



MATERIAL SAFETY DATA SHEET – August 13, 2002
Tri-Sorb®
Packaged Desiccant

SECTION I -- PRODUCT IDENTIFICATION

Product: Z3-01, 02, 03, 04; Z4-01, 02; Z5-01, 02; Z10-01
Molecular Sieve 3A-Z8, 3A-Z8-02, 4A-Z8, 5A-Z8, 13X-Z8

Chemical Family	Molecular Sieve; Zeolite
Chemical Name	Synthetic Sodium, Potassium or Calcium Aluminosilicate
Formula	$Mx/n[(AlO_2)_x(SiO_2)_y].wH_2O$

SECTION II (A) – INGREDIENTS

COMPONENT	CAS No.	Zeolite Type
Zeolite, NaA	68989-22-0	4A
Zeolite, KA	68989-21-9	3A
Zeolite, CaA	68989-20-8	5A
Zeolite, NaX	68989-23-1	13X
Mg Aluminosilicate	1327-43-1	Clay

SECTION II (B) -- PRODUCT ANALYSES & EXPOSURE LIMITS

COMPONENT	CAS No.	%	OSHA/PEL	ACGIH/TLV
Zeolite	See above	75-85	10 mg/m ³	10mg/m ³
Mg Aluminosilicate	1327-43-1	15-25	10 mg/m ³	10mg/m ³
Quartz	14808-60-7	0-2	10 mg/m ³ /(%SiO ₂) 30 mg/m ³ /(%SiO ₂)	0.1mg/m ³

SECTION III -- PHYSICAL DATA

Appearance and Odor	Light tan bead or pellet, odorless.
Melting Point	>2900 deg F; >1600 deg C
Solubility in Water	Insoluble
Bulk Density	0.68 g/ml; 42.4 lbs./cu. ft.
Percent Volatile by Weight	<5%



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SECTION IV -- FIRE EXPLOSION DATA

Fire and Explosion Hazard

Negligible fire and explosion hazard when exposed to heat or flame by reaction with incompatible substances.

Flash Point

Nonflammable.

Firefighting Media

Dry chemical, water spray, or foam. For larger fires, use water spray fog or foam.

Firefighting

Nonflammable solids, liquids or gases: Cool containers that are exposed to flames with water from the side until well after fire is out. For massive fire in enclosed area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of the tank due to fire.

SECTION V -- HEALTH HAZARD DATA

Health hazards may arise from inhalation, ingestion, and/or contact with the skin and/or eyes. Ingestion may result in damage to throat, esophagus, and/or gastrointestinal tract. Inhalation may cause burning of the upper respiratory tract and/or temporary or permanent lung damage. Prolonged or repeated contact with the skin, in the absence of proper hygiene, may cause dryness, irritation, and/or dermatitis. Contact with the eye tissue may result in irritation, burns or conjunctivitis.

This product contains a small amount of crystalline silica which may cause delayed respiratory disease if inhaled over a prolonged period of time. IARC Monographs on the evaluation of the Carcinogenic Risk of Chemicals to Humans (volume 42, 1987) concludes that there is "limited evidence of the carcinogenicity of crystalline silica to humans. IARC classification 2A.



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First Aid (Inhalation)

Remove to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

First Aid (Ingestion)

If large amounts have been ingested, give emetics to cause vomiting. Stomach siphon may be applied as well. Milk and fatty acids should be avoided. Get medical attention immediately.

First Aid (Eyes)

Wash eyes immediately and carefully for 30 minutes with running water, lifting upper and lower eyelids occasionally. Get prompt medical attention.

First Aid (Skin)

To avoid repeated or prolonged contact with this chemical, use good hygienic practices. Wash with soap and a large amount of water. Get medical attention if irritation or inflammation develops.

NOTE TO PHYSICIAN - This product is a desiccant and generates heat as it adsorbs water. The used product can contain material of hazardous nature. Identify that material and treat accordingly.

SECTION VI -- REACTIVITY DATA

Reactivity

Is stable under normal temperatures and pressures in sealed containers. Hazardous polymerization will not occur. Moisture can cause rise in temperature, which may result in a burn. Avoid sudden contact with high concentrations of chemicals having high heats of adsorption such as olefins, HCl, etc.

SECTION VII -- SPILL OR LEAK PROCEDURES

Notify safety personnel of spills or leaks. Clean-up personnel need protection against inhalation of dusts or fumes. Eye protection is required. Vacuuming and/or



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wet methods of cleanup are preferred. Place in appropriate containers for disposal, keeping airborne particulates at a minimum.

Disposal

Consult applicable local, state, and federal regulations to select the method of disposal. Recover metal components by reprocessing whenever possible.

SECTION VIII -- SPECIAL PROTECTION INFORMATION

Respiratory Protection

Provide a NIOSH/MSHA jointly approved respirator in the absence of proper environmental control. Contact your safety equipment supplier for proper mask type.

Ventilation

Provide general and/or local exhaust ventilation to keep exposures below the TLV. Ventilation used must be designed to prevent spots of dust accumulation or recycling of dusts.

Protective Clothing

Wear protective clothing, including long sleeves and gloves, to prevent repeated or prolonged skin contact.

Eye Protection

Chemical splash goggles designed in compliance with OSHA regulations are recommended. Consult your safety equipment supplier.

Health Hazard	0
Flammability	0
Reactivity	0
Personal Protection	See Section 8 (above)

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* No Information Available