Rinker Materials

MATERIAL SAFETY DATA SHEET

for

AGGREGATE PRODUCTS

Section I - Product and Company Identification

Material Identity (Trade Names): Aggregate Products (Limestone/Dolomite, Granite/Basalt, Sand, or Gravel)	
Manufacturer's Name: Rinker Materials Corporation	**Emergency Telephone Number:** 1-800-226-3768 ext. 2436
Address: 1501 Belvedere Road West Palm Beach Fl 33406	**Telephone Number for Information:** 1-800-226-3768 ext. 2436 **Internet Web Site:** www.rinker.com
	Preparer: Clayton Group Services, Inc.

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Chemical Identity/Common Names)	CAS No.	OSHA PEL	ACGIH TLV	MSHA PEL	%
Component of all aggregate products: Crystalline Silica (Quartz) **(Note:** Aggregate products are naturally occurring materials of variable composition which may contain greater than 0.1% crystalline silica. For example, limestone typically contains less than 1% crystalline silica, granite and gravel up to 40%, and sand, up to 100%.)	14808-60-7	30/(%SiO_2 +2) mg/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) 10/(%SiO_2 +2) mg/m^3 (Respirable)	0 -100%
Component of limestone only: Limestone (calcium carbonate, $CaCO_3$)	1317-65-3	15 mg/m^3 (Total) 5 mg/m^3 (Respirable)	10 mg/m^3	10 mg/m^3 (Total)	0-100%
Particulates not otherwise classified	--------	15 mg/m^3 (Total) 5 mg/m^3 (Respirable)	10 mg/m^3 (Inhalable) 3 mg/m^3 (Respirable)	10 mg/m^3 (Total)	0-100%

Section III - Physical/Chemical Characteristics

Boiling Point	Not Applicable	**Specific Gravity (H_20 = 1)**	2.45 - 2.80
Vapor Pressure (mm Hg)	Not Applicable	**Melting Point**	Not Applicable
Vapor Density (Air = 1)	Not Applicable	**Evaporation Rate (Butyl Acetate = 1)**	Not Applicable
Solubility in Water: Not soluble			
Appearance and Odor: Granular white, gray, light tan and/or reddish odorless particles, ranging in size from powder to boulders.			

Section IV - Fire and Explosion Hazard Data

Flash Point : Not Combustible	**Flammable Limits:** Not Flammable	**LEL:** N/A	**UEL:** N/A

Extinguishing Media: This material is noncombustible. Use extinguishing media appropriate to surrounding fire.

Special Fire Fighting Procedures:. Be aware of runoff from fire control methods; particulate matter may clog sewers or waterways.

Unusual Fire and Explosion Hazards: See Section V, Incompatibility.

Section V - Reactivity Data

Stability: Stable	**Conditions to Avoid:** Avoid contact with incompatible materials.

Incompatibility (Materials to Avoid): Stable under expected conditions of use. Under unexpected conditions of use, material may react with hydrofluoric acid to produce a corrosive gas (silicon tetrafluoride). Also, contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions.

Hazardous Decomposition or Byproducts: None known.

Hazardous Polymerization: Not known to occur	**Conditions to Avoid:** See Incompatibility, in this section of MSDS.

Section VI - Health Hazard Data

Route(s) of Entry: **Inhalation?** Yes **Skin?** No **Ingestion?** Unlikely

Health Hazards (Effects described in this section are not believed to occur if exposures are maintained at or below OSHA PELs , MSHA PELs, and ACGIH TLVs. Because of the wide variation in individual susceptibility, these exposure limits may not be applicable to all persons and those with medical conditions listed below):

Acute Effects:

EYE CONTACT: Direct contact with dust may cause irritation by mechanical abrasion.

SKIN CONTACT: Direct contact may cause irritation by mechanical abrasion.

SKIN ABSORPTION: Not expected to be a significant route of exposure.

INGESTION: Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

INHALATION: Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of recommended exposure limits.

Use of aggregate products for construction purposes is not believed to cause additional acute toxic effects. However, repeated overexposures 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. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain.

Chronic Effects: Chronic bronchitis may result from chronic inhalation exposure. If unprotected skin is chronically exposed to dust, contact dermatitis may occur.

Aggregate products 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). 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.

Section VI - Health Hazard Data (continued)

There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with adverse health effects involving the kidney, scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) and other autoimmune disorders. However, this evidence has been obtained primarily from case reports involving individuals working in high exposure situations or those who have already developed silicosis; and therefore, this evidence does not conclusively prove a causal relationship between silica or silicosis and these adverse health effects. Several studies of persons with silicosis also indicate an increased risk in developing lung cancer, a risk that increases with duration of exposure. Many of these studies of silicotics do not account for lung cancer confounders, especially smoking.

Carcinogenicity: Aggregate products (limestone/dolomite, granite/basalt, sand, and gravel) are not listed on the NTP, IARC, or OSHA list of carcinogens. However, in October 1996, IARC classified respirable crystalline silica from occupational sources as carcinogenic (Group 1). The NTP indicates that crystalline silica (respirable size) is a known human carcinogen (Group 1). These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed to crystalline silica.

Signs and Symptoms of Exposure: Chronic exposure to respirable dust containing crystalline silica in excess of applicable OSHA PELs , MSHA PELs, and ACGIH TLVs has caused silicosis, a progressive lung disease. Chronic tobacco smoking may further increase the risk of developing chronic lung problems. Not all individuals with silicosis will exhibit symptoms (signs) of the disease. However, silicosis is progressive, and symptoms can appear at any time, even years after exposures have ceased. Symptoms of silicosis may include (but are not limited to): 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 pulmonary tuberculosis infection.

Medical Conditions Generally Aggravated by Exposure: Inhaling respirable dust and/or crystalline silica and/or limestone may aggravate existing respiratory system disease(s) or dysfunction. Exposure to dust may aggravate existing skin and/or eye conditions.

Emergency and First Aid Procedures:

Dust in Eyes: Gently lift the eyelids and flush immediately and continuously with flooding amounts of water for a minimum of 15 minutes. Consult a physician immediately if irritation persists or later develops.

Dust on Skin: Wash affected areas thoroughly with soap and water. Consult a physician immediately if irritation persists.

Dust Inhalation: Remove exposed person to fresh air and support breathing as needed. Encourage victim to cough, spit out, and blow nose to remove dust. Consult a physician immediately if irritation persists or later develops.

Dust Ingestion: If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Persons involved in cleaning should follow the protective controls defined in Section VIII of this MSDS. Spilled materials, where dust can be generated, may expose cleanup personnel to respirable dust containing crystalline silica. Cleanup personnel should use methods that minimize generation of airborne dusts, such as vacuuming, wet mopping, or moistening with water. Dry material from cleanup operations should be collected and placed in a suitable container for disposal or reuse.

Section VII - Precautions for Safe Handling and Use (continued)

Waste Disposal Method: Pickup and reuse clean materials. For disposal of non-reusable materials, follow applicable Federal, state, and local regulations. The materials are not listed as hazardous wastes under designations by the EPA or DOT.

Precautions to Be Taken in Handling and Storing: Silica-containing respirable dust particles may be generated by handling, crushing, cutting, grinding, or drilling aggregate products. Follow protective controls defined in Section VIII when handling these products.

Section VIII - Control Measures

Respiratory Protection : When exposed or likely to be 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, safety professional, or other suitably knowledgeable individual prior to respirator selection and use. For emergency or nonroutine operations (e.g., confined spaces), additional precautions or equipment may be required. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements.

Ventilation	**Local Exhaust:** Provide general or local ventilation systems, as needed, to maintain airborne dust concentrations below the OSHA PELs, MSHA PELs, and ACGIH TLV. Local exhaust ventilation is preferred since it prevents release of contaminants into the work area by controlling it at the source.	**Other:** Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of applicable OSHA PELs , MSHA PELs, and ACGIH TLVs should be reduced by all feasible engineering controls including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations.
	Mechanical (General): See above recommendations.	**Special:** None reported.

Skin Protection: Wash dust-exposed skin with soap and water thoroughly after handling. Wear work gloves and long sleeve work clothes to prevent skin contact. Wash work clothes after each use.	**Eye Protection:** Wear safety glasses with side shields as minimum protection from blowing dust. Dust goggles should be worn when excessively (visible) dusty conditions are present or anticipated.

Other Protective Clothing or Equipment: Wear suitable protective clothing, as needed, to prevent skin contact. Make available (if necessary) the use of eyewash stations, quick drench showers, and suitable washing facilities.

Work/Hygienic Practices: Avoid dust inhalation and direct dust contact with skin and eyes. Wear suitable protective clothing. If respiratory protection is used, institute a respiratory protection program that includes regular training, inspection, maintenance, and evaluation. Practice good personal hygiene and housekeeping procedures when using these products. Wash contaminated skin before eating, drinking, smoking, lavatory use, and before applying cosmetics.

DISCLAIMER:

The information contained in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is based on technical data that the Company believes to be accurate. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside the Company's control, the Company makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information.