT NAME	CAS REGISTRY NO.	% by wt. (APPROX.)	EXPOSURE LIMITS
Coarse Aggregate (Limestone – primarily CaCO ₃)	1317-65-3	50-51%	See Section VI
Fine Aggregate (Sand – primarily SiO ₂)	14808-60-7	30-31%	
Fly Ash A mixture primarily of hydrated amorphous silica, Al ₂ O ₃ , CaO, and Fe ₂ O ₃	mixture	0-2.1%	
Water	7732-18-5	5-6%	
Portland Cement A mixture of calcium sulfates, calcium silicates and calcium aluminates	65997-15-1	11.9-14%	

III – PHYSICAL DATA			
BOILING POINT:	N/A	SPECIFIC GRAVITY:	2.20
VAPOR PRESSURE:	N/A	VAPOR DENSITY:	N/A
SOLUBILITY IN WATER:	Slight (0.1-1.0%)	pH (in slurry phase):	12-13
APPEARANCE AND ODOR:	A thick gray slurry of aggregate and paste. No odor. Hardens to a rock-like solid.		

IV – FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT:	Not Flammable	METHOD USED:	N/A
LOWER FLAMMABLE LIMIT:	Not Flammable	UPPER FLAMMABLE LIMIT:	Not Flammable
EXTINGUISHING MEDIA:	None required		
SPECIAL FIRE FIGHTING PROCEDURES:	None required		
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Contact with strong oxidizing agents may cause fire and/or explosion.		

V – REACTIVITY DATA			
STABILITY:	Stable	CONDITIONS TO AVOID:	Avoid incompatible materials (below)
INCOMPATIBILITY:	Contact with powerful oxidizing agents such as fluorine, boron trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosion. Silica dissolves in hydrofluoric acid, producing a corrosive gas: silicon tetrafluoride.		
HAZARDOUS DECOMPOSITION PRODUCTS:	None.		

VI – HEALTH HAZARD / FIRST AID INFORMATION

PRIMARY ROUTES OF ENTRY: INHALATION X SKIN X INGESTION EYES

EXPOSURE LIMITS:
(expressed in 8-hour time-weighted averages-TWA)

Other Particulates: TLV_{INHALABLE} = 10 mg/m³; TLV_{RESPIRABLE} = 3 mg/m³; OSHA PEL_{TOTAL}=15 mg/m³; OSHA PEL_{RESPIRABLE}= 5 mg/m³
Respirable Silica: TLV=0.025 mg/m³; MSHA/OSHA PEL=10 mg/m³/(%SiO₂ +2)

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Inhaling respirable dust or crystalline silica may aggravate existing respiratory system diseases/dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions.

SHORT-TERM (ACUTE) HEALTH EFFECTS:

INGESTION:

Ingestion of large amounts may cause gastrointestinal irritation and blockage.

TREATMENT:

If conscious, give large quantity of water and do not induce vomiting. **NEVER MAKE AN UNCONSCIOUS PERSON DRINK OR VOMIT.** Get immediate medical attention.

EYES:

May cause eye irritation, chemical burns, or damage to cornea.

TREATMENT:

Flush eyes with plenty of clean water for at least 15 minutes, while holding lid open. Occasionally lift lids to ensure thorough rinsing. Contact physician if irritation persists or later develops.

SKIN:

May cause dry skin, redness, irritation, or chemical burns. Known to cause allergic reaction in sensitive individuals. Thickening of the skin (scleroderma) may be associated with exposure to high levels of crystalline silica.

TREATMENT:

Wash with soap and water. Use moisturizing creams for irritation. Contact a physician in case of burns or if irritation persists or later develops.

INHALATION:

Dusts from cutting or breaking solidified product may irritate nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of exposure limits.

Use of concrete for construction purposes is not believed to cause additional acute effects, however, repeated overexposure to very high levels of respirable silica over as little as 6 months has caused acute silicosis, a rapidly progressive, incurable, typically fatal lung disease. Symptoms may include shortness of breath, cough, fever, weight loss, and chest pain.

TREATMENT:

Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.

LONG-TERM (CHRONIC) HEALTH EFFECTS:

Prolonged and repeated exposure to respirable crystalline silica-containing dust can cause silicosis, a lung disease, which can increase risks of pulmonary tuberculosis infection. Silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Symptoms may include, but are not limited to, shortness of breath, difficulty breathing, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume, and right heart enlargement or failure. Smoking may increase risk of developing lung disorders.

Research also shows there may be associations between excessive crystalline silica exposure and adverse health effects involving the kidney, scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) and other autoimmune disorders. Respirable crystalline silica has also been listed by the NTP and IARC as a "known human carcinogen" and by the ACGIH as a suspected human carcinogen. Crystalline silica is also considered a carcinogen by the state of California.

VII – PERSONAL PROTECTION AND CONTROL MEASURES

RESPIRATORY PROTECTION:	No respiratory protection required for wet concrete. For respirable silica levels that are likely to exceed 8-hr TWA of 0.025 mg/m ³ , a NIOSH/MSHA approved half-mask N95 or better respirator must be worn. For levels exceeding 0.25 mg/m ³ , a full face N95 respirator must be worn, which must comply with MSHA/OSHA standards, including training program, fit testing, etc. For levels exceeding 1.25 mg/m ³ , consult an industrial hygienist or safety professional.
VENTILATION:	Local exhaust or general ventilation adequate to maintain exposures below limits.
SKIN PROTECTION:	Impervious gloves, shoes and protective clothing to prevent skin contact.
EYE PROTECTION:	Safety glasses with side shields or goggles.
HYGIENE:	Wash exposed skin with soap and water before eating, drinking, smoking, or using toilet facilities. Wash work clothes after each use.
OTHER CONTROL MEASURES:	Breaking or cutting of hardened product may produce dust. Dust and silica levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee workstations.

VIII – STORAGE AND HANDLING PRECAUTIONS

The personal protection and controls identified in Section VII of this MSDS should be applied as appropriate to prevent contact with highly caustic wet material. Respirable crystalline silica-containing dust may be generated during processing or handling of hardened material.

Do not store near food and beverages or smoking materials.

IX – SPILL, LEAK, AND DISPOSAL PRACTICES

Personal protection and controls identified in Section VII of this MSDS should be applied as appropriate during cleanup.

If hardened, dust can be generated, and may overexpose cleanup personnel to respirable crystalline silica-containing dust. Wetting of material and use of respiratory protection may be necessary.

Not listed in CERCLA/SUPERFUND, 40 CFR 117,302. This product is considered a hazardous chemical and a delayed health hazard according to Sections 311 and 312 of SARA 1986, however this product contains **none** of the substances subject to reporting under SARA Section 313.

MATERIAL DISPOSAL METHOD:

Dispose of hardened material in a construction debris landfill. Material can also be crushed and reused as aggregate.

X – TRANSPORTATION

DOT HAZARD CLASSIFICATION: None

PLACARD REQUIRED: None

LABEL REQUIRED: Label as required by OSHA Hazard Communication standard [29 CFR 1910.1200 (f)] and applicable state and local laws and regulations.

XI – OTHER INFORMATION

Abbreviations:

CAS No.	Chemical Abstract Service number
OSHA	Occupational Safety and Health Administration
MSHA	Mine Safety and Health Administration
PEL	Permissible Exposure Limit
ACGIH	American Conference of Governmental Industrial Hygienists
TLV	Threshold Limit Value
TWA	Time Weighted Average (8-hour)
CL	Ceiling Limit
mg/m ³	Milligrams per cubic meter
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
NIOSH	National Institute for Occupational Safety and Health
>	Greater than
<	Less than
DOT	U.S. Department of Transportation
TDG	Transportation of Dangerous Goods
CFR	Code of Federal Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
SARA	Superfund Amendments and Reauthorization Act

Information in this MSDS was obtained from sources believed to be reliable. It is believed to be current and accurate at the time provided. It is the user's obligation to determine the conditions of safe use of this product.