

MATERIAL SAFETY DATA SHEET

RAr-1
November 15, 2005

CLAY MINERALS SOCIETY SAFETY DATA SHEET

1. Product and Company Information

Manufacturer: Clay Minerals Society
Source Clays Repository
P.O.Box 460130, Aurora,
Colorado 80046-0130
USA.

Web: <http://www.clays.org>





Information Phone Number: (303) 680-9002

Product Name: RAr-1

MSDS Date of Preparation: 11/15/05

Generic Name: Rectorite

HMIS Hazard Rating

	HEALTH	1*
	FLAMMABILITY	0
	REACTIVITY	0
	PERSONAL PROTECTION	X

* Chronic Health Hazard

2. Hazards Identification

Yellow-gray flakes with no odor..

EMERGENCY OVERVIEW

This product is a naturally occurring mineral which contains crystalline silica in the form of quartz. Prolonged or repeated inhalation of crystalline silica over an extended period of time may result in lung damage and may cause lung cancer. The risk of cancer is dependent on the duration and level of exposure.

Potential Health Effects:

Eye: Contact may cause mechanical irritation with redness, tearing and pain.

Skin: May cause drying of the skin

Inhalation: Inhalation of high concentrations of dust may cause mucous membrane and respiratory irritation.

Ingestion: Swallowing large amounts may cause gastrointestinal irritation.

Chronic Hazards: Prolonged overexposure to dust may cause lung damage. This product contains crystalline silica. Repeated inhalation of silica dust over an extended period of time may result in a progressive, disabling, potentially fatal lung disease, silicosis. Symptoms include shortness of breath, chest pain and reduced lung function. Prolonged exposure to respirable crystalline silica is also associated with chronic bronchitis, emphysema, autoimmune disorders including scleroderma and rheumatoid arthritis and kidney disease. Exposure to respirable crystalline silica increases the risk of tuberculosis.

MATERIAL SAFETY DATA SHEET

RAr-1
November 15, 2005

Carcinogen Status: The International Agency for Research on Cancer has determined that respirable crystalline silica is a known human carcinogen (Group 1). The National Toxicology Program classifies respirable crystalline silica as a known human carcinogen.

Medical Conditions Aggravated by Exposure: Persons with pre-existing respiratory disorders may be at an increased risk from exposure.

3. Composition/Information of Ingredients

Chemical Name	CAS#	%
Rectorite	Not Available	80-85
Crystalline Silica – Quartz	14808-60-7	15-20

4. First Aid Measures

Eye: Flush immediately with large amounts of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Avoid rubbing the eyes as this may increase irritation. If irritation persists get medical attention.

Skin: No first aid is normally needed. Wash exposed skin with soap and water after use. If irritation or rash develops get medical attention. Use skin lotion if dryness occurs.

Inhalation: No first aid normally needed. If irritation develops, remove person from source of exposure to fresh air. If symptoms persist get medical attention.

Ingestion: Clear material from mouth. No harmful effects are expected from a small ingestion. If large amounts are swallowed, get medical attention.

5. Firefighting Measures

Flashpoint: Not Applicable

Autoignition Temperature: Not Applicable

Lower Explosion Limit: Not Applicable

Upper Explosion Limit: Not Applicable

Extinguishing Media: This product is not combustible. Use any media that is appropriate for the surrounding fire.

Special Fire Fighting Procedures: Wear positive pressure, self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards: None known.

Combustion Products: None known.

6: Accidental Release Measures

MATERIAL SAFETY DATA SHEET

RAr-1
November 15, 2005

Wear appropriate protective clothing and equipment. Sweep up or vacuum, avoiding the creation of airborne dust, and collect into a suitable container for disposal.

7. Handling and Storage

Handling: Avoid generating and breathing dust. Avoid eye contact. Use with adequate ventilation. If clothing becomes contaminated, remove and launder before re-use. Wash thoroughly after handling.

Storage: Store in a dry area.

8. Exposure Controls / Personal Protection

Chemical Name	Exposure Limits
Rectorite	5 mg/m ³ (respirable) OSHA PEL-TWA 15 mg/m ³ (total dust) OSHA PEL TWA
Crystalline Silica – Quartz	10 mg/m ³ /%silica +2 OSHA PEL-TWA 0.05 mg/m ³ ACGIH TLV-TWA

Ventilation: General ventilation should be adequate for normal use. For operations where the TLV may be exceeded, mechanical ventilation such as local exhaust may be needed to maintain exposure levels below applicable limits.

Respiratory Protection: None needed under normal use conditions. For operations where the exposure limit may be exceeded, a NIOSH approved high efficiency particulate respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Skin Protection: None needed for normal use.

Eye Protection: None needed for normal use. For dusty conditions, safety glasses or goggles can be used.

Other Protective Equipment: None needed for normal use.

9. Physical and Chemical Properties

Boiling Point: Not Applicable	Specific Gravity: 2.2 (approximately)
Melting Point: Not Applicable	% Volatile: Not Applicable
Vapor Pressure: Not Applicable	Evaporation Rate (Butyl Acetate=1): Not Applicable
Vapor Density(Air=1): Not Applicable	pH: Not Applicable
% Solubility in Water: Not Applicable	Octanol/Water Partition Coefficient: Not Applicable
Odor/Appearance: Yellow-gray flakes with no odor.	

10. Stability and Reactivity

MATERIAL SAFETY DATA SHEET

RAr-1
November 15, 2005

Stability: Material is stable.

Incompatibility/Conditions to Avoid: Contact with hydrofluoric acid may generate heat.

Hazardous Reactions-Decomposition Products: None known.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

This product is composed of natural clay minerals which are not acutely toxic by ingestion, inhalation or dermal contact, therefore, no toxicity values have been established.

12. Ecological Information

No ecotoxicity data is available at this time.

13. Disposal Considerations

Dispose in accordance with federal, state and local regulations

14. Transport Information

U.S. Department of Transportation (DOT)

Proper Shipping Name: Not Regulated

ID Number: N/A

Hazard Class: N/A

Packing Group: N/A

Markings: N/A

Label: N/A

Air - IATA/ICAO

Shipping Description: Not Regulated

ID Number: None

Hazard Class: None

Packing Group: None

Marking: None

Label: None

15. Regulatory Information

U.S. Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) Reportable Quantity:

This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills as required under federal, state and local regulations.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 Hazard Categories: None

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313: None

California Proposition 65: This product contains crystalline silica, as do most natural clay minerals. Respirable crystalline silica is listed by California as a chemical known to cause cancer.

MATERIAL SAFETY DATA SHEET

RAr-1
November 15, 2005

Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA inventory or exempt from notification requirements.

Canadian Environmental Protection Act: All of the components of this product are listed on the Canadian Domestic Substances List or exempt from notification requirements.

Canadian WHIMIS Classification: Class D, Division 2, Subdivision A (Carcinogen)

European Inventory of Commercial Chemical Substances: All of the components of this product are listed on the EINECS Inventory or exempt from notification requirements.

EU Labeling Classification and R & S Phrases: Harmful (Xn) R48/20.

Japan MITI: All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law.

Australian Inventory of Chemical Substances: All of the components of this product are listed on the AICS Inventory or exempt from notification requirements.

16. Other Information

NFPA Ratings:

Health: 1 Flammability: 0 Reactivity: 0

HMIS Ratings:

Health: 1* Flammability: 0 Reactivity: 0

* Chronic Health Hazard