

MATERIAL SAFETY DATA SHEET

Identity:
Sepiolite Clay (CAS #63800-37-3)

SECTION I

Manufacturer's Name IMV NEVADA	Emergency Telephone Number 775-372-5341
Address Route Box 549 Amargosa Valley, Nevada 89020	Telephone Number for Information 775-372-5341
	Date Prepared 9/08/04
	Date Revised 11-1-06

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

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

Specific Chemical Identity:

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

CAS #63800-37-3

Common Names: Sepiolite, Meerschaum, Palygorskite, Clay—a natural mineral extracted from the earth (see tradenames, page 4)

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

ACGIH 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	Specific Gravity (H₂O = 1):	1.9-2.4
Vapor Pressure (mm Hg.):	None	Melting Point:	None
Vapor Density (AIR = 1):	None	Evaporation Rate:	None
Solubility in Water:	Insoluble in water		
Appearance and Odor:	Light gray, tan or reddish tan, granular or powder. Earthy odor when wet.		

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, through there is a risk 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 (ARC Monographs? Yes OSHA Regulated? No

{ARC 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 (ARC Class 3).

Sepiolite Clay, like other naturally occurring minerals, may contain crystalline silica. {ARC has concluded that there is limited evidence for the carcinogenicity of crystalline silica in humans and sufficient evidence for the carcinogenicity of crystalline silica in experimental animals (ARC 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 Clay, 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, and give artificial respiration as needed, seek medical attention as needed.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To be taken in Case Material is Released or Spilled:

Spills: Use dustless methods (vacuum) and place into closable container for disposal, or flush with water. Do not dry sweep. Care should be taken to avoid high aerosol dust concentrations. Wear protective equipment specified below. Spilled material may become very slippery when wet wit water, grease, oil, gasoline, or solvents.

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 types 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 full 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.

*Only NIOSH-approved or MSHA-approved equipment should be used. (See 29 CFR 1910.134).

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 of 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.

TRADE NAMES**I G S**

SEA MUD

SEPIOGEL - A

SEPIOGEL - R

SEPIOGEL - F

SEPIOGEL - 721

THERMOGEL

SEPIOLITE NOODLES

GRANULAR SEPIOLITE

MIN-U-GEL - 200i

SEPIOLITE - 1630i

SEPIOLITE - 3080i