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Material Safety Data Sheet

Molecular Sieve, Type 4a, Powder MSDS

Section 1: Chemical Product and Company Identification

Product Name: Molecular Sieve, Type 4a, Powder

Catalog Codes: SLM1420

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Quartz

CI#: Not available.

Synonym: Molecular Sieve, Type 4a, Powder; Zeolite type; Synthetic Zeolite. Zeolite is a hydrated silicate of aluminum and sodium (sodium aluminosilicate or alkali aluminosilicate in the sodium form). It may contain quartz.

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: 1-800-901-7247

International Sales: 1-281-441-4400

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Quartz	14808-60-7	<3

Toxicological Data on Ingredients: Quartz LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. The amount of tissue damage depends on length of contact. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death.

Potential Chronic Health Effects:

Slightly hazardous in case of inhalation. CARCINOGENIC EFFECTS: Classified 1 (Proven for human.) by IARC, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA, + (Proven.) by NIOSH [Quartz]. Classified A2 (Suspected for human.) by ACGIH [Quartz]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to lungs. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:

Powerful oxidizers may cause fire. [Quartz] Chlorine Trifluoride reacts violently with Aluminum Oxide producing a flame. [Aluminum Oxide] Magnesium Oxide may ignite and explode when heated with sublimed sulfur, magnesium powder, or aluminum powder. It reacts violently with interhalogens (bromine pentafluoride, chlorine trifluoride) and produces flame. When combined with phosphorus pentachloride, it incandesces. [Magnesium Oxide]

Special Remarks on Explosion Hazards:

Powerful oxidizers or metals may cause explosions. [Quartz] Magnesium Oxide may ignite and explode when heated with sublimed sulfur, magnesium powder, or aluminum powder. [Magnesium Oxide]

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Finish cleaning by

spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Do not breathe dust. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Quartz TWA: 0.05 (mg/m³) from ACGIH (TLV) [United States] [1999] Inhalation Respirable. TWA: 0.1 (mg/m³) from OSHA (PEL) [United States] Inhalation Respirable. TWA: 0.3 (mg/m³) [United Kingdom (UK)] Inhalation Respirable. TWA: 0.2 (mg/m³) [Australia] Inhalation TWA: 0.1 (mg/m³) [Canada] Inhalation Respirable.3 Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid powder.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Beige. Tan. (Light.)

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point: 1710°C (3110°F) based on data for: Quartz.

Critical Temperature: Not available.

Specific Gravity: The only known value is 2.65 (Water = 1) (Quartz).

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is insoluble in water and oil.

Ionicity (in Water): Not available.

Dispersion Properties: Is not dispersed in cold water, hot water.

Solubility: Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, moisture, excess dust generation

Incompatibility with various substances: Slightly reactive to reactive with oxidizing agents, acids, moisture.

Corrosivity: Not available.

Special Remarks on Reactivity:

Hygroscopic. Reacts with water to evolve heat. Sudden contact with high concentrations of chemicals having high heats of adsorption such as elefins, HCl, etc. when first wetted, the product can heat up to the boiling point of water. Flood with water to cool material. [Molecular Sieve mixture] Incompatibility with powerful oxidizers: fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, hydrogen peroxide, etc.; Incompatible with acetylene and ammonia. This chemical is attacked by Hydrogen Fluoride. Silica will dissolve in Hydrofluoric Acid and produce the corrosive gas Silicon Tetrafluoride (SiF₄). [Quartz].

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:

LD50: Not available. LC50: Not available.

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified 1 (Proven for human.) by IARC, 1 (Clear evidence.) by NTP, + (Proven.) by OSHA, + (Proven.) by NIOSH [Quartz]. Classified A2 (Suspected for human.) by ACGIH [Quartz]. May cause damage to the following organs: lungs.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

Contains about 3% Quartz which may cause cancer. Quartz has been classified by IARC as a class 1 carcinogen.

Special Remarks on other Toxic Effects on Humans:

Potential Health Effects Skin: May cause skin irritation. The product gets hot as it first adsorbs water. Eyes: Dust and /or product may cause eye discomfort and/or irritation. Ingestion: The product gets hot as it first adsorbs water. Burns to moist body tissues may result if contact is prolonged. Inhalation: Exposure to dust particles generated from this material may cause irritation of the respiratory tract and may cause lung injury/fibrosis (silicosis) or cancer. Repeated and prolonged inhalation of crystalline silica in the form of quartz from occupational sources may cause cancer or lung injury (silicosis (fibrotic lung disease)).

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Quartz California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Quartz Pennsylvania RTK: Quartz Florida: Quartz Minnesota: Quartz Massachusetts RTK: Quartz New Jersey: Quartz TSCA 8(b) inventory: Quartz

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

Not available S24/25- Avoid contact with skin and eyes.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 1

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 1

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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