



SAFETY DATA SHEET

Effective Date:	May 29, 2015
SDS Number:	M53

Section 1 – Product And Company Information

Product Name: Molecular Sieve

Product Use: Desiccant, Absorbent

Grades: 13X, Beads

Synonyms: Synthetic zeolite

Company: Multisorb Filtration Group

Address: 325 Harlem Road
Buffalo, NY 14224-1893 USA

Telephone Number: (716) 824 8900 [USA] Monday - Friday (8:00 - 5:00 EDT)

Fax Number: (716) 824 4091 [USA]

Website / E-Mail : www.multisorb.com

Section 2 – Hazard Identification

Emergency Overview:

A tan odorless bead or pellet that poses little or no immediate hazard. This product is not combustible. When first wetted, product can heat up to the boiling point of water. This product is classified as a hazardous substance according to the Global Harmonized System (GHS).

Pictogram



Signal Word

Danger

GHS classification of the substance or mixture:

Carcinogenicity, Category 1A, H350
Specific target organ toxicity – repeated exposure , lungs, Category 2, H373

GHS label elements, Including precautionary statements:

H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe gas / mist / vapors / spray.
P281 Use personal protective equipment.
P308 + P313 IF exposed or concerned: Get medical advice / attention.
P405 Store locked up.
P501 Dispose of contents / container to an approved waste disposal plant.

Hazardous not otherwise classified (HNOC) or not covered by GHS:

This product will react with water and release heat. Prolonged contact can cause burns to moist body tissues. (severity of effects depends on extent of exposure)
Contains crystalline silica (as quartz, cristobalite, tridymite, or tripoli) which is listed as a cancer hazard if inhaled. Zeolite is a mineral, compound of silicates and oxides or various metals, which exhibits different properties from a simple mixture of the component molecules. Zeolite materials are less irritating and have lower acute and chronic toxicity than the other component molecules. The primary hazard of this product is associated with heat generated upon contact with water.

Potential Health Effects:

- Eyes:** Prolonged or repeated exposure to the dust may cause discomfort and irritation seen as tearing and reddening.
- Skin:** This product may cause drying of the skin. This material becomes hot when it first comes in contact with moisture. The hot material could cause thermal burns.
- Ingestion:** This product gets hot as it absorbs water. Burns to moist body tissue can result if contact is prolonged.
- Inhalation:** Can cause lungs effects, coughing, wheezing, and breathing difficulties
- Medical Effects Generally Aggravated by Exposure:** Respiratory disease or diminished respiratory capacity.
- Chronic Effects/Carcinogenicity:** Contains crystalline silica (as quartz, cristobalite, tridymite, or tripoli) which is listed as a cancer hazard if inhaled.

Section 3 – Composition / Information On Ingredients

Component Name	CAS Number	% BY WEIGHT	EC #	ANNEX #
Zeolite	1318-02-1	75 -85 %	930-915-9	Not Listed
Clay, montmorillonite	1318-93-0	15 – 25 %	215-288-5	Not Listed
This SDS contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.				

Section 4 – First Aid Measures

- Eyes:** Rinse eyes well with water while lifting the eye lids. If irritation persists, consult a physician.
- Skin:** Wash affected area with soap and water.
- Ingestion:** Ingestion is unlikely. This material will pass through the body normally.
- Inhalation:** Remove the affected person to fresh air and get medical attention if necessary.
- Notes to Physician:** Not applicable.

Section 5 – Fire Fighting Measures

- Flammable Properties:** Not flammable
- Flash Point:** Not applicable **Method:** Not applicable
- Flammable Limits:** Not flammable
- **Lower Flammability Limit:** Not applicable
 - **Upper Flammability Limit:** Not applicable
- Auto-ignition Temperature:** Not applicable
- Hazardous Combustion Products:** Not applicable
- Extinguishing Media:** Use extinguishing media that is appropriate for the surrounding fire.
The molecular sieve is not combustible.
- Fire Fighting Instructions:** Not combustible.
- Unusual Fire and Explosion Hazards:** Molecular sieve gets hot enough to burn tissue when it absorbs moisture rapidly. Use an excess of water to cool the molecular sieve

Section 6 – Accidental Release Measures

- Spill:** Sweep or vacuum up and place the spilled material in a waste disposal container.
Avoid raising dust. Wash with soap and water after handling. See section 8 for personal protective equipment.

Section 7 – Handling And Storage

- Handling:** Avoid raising dust and minimize the contact between worker and the material.
Practice good hygienic work practices.
- Storage:** Store in a cool, dry location. Keep in sealed containers away from moisture. The molecular sieve will readily adsorb moisture.
- Incompatibility:** None

Section 8 – Exposure Controls/Personal Protection

- Engineering Controls:** Use general and local exhaust ventilation for nuisance dust and to prevent concentrations of dust or mist in the work place. Ventilation requirements will depend on the process and should be adequate to avoid exceeding TLV's.
- Respiratory Protection:** Avoid breathing dust. Where airborne exposure limits are exceeded use a NIOSH approved respirator with a dust cartridge.
- Skin Protection:** Light gloves made of polyvinyl chloride, neoprene, nitrile or natural rubber will protect against abrasion of the skin.
- Eye Protection:** Wear safety glasses with side shields, safety goggles, especially in dusty conditions.

Exposure Limits			
Component Name	Osha Pel	ACGIH TLV	Other Recommended Limits
Zeolite	Not Applicable	Not Applicable	Not Applicable

China

STEL 10 mg / m³ (total dust)

TWA 5 mg / m³ (total dust)

Russia

STEL 6 mg / m³

TWA 2 mg / m³

Exposure Limits			
Component Name	OSHA PEL	ACGIH TLV	Other Recommended Limits
Clay, montmorillonite	Not Applicable	Not Applicable	Not Applicable

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Tan Bead or pellet	Vapor Density:	Not applicable
Odor:	None	Boiling Point:	Not applicable
Physical State:	Solid bead or pellet	Melting Point:	Not applicable
PH:	8-11	Solubility:	Insoluble in water
Vapor Pressure:	Not applicable	Specific Gravity:	Not applicable
Flammable:	Not applicable	Auto-Ignition Point:	Not applicable
Flash Point:	Not applicable	Flammable Limits:	Not applicable
Odor Threshold:	None	Evaporation Rate:	Not applicable
Partition Coefficient N-Octanol / Water:	Not applicable	Decomposition Temperature:	Not known
VISCOSITY:	Not applicable		

Section 10 – Stability And Reactivity

Stability: Stable

Conditions to avoid: Moisture and high humidity environments.

Incompatibility: None

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur

Reactivity: None

Section 11 – Toxicological Information

Animal Toxicology:

Dermal LC50 Rabbit > 2000 mg / kg (source NLM_CIP)*

Inhalation LC50 Rat 2.4 mg / L 1 hr (Source IUCLID)*

Oral LD50 Rat 5000 mg / kg (Source IUCLID)*

* Zeolite

Human Toxicology: No data available but no adverse effects are expected.

Section 12 – Ecological Information

Environmental: Not known to have any adverse effects on the aquatic environment. Molecular sieve is insoluble and non toxic.

Ecotoxicity: 96 Hr EC50 *Desmodesmus subspicatus*: 18 mg / L*

96 Hr LC50 *Brachydanio rerio*: 1800 mg / L (semis-static)*

96 Hr LC50 *Oryzias latipes*: 3200 – 5600 mg / L (semi-static)*

96 Hr LC50 *Poecilia reticulata*: 1800 – 3200 mg / L (semi-static)*

48 Hr EC50 *Daphnia magna*: 1000 – 1800 mg / L*

* Zeolite

Persistence and degradability: Not available

Bioaccumulative potential: Not available

Mobility in soil: Not available

Other adverse effects: Not available

Section 13 – Disposal Information

Disposal Information:

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Materials of a hazardous nature that contact the product during normal use may be retained on the product. The user of the product must identify the hazards associated with the retained material in order to assess the waste disposal options. Dispose according to federal, state, provincial and local regulations.

Section 14 – Transportation Information

U.S. Department of Transportation Shipping Name: Not classified as a hazardous material. Not regulated. Non dangerous per IATA-DG regulations.

Section 15 – Regulatory Information *(Not Meant To Be All Inclusive - Selected Regulations Represented)*

TSCA Listed: Yes

OSHA: See section 8

ACGIH: See section 8

DOT: Not classified as a hazardous material.

Section 16 – Other Information**HMIS – Hazardous Materials Identification System**

HMIS RATING	
Health:	1
Flammability:	0
Physical:	0

The HMIS rating information is intended solely for the use of individuals trained in the HMIS rating system.

The NPCA specifically recommends that preparers of SDS should not place HMIS PPE designation codes on the SDS or labels that leave the facility as it is not known the conditions under which the customer will use this product.

Date of Preparation: May 29, 2015

This data and recommendations presented in this data sheet concerning the use of our product and the materials contained therein are believed to be correct but does not purport to be all inclusive and shall be used only as a guide. However, the customer should determine the suitability of such materials for his purpose before adopting them on a commercial scale. Since the use of our products is beyond our control, no guarantee, expressed or implied is made, and no responsibility assumed for the use of this material or the results to be obtained there from. Information on this form is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this data sheet are not to be construed as a license to operate under, or a recommendation to infringe any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.