



# MATERIAL SAFETY DATA SHEET

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## I – IDENTIFICATION

<b>CHEMICAL NAME</b> Limestone	<b>CHEMICAL FORMULA</b> Not Applicable	<b>MOLECULAR WEIGHT</b> Not Applicable
<b>TRADE NAME</b> Crushed Stone		
<b>SYNONYMS</b> Aggregate, Aglime, Barn Lime, Coverstone, Fluxing Agent, Flexible Base, Manufactured Sand, Mineral Sand, Screenings		<b>DOT IDENTIFICATION NO.</b> None

## II – PRODUCT AND COMPONENT DATA

COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NO.	% (APPROX)	ACGIH TLV-TWA
Limestone*	1317-65-3	100	See Section VI
*Composition varies naturally – typically contains quartz (crystalline silica)	14808-60-7	>1	

## III – PHYSICAL DATA

<b>APPEARANCE AND ODOR</b> Angular grey, white, and tan particles, ranging in size from powder to boulder. No odor.	<b>SPECIFIC GRAVITY</b> 2.6 – 2.75
<b>BOILING POINT</b> Not Applicable	<b>VAPOR DENSITY IN AIR (AIR=1)</b> Not Applicable
<b>VAPOR PRESSURE (mm Hg @ 20°C)</b> 0	<b>%VOLATILE BY VOLUME</b> 0%
<b>EVAPORATION RATE</b> 0	<b>SOLUBILITY IN WATER</b> 0

## IV – REACTIVITY DATA

<b>STABILITY</b> Stable	<b>CONDITIONS TO AVOID</b> Avoid contact with incompatible materials (see below)
<b>INCOMPATIBILITY (Materials to Avoid)</b> Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Silica dissolves in hydrofluoric acid producing a corrosive gas-silicon tetrafluoride.	
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b> Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas-silicon tetrafluoride. Respirable dust containing silica may be generated by handling.	
<b>HAZARDOUS POLYMERIZATION</b> Not known to polymerize.	

## V – FIRE AND EXPLOSION HAZARD DATA

<b>FLASHPOINT (Method Used)</b> Not Flammable	<b>FLAMMALBE LIMITS IN AIR</b> Not Flammable
<b>EXTINGUISHING AGENTS</b> None required	
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b> Contact with powerful oxidizing agents may cause fire and/or explosions (see Section IV)	



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## VI – TOXICITY & FIRST AID

### EXPOSURE LIMITS (When exposure to this product and other chemicals is concurrent, the exposure limit must be defined in the workplace)

Unless otherwise specified, limits are expressed as 8-hour time-weighted averages (TWA<sup>8</sup>). Limits for cristobalite and tridymite (forms of crystalline silica) are equal to ½ the limits of quartz.

**Respirable Dust (Nuisance):** MSHA & OSHA 5 mg/m<sup>3</sup>

**Respirable Dust (Crystalline Silica):** MSHA & OSHA PEL = 10 mg/m<sup>3</sup> (%SiO<sub>2</sub> + 2)

**Total Dust:** MSHA PEL = 30mg/m<sup>3</sup> (%SiO<sub>2</sub> + 3); OSHA PEL = 30mg/m<sup>3</sup> (%SiO<sub>2</sub> + 2)

Adverse effects are believed not likely to occur in the workplace if exposures are maintained below the appropriate exposure levels. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals.

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

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

### ACUTE TOXICITY

Primary routes of exposure:   X Inhalation    Skin    Ingestion

Exposure to dust may irritate the eyes, skin, and respiratory system (nose and throat). Coughing, sneezing, and shortness of breath may follow exposures above applicable exposure limits.

### FIRST AID

Eyes: Immediately flush eyes with running water for 15 minutes. Contact a physician if irritation persists or later develops.

Skin: Wash with soap and water. Contact a physician if irritation persists or later develops.

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

### CHRONIC TOXICITY

Chronic exposure to respirable limestone dust in excess of applicable exposure limits may cause silicosis, a progressive lung disease. Not all persons with silicosis will exhibit symptoms of the disease. Symptoms of silicosis may include (but are not limited to) shortness of breath, difficulty breathing, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume, heart enlargement or failure. Persons with silicosis have an increased risk of pulmonary tuberculosis infection. Smoking may increase the risk of developing chronic lung problems.

Limestone is not listed as a carcinogen by IARC, NTP or OSHA. Crystalline silica, a component of Limestone is listed as a carcinogen by IARC, as a known human carcinogen by NTP, and a suspected human carcinogen by ACGIH. These classifications are based on evidence in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

## VII – PERSONAL PROTECTION & CONTROLS

### RESPIRATORY PROTECTION

NIOSH-MSHA approved dust respirators for conditions where dust levels exceed or are likely to exceed appropriate exposure limits.

Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respiratory repair and cleaning, respiratory fit testing, and other requirements.

### VENTILATION

Local exhaust or general ventilation adequate to maintain exposures below appropriate exposure limits.

### SKIN PROTECTION

See “Hygiene” section below.

### EYE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

### HYGIENE

Wash dust exposed skin with soap and water. Wash work clothes after each use.

### OTHER CONTROL MEASURES

Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels over applicable exposure limits should be reduced by feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations.



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## VIII – STORAGE AND HANDLING PRECAUTIONS

Respirable dust may be generated during processing, handling, and storage. The controls identified in Section VII of the MSDS should be applied as appropriate.

## IX – SPILL, LEAK, AND DISPOSAL PRACTICES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

The controls identified in section VII of the MSDS should be applied as appropriate. Spilled materials, where dust can be generated, may overexpose cleanup personnel to respirable dust. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Avoid dry sweeping.

### WASTE DISPOSAL METHOD

Pickup and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.

## X – TRANSPORTATION

### DOT HAZARD CLASSIFICATION

None

### PLACARD REQUIRED

None

### LABEL REQUIRED

Label as required by OSHA Hazard Communication Standard [29CFR1910.1200(f)], MSHA HazCom Standard, and all applicable federal, state and local regulations.

### FOR FURTHER INFORMATION

Contact: Safety Department  
Rogers Group, Inc.  
550 S. Adams St.  
P.O. Box 849  
Bloomington, IN 47402  
(812) 332-6341 ext. 563  
8:00 a.m. – 5:00 p.m.  
Monday – Friday

For Emergency Information (24 Hrs) Call:  
Safety Director  
(812) 320-1726

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Notice: Rogers Group, Inc. believes that the information contained in this Material Safety Data Sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules, or insurance requirements.

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