

UOP LLC -- MOLSIV ADSORBENTS 13X 1/16 -- 6850-00-865-2418

===== Product Identification =====

Product ID:MOLSIV ADSORBENTS 13X 1/16

MSDS Date:10/01/1999

FSC:6850

NIIN:00-865-2418

Status Code:A

MSDS Number: CKXTJ

=== Responsible Party ===

Company Name:UOP LLC

Address:25 E. ALGONQUIN ROAD

City:DES PLAINES

State:IL

ZIP:00017-6017

Country:US

Info Phone Num:847-391-2189

Emergency Phone Num:847-391-2123

Resp. Party Other MSDS Num.:F8936501

Chemtec Ind/Phone:(800)424-9300

CAGE:TO600

=== Contractor Identification ===

Company Name:PHOENIX INDUSTRIES INC

Address:1519 CHAMBERLAYNE PARKWAY

Box:City:RICHMOND

State:VA

ZIP:23222

Country:US

Phone:804-264-5183/FAX: 264-5535

Contract Num:SP0450-02-M-D504

CAGE:0YED2

Company Name:UOP LLC

Address:25 E. ALGONQUIN ROAD

Box:City:DES PLAINES

State:IL

ZIP:60017-5017

Country:US

Phone:847-391-3189

CAGE:TO600

===== Composition/Information on Ingredients

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Ingred Name:SILICON OXIDE (SYNTHETIC)

CAS:7631-86-9

< Wt:65.

Other REC Limits:NOT PROVIDED

OSHA PEL:15 MG/M3 TDUST

OSHA STEL:5 MG/M3 (RESPIR)

ACGIH TLV:10 MG/M3 (INHALE)

ACGIH STEL:3 MG/M3 (RESPIR)

Ingred Name:ALUMINUM OXIDE (NON-FIBROUS)

CAS:1344-28-1

RTECS #:BD1200000

< Wt:35.

Other REC Limits:NOT PROVIDED

OSHA PEL:15 MG/M3 TDUST

OSHA STEL:5 MG/M3 (RESPIR)

ACGIH TLV:10 MG/M3

Ingred Name:SODIUM OXIDE

CAS:1313-59-3

< Wt:20.

Other REC Limits:NOT PROVIDED

OSHA PEL:N.E

OSH

A STEL:N.E

ACGIH TLV:N.E.

ACGIH STEL:N.E.

Ingred Name:MAGNESIUM OXIDE

CAS:1309-48-4

RTECS #:OM3850000

< Wt:5.

Other REC Limits:NOT PROVIDED

OSHA PEL:N.E.

OSHA STEL:N.E.

ACGIH TLV:N.E.

ACGIH STEL:N.E.

Ingred Name:QUARTZ

CAS:14808-60-7

RTECS #:VV7330000

< Wt:2.

Other REC Limits:NOT PROVIDED

OSHA PEL:TD-30/(%SIO2+2)

OSHA STEL:RD-10(%SIO2+2)

ACGIH TLV:0.1 MG/M3 (RESPIR)

===== Hazards Identification =====

LD50 LC50 Mixture:LD50 (ORAL, RAT) > 32,000 MG/KG

Ro

utes of Entry: Inhalation: YES Skin: YES Ingestion: NO
Reports of Carcinogenicity: NTP: YES IARC: YES OSHA: NO
Health Hazards Acute and Chronic: TARGET ORGANS: PROLONGED OR REPEATED
INHALATION MAY CAUSE LUNG INJURY/CANCER. SKIN: MAY CAUSE SKIN
IRRITATION. THE PRODUCT GETS HOT AS IT FIRST ADSORBS WATER. EYE:
DUST AND/OR PRODUCT MAY CAUSE EYE DISCOMFORT AND/OR IRRITATION
SEEN AS TEARING AND REDDENING. INGESTION: THE PRODUCT GETS HOT AS
IT FIRST ADSORBS WATER. BURNS TO MOIST BOD

Y TISSUES CAN RESULT IF

CONTACT IS PROLONGED. INHALATION: EXPOSURE TO DUST PARTICLES
GENERATED FROM THIS MATERIAL MAY CAUSE IRRITATION OF THE
RESPIRATORY TRACT. REPEATED AND PROLONGED INHALATION OF CRYSTALLINE
SILICA IN THE FORM OF QUARTZ FROM OCCUPATIONAL SOURCES MAY CAUSE
CANCER.

Explanation of Carcinogenicity: IARC: SILICON
DIOXIDE(SYNTHETIC)-UNCLASSIFIABLE AS TO CARCINOGENICITY IN HUMANS
(GROUP 3). INHALED CRYSTALLINE SILICA IN THE FORM OF QUARTZ FROM
OCCUPAT

IONAL SOURCES IS CARCINOGENIC TO HUMANS (IARC GROUP I).

NTP: QUARTZ-REASONABLY ANTICIPATED TO BE A HUMAN CARCINOGEN. OSHA:
NEITHER THE PRODUCT NOR THE COMPONENTS ARE CLASSIFIED OR REGULATED.

Effects of Overexposure: EYE: DUST AND/OR PRODUCT MAY CAUSE EYE
DISCOMFORT AND/OR IRRITATION SEEN AS TEARING AND REDDENING.

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===== First Aid Measures =====

First Aid: EYE: RINSE IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15
MINUTES. IF EYE IRRITATION P

ERSISTS, CONSULT A PHYSICIAN. SKIN:

WASH OFF WITH SOAP AND PLENTY OF WATER. IF SKIN IRRITATION
PERSISTS, CALL A PHYSICIAN. AFTER INHALATION: REMOVE THE VICTIM
INTO FRESH AIR. IF SYMPTOMS PERSIST, CALL A PHYSICIAN. AFTER
INGESTION: IMMEDIATELY GIVE LARGE VOLUME OF WATER TO DRINK. IF
SYMPTOMS PERSIST, CALL A PHYSICIAN. NOTE TO PHYSICIAN: THIS
PRODUCT IS A DESSICANT AND GENERATES HEAT AS IT ADSORBS WATER. THE
USED PRODUCT CAN CONTAIN MATERIAL OF A HAZARDOUS NATURE. IDENTIFY

TIFY

THAT MATERIAL AND TREAT SYMPTOMATICALLY.

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===== Fire Fighting Measures =====

Flash Point: N.A.

Autoignition Temp: Autoignition Temp Text: N.A.

Lower Limits: N.A.

Upper Limits: N.A.

Extinguishing Media: NON-COMBUSTIBLE. USE EXTINGUISHING MEDIA FOR
SURROUNDING FIRE.

Fire Fighting Procedures: IN THE CASE OF RESPIRABLE DUST AND/OR FUMES,
USE SELF-CONTAINED BREATHING APPARATUS AND DUST IMPERVIOUS
PROTECTIVE SUIT.

Unusual Fire/Explosion Hazard: STANDARD

PROCEDURE FOR CHEMICAL FIRES.

THE PRODUCT ITSELF DOES NOT BURN. THE USED PRODUCT CAN RETAIN MATERIAL OF A HAZARDOUS NATURE. IDENTIFY THAT MATERIAL AND INFORM THE FIRE FIGHTERS.

===== Accidental Release Measures =====

Spill Release Procedures:ENVIRONMENTAL PRECAUTIONS-NO SPECIAL ENVIRONMENTAL PRECAUTIONS REQUIRED. CLEAN-UP: SWEEP, SHOVEL OR VACUUM SPILLED PRODUCT INTO APPROPRIATE CONTAINERS (DO NOT USE A VACUUM IF MATERIAL HAS CONTACTED A HYDROCARBON MATERIAL). PICK-UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. NEVER USE SPILLED PRODUCT. SPILLED PRODUCT SHOULD BE DISPOSED IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT REGULATIONS.

===== Handling and Storage =====

Handling and Storage Precautions:HANDLING-HANDLE & OPEN CONTAINER WITH CARE. AVOID FORMATION OF RESPIRABLE PARTICLES. AVOID CONTACT WITH SKIN & EYES. TAKE PRECAUTIONARY MEASURE AGAINST STATIC DISCHARGE. OBTAIN A COPY OF UOP'S BOOKLET "PRECAUTIONS & SAFE PRACTICES FOR HANDLING MOLECULAR SIEVES IN PROCESS UNITS", M-100C, AT NO COST. Other Precautions:STORAGE-STORE IN ORIGINAL CONTAINER. KEEP IN A DRY PLACE.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IN CASE OF INSUFFICIENT VENTILATION WEAR SUITABLE RESPIRATORY EQUIPMENT. BREATHING APPARATUS WITH FILTER: CLASSIFICATION N-100 OR IF OIL/LIQUID AEROSOLS ARE PRESENT P-100 (42 CFR 84).

Ventilation:ENSURE ADEQUATE VENTILATION, ESPECIALLY IN CONFINED AREAS.
Protective Gloves:PROTECTIVE GLOVES.
Eye Protection:SAFETY GLASSES. AVOID CONTACT WITH EYES.
Other Protective Equipment:DUST IMPERVIOUS PROTECTIVE SUIT.
Work Hygienic Practices:HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES.

Supplemental Safety and Health
DISPOSAL-THIS PRODUCT (UNUSED STATE) IS NOT LISTED BY GENERIC NAME OR TRADEMARK NAME IN THE US EPA'S RCRA REGULATIONS & DOES NOT POSSESS ANY OF

THE FOUR IDENTIFYING CHARACTERISTICS OF HAZARDOUS WASTE (IDENTIFIABILITY, CORROSIVITY, REACTIVITY OR TOXICITY).

===== Physical/Chemical Properties =====

HCC:N1

Boiling Pt:B.P. Text:N.A.

Melt/Freeze Pt:M.P/F.P Text:N.A.

Vapor Pres:N.A.

Vapor Density:N.A.

Spec Gravity:NO DATA AVAILABLE.

pH:N.A.

Viscosity:N.A.

Solubility in Water:NO DATA AVAILABLE.

Appearance and Odor:FORM: PELLETS. COLOR: TAN. ODOR: NONE.

===== Stability and Reactivity Data =====

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Stability Indicator/Materials to Avoid:YES

SUDDEN CONTACT WITH HIGH CONCENTRATIONS OF CHEMICALS HAVING HIGH HEATS OF ABSORPTION SUCH AS OLEFINS, HCL, ETC. WHEN FIRST WETTED THE PRODUCT CAN HEAT UP TO THE BOILING POINT OF WATER. FLOOD WITH WATER TO COOL MATERIAL.

Stability Condition to Avoid:SUDDEN CONTACT WITH HIGH CONCENTRATIONS OF CHEMICALS HAVING HIGH HEATS OF ABSORPTION SUCH AS OLEFINS, HCL, ETC.WHEN FIRST WETTED THE PRODUCT CAN HEAT UP TO THE BOILING POINT OF WATER

Hazardous Decomposition Products:NO DECOMPOSITION IF USED AS DIRECTED. HYDROCARBONS AND OTHER MATERIALS THAT CONTACT THE PRODUCT DURING NORMAL USE CAN BE RETAINED. DECOMPOSITION PRODUCTS WILL COME FROM THESE RETAINED MATERIALS OF USE.

===== Toxicological Information =====

Toxicological Information:ACUTE TOXICITY: LD50/ORAL/RAT>32,000 MG/KG. LD50/DERMAL/RABBIT=NO DATA AVAILABLE. LC50/INHALATION/RABBIT=NO DATA AVAILABLE. CHRONIC TOXICITY: C

CLASSIFICATION OF INGREDIENTS. EC

CARCINOGENIC-NOT LISTED. EC MUTAGENIC-NOT LISTED. EC TOXIC FOR REPRODUCTION-NOT LISTED. CARCINOGENICITY (ACGIH): A4 (ALUMINUM OXIDE). IARC CLASSIFICATION: GROUP 3 (SILICON OXIDE-SYNTHETIC) GROUP 1 (QUARTZ). ROUTES OF EXPOSURE: EXPOSURE MAY OCCUR VIA INHALATION, CONTACT WITH SKIN & EYES. IRRITATION: SKIN(RABBIT)-NOT CLASSIFIED AS A SKIN IRRITANT IN ANIMAL TESTING. EYE(RABBIT)-MODERATE EYE IRRITATION.

===== Ecological

Information =====

Ecological: MOBILITY: NO DATA AVAILABLE. BIODEGRADATION: NO DATA AVAILABLE. BIOACCUMULATION: NO DATA AVAILABLE. AQUATIC TOXICITY: NO DATA AVAILABLE. FUTURE INFORMATION: NO DATA AVAILABLE.

===== Disposal Considerations =====

Waste Disposal Methods: MATERIALS OF A HAZARDOUS NATURE THAT CONTACT THE PRODUCT DURING NORMAL USE MAY BE RETAINED ON THIS PRODUCT. THE USER OF THE PRODUCT MUST IDENTIFY THE HAZARDS ASSOCIATED WITH THE RETAINED MATERIAL IN ORDER TO ASSESS THE WASTE DISPOSAL OPTIONS.
*SEE SUPPLEMENTAL.

===== MSDS Transport Information =====

Transport Information: PROPER SHIPPING NAME: NOT APPLICABLE. UN-NO: N.A. PACKAGING GROUP: N.A. U.S. DOT: NOT REGULATED. DOT SHIPPING NAME: N.A. HAZARD CLASSIFICATION: N.A. IMO: NOT REGULATED. EMS: N.A. MFAG: N.A. MARINE POLLUTANT: NO. ICAO-IATA: NOT REGULATED. INSTRUCTION "PASSENGER": N.A. INSTRUCTION "CARGO": N.A. FURTHER INFORMATION: NOT CLASSIFIED AS HAZARDOUS OR DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

===== Regulatory Information =====

SARA Title III Information: SARA TITLE III: SECTION 302 (EXTREMELY HAZARDOUS SUBSTANCES): THE FOLLOWING COMPONENT(S) OF THIS PRODUCT IS/ARE SUBJECT TO THE EMERGENCY PLANNING PROVISIONS OF 40 CFR 355 WHEN THERE ARE AMOUNTS EQUAL TO OR GREATER THAN THE THRESHOLD PLANNING QUANTITY (TPQ): --NONE--.

SECTION 313 (TOXIC CHEMICALS):

THE FOLLOWING COMPONENT(S) HAVE BEEN SPECIFIED AS TOXIC CHEMICALS UNDER SARA SECTION 313 & MAY BE SUBJECT TO THE TOXIC RELEASE INVENTORY (TRI) REPORTING REQUIREMENTS UNDER 40 CFR 372: --NONE--.

Federal Regulatory Information: TSCA: ALL THE INGREDIENTS OF THIS MIXTURE ARE REGISTERED IN THE TSCA CHEMICAL SUBSTANCE INVENTORY. CERCLA: THE FOLLOWING COMPONENT(S) OF THIS PRODUCT IS/ARE SUBJECT TO RELEASE REPORTING UNDER 40 CFR 302 WHEN RELEASE EXCE

EDS THE

REPORTABLE QUANTITY (RQ):--NONE--.

State Regulatory Information: CALIFORNIA-PROPOSITION 65: SILICA, CRYSTALLINE. MASSACHUSETTS RIGHT-TO-KNOW: QUARTZ, ALUMINUM OXIDE. NEW JERSEY RIGHT-TO-KNOW: SILICA, AMORPHOUS; ALUMINUM OXIDE; SILICA, QUARTZ. PENNSYLVANIA RIGHT-TO-KNOW: SILICA, ALUMINUM OXIDE, QUARTZ, MAGNESIUM OXIDE. NOTE: OTHER US STATE REGULATIONS MAY EXIST, CHECK YOUR LOCAL SOURCES IF AVAILABLE OR CONTACT THE UOP PRODUCT STEWARDSHIP MANAGER.

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===== Other Information =====

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