

TECHNICAL INFORMATION

Hanson Aggregates BMC

White Mason Sand Upper Township Plant

<u>Particle Size</u>	<u>Sieve</u>	<u>% Cumulative</u>	<u>% Retained</u>	<u>% Passing</u>
3.36 mm	# 6 mesh	0.0	0.0	100.0
1.68 mm	#12 mesh	2.5	2.5	97.5
0.84 mm	#20 mesh	21.0	18.5	79.0
0.59 mm	#30 mesh	38.0	17.0	62.0
0.42 mm	#40 mesh	58.2	20.2	41.8
0.29 mm	#50 mesh	73.4	15.2	26.6
0.21 mm	#70 mesh	88.5	15.0	11.5
0.14 mm	#100 mesh	91.7	8.7	2.9
0.10 mm	#140 mesh	99.5	2.4	0.5
0.07 mm	#200 mesh	99.9	0.4	0.1
0.05 mm	#270 mesh	100.0	0.1	0.0
Pan	Pan	100.0	0.0	0.0

Sand: 99.4%

Silt: 0.4

Clay 0.2

Color.- Off White

Application - Upper Township mason sand is a controlled material used for masonry work, and also used as a playground sand, beach sand, volley ball court, and as a children's playbox sand.

Information shown is based on typical lab results. Hanson Aggregates BMC regularly tests batches of mason sand prior to shipment for proper gradation and uniformity.



Material Safety Data Sheet

SECTION 1 COMPANY AND PRODUCT IDENTIFICATION

PRODUCT NAME Natural Sand, Crushed Stone		Revised: 10/04/02
SYNONYMS Aggregate, Manufactured Sand		
MANUFACTURER Hanson Aggregates	EMERGENCY PHONE NUMBER 800-424-9300 CHEMTREC®	

SECTION 2 COMPOSITION & INFORMATION ON INGREDIENTS

OSHA / MSHA REGULATORY STATUS This product contains naturally occurring crystalline silica (quartz) which is considered to be hazardous under the OSHA and MSHA Hazard Communication Standards.		
HAZARDOUS COMPONENTS Crystalline silica (quartz)	CAS NUMBER 14808-60-7	% BY WEIGHT >1 composition varies naturally.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW Odorless; angular; tan, brown and/or gray particles. Nonflammable. May cause skin, eye or respiratory tract irritation from abrasion.
PHYSICAL HAZARDS None.
PRIMARY ROUTES OF EXPOSURE Primary routes of exposure are inhalation and eye/skin contact.
POTENTIAL EFFECTS AND SYMPTOMS OF ACUTE EXPOSURE Contact with dust may cause irritation to the eyes and skin; inhalation may cause upper respiratory tract irritation. Symptoms may include temporary upper respiratory discomfort with coughing, sneezing; tearing and irritation of the eyes; and irritation and redness of exposed skin. An acute form of silicosis may develop from inhalation of extremely high concentrations of crystalline silica over a period of several months to five years. Acute silicosis progresses rapidly and is often fatal. This disease is very rare in humans but has occurred in occupations such as tunneling or sandblasting where exposures were high and controls were minimal.
POTENTIAL EFFECTS AND SYMPTOMS OF CHRONIC EXPOSURE Repeated or prolonged inhalation of high concentrations of very small dust particles containing crystalline silica may cause silicosis. Silicosis is a scarring of the lungs which generally develops gradually over a period of years and may progress even after exposure has stopped. Early symptoms may be so mild that they are not noticed. In advanced cases, lung capacity is severely reduced and the risk of infectious diseases such as tuberculosis increases. Early symptoms of silicosis include coughing and shortness of breath on exercising; symptoms may progress to pain

PRODUCT NAME: Natural Sand, Crushed Stone

in the chest, loss of appetite, fatigue, weakness, inability to work. Complications may lead to respiratory or heart failure. Chronic silicosis generally occurs after 10 or more years of overexposure.

Studies indicate that people with silicosis have an increased risk of lung cancer; however, many of the studies do not take into account additive factors such as smoking. In laboratory animal tests, dust containing newly broken particles of respirable silica particles caused greater lung injury than equal exposures to particles aged for sixty days or more.

CARCINOGENICITY

Natural Sand is not listed as a carcinogen by the International Agency on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Classifications of the crystalline silica component are based on experimental studies with animals and epidemiologic studies of workers exposed to respirable crystalline silica.

IARC: classified as Group 1, a substance known to cause cancer to humans
 NTP: classified as a known human carcinogen
 OSHA: not classified as a carcinogen
 ACGIH: classified as suspect human carcinogen
 NIOSH: classified as a potential occupational carcinogen

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with respiratory disorders may find these conditions aggravated by exposure to dust.

SECTION 4 FIRST AID MEASURES**INHALATION**

Move exposed individual to fresh air. Dust in throat and nasal passages should clear naturally by coughing, sneezing and nasal discharge. Obtain medical attention if symptoms persist or develop later.

EYE CONTACT

Do not allow individual to rub eyes. Flush gently under running water for 15 minutes or longer, making sure that the eyelids are held open. Other than washing with water, do not attempt to remove material from eyes. If pain or irritation persist or develop later, obtain medical attention.

SKIN CONTACT

If irritation occurs, flush gently with water until dust is removed. If irritation persists or develops later, obtain medical attention.

INGESTION

Ingestion is not a common route of occupational exposure. If swallowed and irritation or discomfort occurs, obtain medical attention.

SECTION 5 FIRE FIGHTING MEASURES**FLASH POINT**

Not combustible.

FLAMMABLE LIMITS

Not applicable.

EXTINGUISHING AGENTS

Not combustible. Use extinguishing agent appropriate for surrounding flammable materials.

UNUSUAL FIRE AND EXPLOSION HAZARDS

None.

PRODUCT NAME: **Natural Sand, Crushed Stone**

Page 3 of 5

SECTION 6 ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS**

Eye protection and appropriate respiratory protection should be used to protect cleanup personnel against dust.

SPILL AND LEAK PROCEDURES

Keep unprotected personnel out of the area. Do not dry sweep spilled dusty material. Use water spray to minimize dust or vacuum with HEPA filters.

SECTION 7 HANDLING AND STORAGE**HANDLING PRECAUTIONS**

Dust containing crystalline silica may be generated during processing and storage. Use in well ventilated areas. Avoid generating dust. Use good housekeeping methods to prevent the accumulation of dust in the workplace.

RECOMMENDED STORAGE CONDITIONS

Store away from strong oxidizers. Local regulations may require water spray or other measures to limit dust in storage areas.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION**EXPOSURE LIMITS AND GUIDELINES**

COMPONENT & CAS #	OSHA PEL	MSHA PEL
Crystalline silica (quartz) CAS#14808-60-7 *Respirable Dust (containing 1% or more quartz) **Total Dust (containing 1% or more quartz)	$(10 \text{ mg/m}^3)^*$ (%SiO ₂ + 2)	$(10 \text{ mg/m}^3)^*$ (%SiO ₂ + 2)
	$(30 \text{ mg/m}^3)^{**}$ (%SiO ₂ + 2)	$(30 \text{ mg/m}^3)^{**}$ (%SiO ₂ + 3)
	ACGIH TLV	NIOSH REL
	0.05 mg/m ³ *	0.05 mg/m ³ *

ENGINEERING CONTROLS

Use general ventilation, local exhaust and/or wet suppression methods to maintain exposures below allowable exposure limits.

RESPIRATORY PROTECTION

The need for respiratory protection should be evaluated by a qualified professional. The use of respirators for controlling exposures in excess of PEL must comply with OSHA and MSHA requirements for medical surveillance, respirator fit testing, repair and cleaning and user training.

EYE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles or full face protection should be worn when dusty conditions are present or are anticipated.

SKIN PROTECTION

Use gloves to provide hand protection from abrasion. In very dusty conditions, clothing with long sleeves will provide skin protection. Contaminated work clothing should be washed after use.

PRODUCT NAME: **Natural Sand, Crushed Stone**

Page 4 of 5

ADDITIONAL PROTECTIVE MEASURES

Air monitoring for dust and quartz should be conducted regularly. Dust and quartz 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Angular particles.	SPECIFIC GRAVITY 2.55 – 2.80
COLOR Tan, brown and/or gray particles.	EVAPORATION RATE Not applicable.
ODOR None.	VAPOR DENSITY (AIR = 1) Not applicable.
BOILING POINT Not applicable.	pH Not applicable.
VAPOR PRESSURE Not applicable.	SOLUBILITY IN WATER Negligible.

SECTION 10 STABILITY AND REACTIVITY

STABILITY Stable.
INCOMPATIBILITY Crystalline silica may react violently with strong oxidizing agents, causing fire and/or explosions. Silica dissolves in hydrofluoric acid producing a corrosive gas-silicon tetrafluoride.
HAZARDOUS DECOMPOSITION PRODUCTS None.
HAZARDOUS POLYMERIZATION Does not polymerize.
CONDITIONS TO AVOID Avoid contact with strong oxidizing agents.

SECTION 11 TOXICOLOGICAL INFORMATION**ACUTE TOXICITY DATA**

Standard animal toxicity data (e.g. LD₅₀, LC₅₀) are not available for quartz. Epidemiologic studies of workers indicate an increased risk of lung cancer from chronic exposure to respirable crystalline silica; this effect was more pronounced in those with silicosis. However, many of the studies did not account for effects of smoking or other confounding exposures. Studies of chronic inhalation of respirable crystalline silica showed increases in lung cancer in rats but not in hamsters. Epidemiologic studies have linked crystalline silica exposure with immunologic disorders, autoimmune diseases and renal diseases, however the cellular mechanisms for these effects have not been identified and experimental data is not available.

PRODUCT NAME: **Natural Sand, Crushed Stone**

Page 5 of 5

SECTION 12 ECOLOGICAL INFORMATION**ECOLOGICAL DATA**

Generally considered chemically inert in the environment.

SECTION 13 DISPOSAL CONSIDERATIONS**WASTE DISPOSAL**

Dispose of waste product and unused product in compliance with federal, state and local requirements. Used material which has become contaminated, may have significantly different characteristics based on the contaminant and should be evaluated accordingly.

SECTION 14 TRANSPORT INFORMATION**DOT HAZARD CLASS**

None.

DOT PLACARD

None.

SECTION 15 REGULATORY INFORMATION**U.S. FEDERAL REGULATIONS****SARA 313**

Not applicable.

CERCLA 103

Not applicable.

RCRA HAZARDOUS WASTE

Waste is not hazardous according to 40 CFR 261.

STATE REGULATIONS**COMPONENT**

Crystalline Silica, quartz 14808-60-7

STATE REGULATORY LIST

California Proposition 65

SECTION 16 OTHER INFORMATION

For further information on this product contact:

NOTICE: Hanson Building Materials America believes that the information contained in this Material Safety Data Sheet is accurate. The suggested procedures are based on experience as of date of publication. They are not necessarily all-inclusive or 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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