Section 1 – PRODUCT AND COMPANY INFORMATION

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Prepared/Revised January 19, 2007
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Part Numbers	4A	127918	127919	127920	127921	127922	127923
	13X	127924	127925	127926	127927	127928	127929

Product use Designed to remove moisture from gases including water from air. Used as a premium drier medium for plastics industry to dry pellets of polymers and related resins.

Hazardous Material Information System

Health 1*	Flammability 0	Reactivity 1	Protection X
0 Normal use Material	0 Will Not Burn	0 Stable	X = Consult the MSDS and your supervisor for your special workplace need
1 Slight Hazard (temporary)	1 Possible to Burn	1 Unstable if Heated	
2 Health Affected (lengthy)	2 Burns if Heated	2 Violent Chemical Change	
3 Extreme Danger	3 Easily Burns	3 Shock and Heat Sensitive	
4 Severe or Fatal	4 Very Easily Burns	4 May Explode	
* Chronic (Accumulates)			

NOTE The HMIS may not be enough hazard information for this chemical in all workplaces. The HMIS system requires employee training about the system and about information in this MSDS.

Section 2 – INGREDIENTS INFORMATION

Chemical/Common Name	CAS-Number	%	PEL-OSHA	TLV-ACGIH
Zeolite, Sodium Oxide	1344-00-9	70 to 90	10 mg/m^3 (3)	10 mg/m^3 (3)
Magnesium Aluminosilicate	1327-43-1	10 to 30	10 mg/m^3	10 mg/m^3
Quartz (1) (2)	14808-60-7	< 0.5	250 mppcf (4)	0.05 mg/m^3 (5)

(1) WARNING: This product contains a chemical known to the State of California to cause cancer, or birth defects, or other reproductive harm.

(2) Carcinogenicity - Ingredient is listed by IARC as a Group 1, carcinogen; NTP and OSHA as carcinogen; ACGIH as A2.

(3) As nuisance dust

(4) Total dust

(5) Respirable dust

Section 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW Repeated overexposure may cause eye, skin, eating and breathing irritation. For large spills, wear appropriate personal protective equipment. Collect released product by sweeping, vacuuming, scooping, shoveling, etc. Keep dry - away from all liquids, and also from air with high moisture.

CAUTION Slippery; round balls can cause falls if walked on.

HEALTH EFFECTS - (Acute and Chronic):

Mouth May result in damage to throat, esophagus, and/or gastro-intestinal tract.

Nose May cause burning of the upper respiratory tract and/or temporary or permanent lung damage. Contains a small amount of crystalline silica, which may cause delayed respiratory disease, if inhaled over a prolonged period of time.

Eye May result in irritation, burns, or conjunctivitis.

Skin Repeated or prolonged contact in the absence of proper hygiene, may cause dryness, irritation, and/or dermatitis.

PRIMARY ROUTES OF ENTRY Mouth, nose, eyes, skin

TARGET ORGANS, MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE None expected unless there is gross overexposure. Otherwise, respiratory ailments.

Section 4 – FIRST AID MEASURES

NOTE If any irritation persists, get medical help.

Breathing Remove to fresh air immediately. Keep person warm and quiet. Apply artificial respiration if breathing has stopped. If breathing is difficult, give oxygen, and Get Medical Help Immediately. If lung irritation, dizziness, nausea, or unconsciousness occurs, get emergency medical attention immediately.

Eating If large amounts have been eaten, give lots of water to drink and also give emetics (any liquid that can cause vomiting), quickly. Stomach siphon may be applied as well. AVOID milk and fatty acids! Get medical attention immediately.

Eye Flush thoroughly with water for at least 20 minutes. May cause temporary eye irritation. Get prompt medical attention.

Skin Wash with soap and water. Launder clothes before re-use.

NOTE **TO PHYSCIAN** this product is a desicant and generates heat as it adsorbs water, even from the air. Treat symptomatically. Also, the used product can contain other materials of hazardous nature. Identity the other materials and treat accordingly.

Section 5 – FIRE FIGHTING MEASURES

Flash Point (COC) .....Non-Flammable Flammable Limits .....LEL = ND UEL = ND

Autoignition temperature.....NA NFPA 0-0-1-NA

Extinguishing Media Foam, Dry Chemical, Water Deluge. Using water to cool exposed containers may be useful.

Special Fire Fighting Procedures Wear Self Contained Breathing Apparatus (SCBA). Use lots of water because a little water may cause heat releasing chemical reaction up to the point of causing water to boil. Water spray may be used to cool closed containers. Prevent runoff from entering streams, sewer, or drinking water supply.

Unusual Fire and Explosion Hazards A little water will cause an exothermic reaction up to the temperature of boiling water. Flooding with water will reduce the temperature to safe limits.

Section 6 – ACCIDENTAL RELEASE MEASURES

Steps to be Taken in Case Material is Released or Spilled Avoid creating or raising dusts. Use protective equipment consistent with the situation. Cleanup personnel need protection against inhalation of dusts or fumes. Eye protection is required. If not contaminated, vacuuming or wet methods of cleanup are recommended and preferred. Otherwise, cleanup according to the safety or environmental hazards of the contaminants. Place in appropriate containers for disposal keeping airborne particulate at a minimum. Store in closed containers for proper disposal. Remove all of the product to prevent a slippery condition. Being small round balls, it will be very slippery if walked on. Do not let contaminated product get to drains, sewers, public water source, or rainfall. Potential for creating static electricity when pouring any such small dry solid material. Ground persons or the process to prevent handlers from static shocks. Do not pour or transfer in an atmosphere of flammable vapors or gases.

Waste Disposal Methods Consult Federal, State, and Local regulations. Direct landfill at approved location is anticipated. Do not reuse or burn containers.

Section 7 – HANDLING AND STORAGE

Storage - Keep container sealed at all times. Open container slowly to avoid creating or raising dust. Keep container tightly sealed closed to prevent exposure to air moisture during storage. Water moisture in small amounts can cause intense heating reaction, enough to burn skin and to boil water, possibly to even higher temperatures.

Precautions to be Taken in Handling and Storage Store in cool, dry area out of direct sunlight. Do not puncture, burn, or store above 120° F (49° C).

Transfer or pouring Applications High potential for creating static electricity when pouring any such small dry solid material. Ground persons or the process to prevent handlers from static shocks. Do not pour or transfer in an atmosphere of flammable vapors or gases. Where exposure exceeds the TLV, use a NIOSH/MSHA approved respirator, goggles, rubber gloves, and protective clothing.

Maintenance Precautions Do not remove or deface label.

Handling Wash after handling, and before eating, drinking, or using tobacco products.

Other Precautions Read and follow directions and cautions on the container label, and any accompanying literature. Spills could make floors slippery from the small round balls structure. Use housekeeping and work rules to prevent slipping.

Section 8 – EXPOSURE CONTROLS – PERSONAL PROTECTION

GENERAL Provide general and/or local exhaust ventilation to keep exposure below the threshold limit value. Ventilation used must be designed to prevent spots of dust accumulation or recycling of dusts. General room ventilation may be adequate to maintain components below TLV/PEL, if handled at ambient temperatures, or in covered equipment. Local exhaust ventilation or other engineering controls may be required, if ambient temperatures are exceeded, or if used in operations without good air circulation. It is good practice to limit exposure to any dust to the OSHA nuisance dust exposure limit of 10 mg/m^3 TWA.

Apron or other body covering is recommended where there is a possibility of regular work clothing becoming contaminated with the product. All soiled or dirty clothing and personal protective equipment should be cleaned before reuse.

Respiratory Protection Provide NIOSHA/MSHA jointly approved respirator in the absence of proper environmental control. If the exposure limit is exceeded, an approved dust mask should be used (consult your safety equipment supplier). If exposures exceed limits by less than a factor of ten, use a NIOSH approved, ½ mask facepiece respirator for particulate matter. If exposures exceed 10 times the recommended limits, consult a professional industrial hygienist or your respiratory protective equipment supplier for selection of the proper equipment.

Protective Gloves Where prolonged or repeated contact with the product is likely, use dust blocking materials or fabrics for personal protective equipment, gloves, and clothing, that will prevent repeated or prolonged skin contact.

Other Protective Equipment If contact with dust is likely, eye protection is recommended. Chemical Dust Monogoggles will provide protection in most situations.

Other Engineering Controls To determine exposure levels, monitoring should be performed. Eye bath and safety shower station should be available.

Work Practices Use enough ventilation to maintain the concentration of the product and its components below their exposure limits. Avoid long-term or repeated contact. Clothing containing product should be removed and laundered before reuse. High potential for creating static electricity when pouring any such small dry solid material. Ground persons or the process to prevent handlers from static shocks. Do not pour or transfer in an atmosphere of flammable vapors or gases. Sudden release of hot vapor or mist from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under vacuum, may result in decomposition without obvious source of heat. All uses of this product in elevated-temperature processes must be thoroughly evaluated to establish and maintain safe operating conditions.

Hygienic Practices As with using any dry chemical product, avoid contact with skin and avoid breathing dusts, do not eat, drink, or smoke in work area; wash hands prior to eating, drinking or using restroom after handling or using. Any dusty product can contaminate tobacco, causing illness (from inhaling components heated in tobacco smoke or ingested from handling tobacco and/or food products).

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	NA	Specific Gravity (Water=1)	0.68
Vapor Pressure (mm Hg at 70° F (21° C)	NA	Percent Volatile by Volume (%)	NA
Vapor Density (Air=1)	NA	Evaporation Rate (ether=1)	NA
VOC	NA	Pour point	NA
Solubility in Water	NIL	pH	Neutral when dry,
Melting point	>2900° F (>1600° C)	pH	8 to 11 when wet
Viscosity, cSt	NA	Odor threshold	ND

Appearance small hard round balls (spheres), light tan color, odorless.

Section 10 – STABILITY AND REACTIVITY

Incompatibility (reactivity, materials to avoid)	Sudden contact with high concentrations of chemicals having high heats of adsorption such as olefins, HCl, HF, etc. Strong caustics (strong acids, strong bases). Water, in small amounts, when not in designed usage.
Product Chemically Stable?	Yes, under normal temperatures and pressures, in sealed containers.
Conditions to keep Stability	Keep dry, product is hygroscopic

Decomposition Products Carbon monoxide, carbon dioxide, water, and incompletely burned contaminants products would be expected.
Sensitive to mechanical impact None
Sensitivity to static discharge (ESD) Higher than normal potential to being a source of ESD, as the pouring or transfer of any dry small solid particles. Ground persons or the process to prevent static shock to persons handling.

Section 11 – TOXICOLOGICAL INFORMATION

LC_{50} Rat - ND
LD_{50} Rat 32,000 mg/Kg; rabbit dermal 2,000 mg/kg
Reproductive Toxicity ND
Irritancy, sensitivity Non-Hazardous. See other sections, 3 - Hazard Identification, 4 - First Aid, and 15 – Regulatory Information.

Section 12 – ECOLOGICAL INFORMATION

No ecological issues known.

Section 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Methods If any organic material is adsorbed, put into sealed, air tight, containers to prevent spontaneous combustion. Observe all warnings and precautions listed for the product. Observe proper safety and handling. Do not allow empty containers to be used for any purpose except to store and ship product. Recovered product may be reused if compatible with users processes. Contaminated material may be disposed of in a permitted waste management facility suitable for the contamination. Do not puncture or burn containers. Reclamation/recycling is encouraged where possible. Where reclamation is not practical, this product may be land filled where permitted by Federal, State, County/Provincial, and Local regulations. Never dispose by means of public sewers or drainage.

Section 14 – TRANSPORT INFORMATION

Ground (US DOT) Not Regulated
Air (IATA) ..... Not Regulated
Vessel..... Not Regulated
EEC Packing Labeling .... Not Regulated

Section 15 – REGULATORY INFORMATION

CFC, Class 1, Class 2	N	OSHA listed	Y
EPA - CAA	N	PROP 65 listed	Y
EPA - CWA	N	RCRA listed	N
EU Risk Phrase #'s	R36 R37 R38	SARA 313 list	N
EU Safety Phrase #'s	S22 S26 S37 S39	TSCA listed	Y
FDA-21 CFR 174.5 (2) (d)	N	USDA H-1, -2	N
IDLH	N	WHMIS	Y
IARC	1	TDG	N
NTP	Y	ADR	N

This product has been classified in accordance with hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16 – OTHER INFORMATION

CAUTION Intentional misuse of this chemical product, as with any industrial chemical in contact with the body, can be harmful or fatal. This includes such things as deliberately breathing, placing in mouth, swallowing, placing on skin, or any other body contact, or repeated, or continuous contact.

IMS provides this information in good faith, but makes no representation as to its comprehensiveness or its accuracy. This document is offered as a guide to a trained person, for appropriate precautionary handling. Persons using the product and receiving the information must exercise independent judgment in determining the appropriateness of the use and the safety information for their particular purpose. IMS MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THIS INFORMATION OR TO THE PRODUCT. ACCORDINGLY, IMS WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE ON THIS INFORMATION.

ACGIH	American Conference of Governmental Industrial Hygienists	NA	Not Applicable, Not Available
AKA	Also Known As, Synonym	ND	Not Determined
CAS	Chemical Abstract Service	NIL	Not measurable, significant, noticeable, or no affect
GRAS	Generally Recognized As Safe by FDA rule or listing	NTP	National Toxicology Program
H-1, -2	USDA, plant process chemicals that do not touch food stuff	OSHA	Occupational Safety and Health Administration
IARC	International Agency for Research of Cancer	ppm	parts per million
IDLH	Immediately Dangerous to Life or Health, exposure rate/volume	USDA	U S Department of Agriculture
mg/m^3	milligrams per Cubic Meter	Y	Yes, Does Exists, Is Listed,
N	No, None, Not listed, Not Known		