

E. DILLON & COMPANY
MATERIAL SAFETY DATA SHEET

Effective Date: 8/1/2007

Replaces: 02/20/1997

1 - PRODUCT & COMPANY IDENTIFICATION			
PRODUCT NAME	CHEMICAL FORMULA	MOLECULAR WEIGHT	
Limestone	Mixture	Not Applicable	
TRADE NAMES/SYNONYMS		DOT IDENTIFICATION NO.	
Crushed aggregate, Limestone sand, Aglime, Calcium Carbonate, Ground limestone, Mineral Filler, Manufactured Sand, Screenings, Scrubber Stone.		Not Restricted	
Manufacturer/Contact Information		General Phone Number:	
E. Dillon & Company P.O. Box 160 Swords Creek, VA 24649		(276) 873-6816	
		Emergency Phone Number:	
		(276) 210-4813	
2. COMPOSITION/INFORMATON ON INGREDIENTS			
Hazardous Components		CAS No.	% by Weight
Limestone*	OSHA/MSHA: 15 mg/m ³ (Total dust). ACGIH: 10 mg/m ³ (Total dust).	1317-65-3	80-100
*Composition varies naturally-typically contains some quartz (crystalline silica)		14808-60-7	>1
3. HAZARDS IDENTIFICATION			
EMERGENCY OVERVIEW			
Inhalation of excessive particulate matter may cause respiratory problems. Avoid breathing excessive dust. Breathing silica containing dust for prolonged periods can cause lung damage.			
PRIMARY ROUTE(S) OF EXPOSURE: Inhalation			
EYE CONTACT: Direct contact with dust may cause irritation and/or redness.			
SKIN CONTACT: Direct contact with dust particles can irritate the skin causing redness and/or itching.			
SKIN ABSORPTION: Not expected to be a significant exposure route.			
INHALATION: Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion.			
INGESTION: Expected to be practically non-toxic.			
EFFECTS FOLLOWING PROLONGED OR REPEATED EXPOSURE:			
Chronic exposure to respirable quartz-containing dust in excess of appropriate limits has caused silicosis, a progressive lung disease.			
CARCINOGENICITY:			
Crystalline silica, a component in this product, has been listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), and/or the Occupational Safety and Health Administration (OSHA).			
4. FIRST AID MEASURES			
EYES:	Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or develops later.		
SKIN:	Wash with mild soap and fresh water. Contact a physician if irritation persists or develops later.		
INGESTION:	If person is conscious, do not induce vomiting. Give large amounts of water and get medical attention. Never attempt to make an unconscious person drink.		
INHALATION:	Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or develops later.		
5. FIRE FIGHTING MEASURES			
FLASHPOINT:	FLAMMABLE LIMITS IN AIR:		
Not Flammable	Not Flammable		
EXTINGUISHING MEDIA:	The presence of this material in a fire does not hinder the use of any standard extinguishing medium. Use extinguising medium for surrounding fire.		
SPECIAL FIREFIGHTING MEASURES:	None.		
UNUSUAL FIRE and EXPLOSION HAZARDS:	Contact with powerful oxidizing agents may cause fire and/or explosions.		
6. ACCIDENTAL RELEASE MEASURES			

PRECAUTIONS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:

Persons involved in cleanup processes should first observe precautions identified in Section 8 of this MSDS. Spilled material, where dust is generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Do not dry sweep or use compressed air for clean-up. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Prevent spilled materials from entering streams, drains, or sewers.

WASTE DISPOSAL METHODS:

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

ENVIRONMENTAL PRECAUTIONS:

Not applicable.

7. HANDLING AND STORAGE

This product is not intended or designed for, and should not be used as an abrasive blasting agent.

STORAGE:

Do not store near food or beverages or smoking materials.

HANDLING:

Respirable crystalline silica-containing dust may be generated during processing, handling and storage. Use personal protection and controls identified in Section 8 of this MSDS as appropriate.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**ENGINEERING CONTROLS:**

Activities that generate dust require the use of general ventilation, local exhaust and/or wet suppression methods to maintain exposures below allowable exposure limits.

OTHER CONTROL MEASURES:

Respirable dust and quartz levels should be monitored regularly to determine worker exposure levels. Exposure levels in excess of allowable exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee workstations.

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.

SKIN PROTECTION:

Use gloves to provide hand protection from abrasion. In dusty conditions, use long sleeve shirts. Wash work clothes after each use.

RESPIRATORY PROTECTION:

For respirable quartz levels that exceed or are likely to exceed the TLV, a NIOSH-approved 100 series particulate filter respirator must be worn. If respirable quartz levels exceed or are likely to exceed an 8hr-TWA of 0.5 mg/m³, a NIOSH-approved air purifying, full-face respirator with a 100 series particulate filter must be worn. Respirator use must comply with applicable MSHA(42 CFR 84) or OSHA(29 CFR 1910.134) standards, which include provisions for a user training program, respirator inspection, repair and cleaning, respirator fit testing, and other requirements.

GENERAL HYGIENE CONSIDERATIONS:

There are no known hazards associated with this material when used as recommended. Following guidelines in this MSDS are recognized as good industrial hygiene practices. Avoid breathing dust. Avoid skin and eye contact. Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using toilet facilities. Wash work clothes after each use.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: Not Applicable	pH: Not Applicable	SPECIFIC GRAVITY: 2.7 - 2.8
MELTING POINT: Not Applicable	VAPOR PRESSURE: (mm Hg) Not Applicable	VAPOR DENSITY: (Air = 1) Not Applicable
SOLUBILITY IN WATER: 0	% VOLATILE: Not Applicable	EVAPORATION RATE: (Butyl Acetate=1) 0

ODOR:

None

APPEARANCE:

Angular, gray particles ranging in size from powder to boulders.

10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal temperatures and pressures.

CONDITIONS TO AVOID:

Contact with incompatible materials should be avoided (see below). See Sections 5 and 7 for additional information.

INCOMPATIBILITY (Materials to Avoid)

Limestone ignites on contact with fluorine and is incompatible with acids, aluminum, 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.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Silica-containing respirable dust particles may be generated by handling limestone. When heated, quartz is slowly transformed into tridymite (above 860 deg. C/1580 deg. F) and cristobalite (above 1470 deg. C/2678 deg. F). Both tridymite and cristobalite are other forms of crystalline silica and are considered more fibrogenic to the lungs than quartz.

HAZARDOUS POLYMERIZATION:

Not known to occur.

11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

No specific data on product.

EFFECTS FOLLOWING PROLONGED OR REPEATED EXPOSURE:

Prolonged overexposure to respirable dusts in excess of allowable exposure limits can cause inflammation of the lungs leading to possible fibrotic changes, a medical condition known as pneumoconiosis.

Prolonged and repeated inhalation of respirable crystalline silica-containing dust in excess of allowable exposure limits may cause a chronic form of silicosis, an incurable lung disease that may result in permanent lung damage or death. Chronic silicosis generally occurs after 10 years or more of over exposure; a more accelerated type of silicosis may occur between 5 and 10 years of higher levels of exposure. In early stages of silicosis, not all individuals will exhibit symptoms (signs) of the disease. However, silicosis can be progressive, and symptoms can appear at any time, even years after exposure has ceased. Symptoms of silicosis may include, but are not limited to, the following: shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; right heart enlargement and/or failure. Persons with silicosis have an increased risk of tuberculosis infection.

Repeated overexposures to very high levels of respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as six months may cause acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain.

Respirable dust containing newly broken silica particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken particles of silica.

There are reports in literature suggesting that excessive crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these health effects.

CARCINOGENICITY:

Epidemiology studies on the association between crystalline silica exposure and lung cancer have had both positive and negative results. There is some speculation that the source and type of crystalline silica may play a role. Studies of persons with silicosis indicate an increased risk of developing lung cancer, a risk that increases with the level and duration of exposure. It is not clear whether or not lung cancer develops in non-silicotic patients. Several studies of silicotics do not account for lung cancer confounders, especially smoking, which have been shown to increase the risk of lung disorders, including emphysema and lung cancer.

In October 1996, an IARC Working Group designated respirable crystalline silica as carcinogenic (Group 1). The NTP's Report on Carcinogens, 9th edition, lists respirable crystalline silica as a "known human carcinogen." In year 2000, the American Conference of Governmental Industrial Hygienists (ACGIH) listed respirable crystalline silica (quartz) as a suspected human carcinogen (A-2). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

12. ECOLOGICAL INFORMATION

AQUATIC ECOTOXICOLOGICAL INFORMATION:

No specific data on this product. Not expected to be toxic to aquatic organisms.

ENVIRONMENTAL FATE DATA:

No specific data on this product.

OTHER:

No specific data on this product.

13. DISPOSAL CONSIDERATIONS

Place contaminated materials in appropriate containers and dispose of in a manner consistent with applicable federal, state, and local regulations. Prevent from entering drainage, sewer systems, and unintended bodies of water. It is the responsibility of the user to determine, at the time of disposal, whether product meets criteria for hazardous waste. Product uses, transformations, mixture and processes, may render the resulting material hazardous.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name:

Not Regulated.

DOT Hazard Classification:

Not Applicable

UN/NA Number:

Not Regulated.

DOT Packing Group:

Not Applicable

LABELING REQUIREMENTS:

Label as required by the OSHA Hazard Communication standard [29 CFR 1910.1200(f)], MSHA Hazard Communication standard [30 CFR Part 47] and applicable state and local regulations.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The components in this product are listed on the TSCA Inventory or are exempt.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA):

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT of 1986 (SARA), Title III

Section 302 extremely hazardous substances:

None

Section 311/312 hazard categories:

Delayed Health

Section 313 reportable ingredients at or above minimum concentrations:

None

CALIFORNIA PROPOSITION 65:

This product contains a chemical (crystalline silica) known to the state of California to cause cancer.

STATE REGULATORY LISTS:

The following materials/components are specifically listed by individual states. For details on regulatory requirements, you should contact the appropriate agency in your state:

<u>Chemical Name</u>	<u>State</u>
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Crystalline Silica (quartz)	CA; FL; MA; MN; NJ; PA
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16. OTHER INFORMATION

Disclaimer of Liability

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