

MATERIAL SAFETY DATA SHEET

Identity: AQUASET II-GH

SECTION I

Manufacturer's Name

Fluid Tech, Inc.

Emergency Telephone Number

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Date Prepared

4/12/88

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01/01/08

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components: Respirable dust may contain Silica, Crystalline Quartz (CAS #14808-60-7).

Specific Chemical Identity:

Sepiolite ($H_6 Mg_8 Si_{12} O_{30}[OH]_{10} \cdot 6 H_2O$)

CAS #63800-37-3

Common Names: Sepiolite, Meerschaum, Palygorskite, Clay-a natural mineral extracted from the earth

OSHA PEL: Classified as a nuisance dust when less than 1% crystalline silica is present, PEL=5.00mg/M³ (respirable)

If greater than 1% crystalline silica, then exposures shall not exceed an 8-hour time-weighted average limit as stated in 29 CFR § 1910.1000 Table Z-1-A for air contaminants, specifically;

Silica, Crystalline Quartz (respirable) 0.1 mg/M³

ACGHIH TLV: Classified as a nuisance dust when less than 1% crystalline silica, TLV-TWA=10 mg/M³ (Total dust), 5 mg/M³ (Respirable)

If greater than 1% crystalline silica, the TLV-TWA = 0.1 mg/M³ (respirable crystalline quartz). See Threshold Limit Value and Biological Exposure Indices for 1991-1992, American Conference of Governmental Industrial Hygienists.

Other Limits Recommended: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration = 0.05 mg/M³ (respirable crystalline quartz) as determined by a full shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica).

SECTION III - Physical/Chemical Characteristics

Boiling Point: More than 1000°F

Bulk Density : 85lbs/ft³

Vapor Pressure (mm Hg): None

Melting Point: None

Vapor Density (AIR = 1): N/A

Evaporation Rate: None

Solubility in Water: Insoluble in water.

Appearance and Odor: Light gray to tan granules.

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used): Non-flammable

Flammable Limits: None

LEL: None

UEL: None

Extinguishing Media: None required

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

SECTION V - Reactivity Data

Stability: Stable

Conditions to Avoid: None

Incompatibility (Materials to Avoid): None

Hazardous Decomposition or Byproducts: None

Hazardous Polymerization: Will Not Occur

Conditions to Avoid: None

SECTION VI - Health Hazard Data

Route(s) of Entry: Inhalation? Yes

Skin? No

Ingestion? No

Health Hazards (Acute and Chronic): May be harmful if inhaled in sufficient quantities. Prolonged exposure to Sepiolite Clay dust may cause a relatively benign lung disease, though there is a risk of the development of massive fibrosis. Repeated and prolonged exposure to respirable crystalline quartz which may be contained in Sepiolite Clay dust may cause delayed (chronic) lung injury (silicosis). Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death.

Carcinogenicity: NTP? Yes

IARC Monographs? Yes

OSHA Regulated? No

IARC has reported that there is inadequate evidence for the carcinogenicity of sepiolite in experimental animals and that there is no data available to evaluate the carcinogenicity of sepiolite in humans (IARC Class 3).

Sepiolite Clay, like other naturally occurring minerals, may contain crystalline silica. IARC has concluded that there is limited evidence for the carcinogenicity of crystalline silica to humans and sufficient evidence for the carcinogenicity of crystalline silica to experimental animals (IARC Class 2A). The NTP has concluded that “silica, crystalline (respirable)” may reasonably be anticipated to be a carcinogen, based on sufficient evidence for the carcinogenicity of respirable crystalline silica in experimental animals and limited evidence in humans.

Signs and Symptoms of Exposure: Undue breathlessness, wheezing, cough and sputum production.

Medical Conditions Generally Aggravated by Exposure: Pulmonary function may be reduced by inhalation of respirable crystalline silica that may be in Sepiolite Organoclay dust. Lung scarring produced by such inhalation may lead to a progressive massive fibrosis of the lung which may aggravate other pulmonary conditions and diseases and which increases susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure and pulmonary failure. Smoking aggravates the effects of exposure.

Emergency and First Aid Procedures: For dust in eyes, wash immediately with water. If irritation persists, seek medical attention. For gross inhalation, remove person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.

SECTION VII - Precautions for Safe Handling and Use

Waste Disposal Method: Dispose in accordance with Federal, State and Local regulations.

Precautions to be Taken in Handling and Storing: Avoid breakage of bagged material or spills of bulk material. See control measures in Section VIII.

Other Precautions: Use dustless systems for handling, storage, and clean up so that airborne dust does not exceed the PEL. Use adequate ventilation and dust collection. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery or equipment. Maintain, clean and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing which has become dusty. See also control measures in Section VIII.

See OSHA Hazard Communication Rule 29 CFR Sections 1910.1200, 1915.99, 1917.28, 1918.90, 1926.59 and 1928.21 and state and local worker or community “right to know laws and regulations. We recommend that smoking be prohibited in all areas where respirators must be used. **WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS – USERS IN CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARDS AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THE OSHA PRECAUTIONS.**

See also American Society for Testing and Materials (ASTM) standard practice E 1132-86, “Standard Practice for Health Requirements Relating to Occupational Exposure to Quartz Dust.

SECTION VIII - Control Measures

Respiratory Protection (Specify Type):

The following chart specifies the type of respirators, which may provide respiratory protection for respirable crystalline silica that may be contained in Sepiolite Clay dust.

RESPIRATORY PROTECTION FOR CRYSTALLINE SILICA

CONDITION Particulate Concentration	MINIMUM RESPIRATORY PROTECTION*
Up to 5 X PEL	Any dust respirator
Up to 10 X PEL	Any dust respirator, except single-use or quarter-mask respirator. Any fume respirator of high efficiency particulate filter respirator. Any supplied-air respirator. Any self-contained breathing apparatus.
Up to 50 X PEL	A high efficiency particulate filter respirator with a full facepiece. Any supplied-air respirator with a full facepiece, helmet or hood. Any self-contained breathing apparatus with a full facepiece.
UP to 500 X PEL	A powered air-purifying respirator with a high efficiency particulate filter. A Type C supplied air respirator operated in pressure-demand or other positive pressure or continuous-flow mode.
Greater than 500 X PEL or entry and escape from unknown concentrations.	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode. A combination respirator which includes a Type C supplied-air respirator with a facepiece operated in pressure-demand or other positive pressure continuous-flow mode and an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.

Ventilation:

Local Exhaust Use sufficient local exhaust to reduce the level of dust to the PEL. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice, "the latest edition.

Mechanical: See "Other Precautions" under Section VII.

Special: See "Other Precautions" under Section VII.

Other: See "Other Precautions" under Section VII.

Protective Gloves: Optional.

Eye Protection: Wear protective shield (safety glasses) when exposed to dust particles.

Other Protective Clothing and Equipment: Optional

Work/Hygienic Practices: Avoid creating and breathing dust. See "Other Precautions" under Section VII.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty to any kind, express or implied is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful health effects which may be caused by purchase, resale use or exposure to our Sepiolite Clay. Customers-users of Sepiolite Clay must comply with all applicable health and safety laws, regulations and orders.