

MATERIAL SAFETY DATA SHEET

Effective Date : January 2006

Replaces : July 1994

I - IDENTIFICATION

CHEMICAL NAME

Natural Sand or Gravel

CHEMICAL FORMULA

Not Applicable

MOLECULAR WEIGHT

Not Applicable

TRADE NAME

Sand or Gravel

SYNONYMS

Construction Aggregates

DOT IDENTIFICATION

None

II - PRODUCT AND COMPONENT DATA

COMPONENT(S) CHEMICAL NAME

Natural Sand *or Gravel*

CAS REGISTRY NO. % APPROX

None 100

ACGIH TLV - TWA

See section VI

*Quartz (crystalline silica) content typically greater than 1%

14808-60-7 >1

III - Physical Data

APPEARANCE AND ODOR

Angular or Round multicolored particles - No odor

BOILING POINT

Not Applicable

VAPOR PRESSURE

0

EVAPORATION RATE

0

SPECIFIC GRAVITY

2.55-2.80

VAPOR DENSITY IN AIR (AIR=1)

Not Applicable

% VOLATILE, BY VOLUME

0%

SOLUBILITY IN WATER

Negligible

IV - REACTIVITY DATA

STABILITY

Stable

CONDITIONS TO AVOID

Avoid contact with incompatible materials

INCOMPATIBILITY (MATERIALS TO AVOID)

Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosion.

HAZARDOUS DECOMPOSITION PRODUCTS

None Known

HAZARDOUS POLYMERIZATION

Not known to polymerize

V - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT (METHOD USED)

Not Flammable

EXTINGUISHING AGENTS

None Required

UNUSUAL FIRE AND EXPLOSION HAZARDS

None Known

FLAMMABLE LIMITS IN AIR

Not Flammable

VI - TOXICITY AND FIRST AID

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

Unless specified otherwise, limits are expressed as milligrams of substance per cubic meter of air (mg/M^3), 8 hour time - weighted averages (TWA). Limits for cristobalite and tridymite (other forms of crystalline silica) are equal to one-half of the limits for quartz

Respirable crystalline silica (quartz): ACGIH TLV, OSHA PEL, and MSHA - proposed PEL = 0.1.

Respirable dust : MSHA = 10/(% respirable quartz + 2). Total dust : MSHA = 30/(% quartz + 3).

Other particulates : ACGIH TLV = 10 (total particulates, not otherwise classified); OSHA PEL = 5 (respirable dust, not otherwise regulated), 15 (total dust, not otherwise regulated); MSHA = 10 (total nuisance dust); MSHA - proposed = 5 (respirable mine dust).

Effects described in this section are believed not to occur if exposures are maintained at or below appropriate TLVs. Because of the wide variation in individual susceptibility, these exposure limits may not be applicable to all person and those with medical conditions listed below

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.

PRIMARY ROUTE(S) OF EXPOSURE

X	Inhalation	Skin	Ingestion
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ACUTE TOXICITY

Exposure to dust may irritate respiratory system, eyes, and skin

Use of natural sand and gravel for construction purposes is believed not to have caused acute toxic effects. Repeated overexposures to respirable crystalline silica for periods as short as 6 months has caused acute silicosis. Symptoms of acute silicosis include (but are not limited to) : shortness of breath, cough, fever, weight loss, and chest pain.

Acute silicosis is a rapidly progressive, incurable lung disease and is typically fatal.

FIRST AID

Dust in eyes : Flush eyes with running water for 15 minutes. Contact a physician if irritation persists.

Dust on previously irritated skin : Wash with soap and water. Contact a physician if irritation is aggravated.

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

CHRONIC TOXICITY

Chronic exposure to respirable quartz-containing dust in excess of appropriate exposure limits has caused silicosis, a progressive pneumoconiosis (lung disease). Chronic tobacco smoking may further increase the risk of developing chronic lung problems.

Symptoms of Silicosis: Not all individuals with silicosis will exhibit symptoms 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.

Sand and Gravel are not listed on the NTP, LARC, or OSHA lists of carcinogens. Crystalline silica, a major component of this product, is on the NTP and LARC carcinogen lists, but not on the OSHA carcinogen list. LARC and NTP have determined that there is sufficient evidence for carcinogenicity to experimental animals exposed to crystalline silica and limited evidence for carcinogenicity to humans. "Limited evidence" means that a causal relationship is possible; however, other explanations such as chance, bias or confounding factors cannot adequately be excluded.

VII - PERSONAL PROTECTION AND CONTROLS

RESPIRATORY PROTECTION

For respirable quartz levels that exceed or are likely to exceed an 8 hr - TWA of 0.1 mg/M³ an approved dust respirator must be worn. For respirable quartz levels that exceed or are likely to exceed and 8 hour TWA of 0.5 mg/M³ an approved HEPA filter respirator must be worn. If respirable quartz levels exceed or are likely to exceed an 8hr - TWA of 5mg/M³ a positive pressure, full face respirator or equivalent is required. Follow applicable respirator use, fitting and training standards.

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 excessive 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 levels should be monitored regularly. Dust 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 work stations.

VIII - STORAGE AND HANDLING PRECAUTIONS

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

Follow protective controls set forth in Section VII of this MSDS when handling this product. Respirable quartz-containing dust may be generated during processing, handling, and storage.

IX - SPILL, LEAK AND DISPOSAL PRACTICES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Persons involved in cleaning should first follow the precautions defined in Section VII of this MSDS. Spilled material, where dust can be generated, may overexpose cleanup personell to respirable quartz-containing dust. Wetting of spilled material and/or use of protective equipment may be necessary. Do not sweep spilled material

This product is not subject to the reporting requirements of Title III of SARA, 1986, and 40 CFR 372.

WASTE DISPOSAL METHOD

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

X - TRANSPORTATION

DOT HAZARD CLASSIFICATION

None

PLACARD REQUIRED

None

LABEL REQUIRED

Label as required by the OSHA Hazard Communication standard [29 CFR 1910. 1200(f)], and applicable state and local regulations.