

UOP MOLECULAR SEIVE DIVISION -- MOLECULAR SIEVE TYPE 4A -- 6850-01-469-3292

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Product Identification
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Product ID:MOLECULAR SIEVE TYPE 4A

MSDS Date:02/01/1997

FSC:6850

NIIN:01-469-3292

MSDS Number: CKJYZ

=== Responsible Party ===

Company Name:UOP MOLECULAR SEIVE DIVISION

Address:25 E. ALGONQUIN ROAD

Box:5017

City:DES PLAINS

State:IL

ZIP:60017-5017

Country:US

Info Phone Num:847-391-3189 FA

X: 847-391-2953

Emergency Phone Num:847-391-3189

Resp. Party Other MSDS Num.:MSDS REV NO. 7

Chemtrec Ind/Phone:(800)424-9300

CAGE:02QC3

=== Contractor Identification ===

Company Name:ADCOA-ADSORBENTS AND DESICCANTS CORP OF AMERICA

Address:17000 S VERMONT AVENUE

Box:City:GARDENA

State:CA

ZIP:90247-5832

Country:US

Phone:310-532-6086

Contract Num:SP0450-00-M-SA49

CAGE:61134

Company Name:SUD-CHEMIE INC/SUB CHEMIE PERFORMANCE PACKAGING DIV

Address:926 SOUTH 8TH ST (FORMALLY HUMIDIAL)

Box:610

City:CO

LTON

State:CA

ZIP:92324-0610

Country:US

Phone:909-825-1793

Contract Num:SP0450-01-M-ZB26

CAGE:00334

Company Name:UOP LLC

Address:25 E ALGONQUIN RD

Box:City:DES PLAINES

State:IL

ZIP:60017-5017

Country:US

Phone:847-391-3189 FAX: 847-391-2953

CAGE:02QC3

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Composition/Information on Ingredients
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Ingred Name:SILICON OXIDE (SYNTHETIC)

CAS:112945-52-5

RTECS #:VV7310000

E
CAS:1313-59-3
< Wt:30.
Other REC Limits:NONE RECOMMENDED

Ingred Name:ALUMINUM OXIDE (NON-FIBROUS)
CAS:1344-28-1
RTECS #:BD1200000
< Wt:30.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9596

Ingred Name:MAGNESIUM OXIDE
CAS:1309-48-4
RTECS #:OM3850000
< Wt:5.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:15 MG/M3 PARTICULATE
ACGIH TLV:10 MG/M3; FUME; 9596

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

Routes of Entry: Inhalati
on:NO Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:UNKNOWN OSHA:NO
Health Hazards Acute and Chronic:TARGET ORGAN: PROLONGED OR REPEATED
EXPOSURE MAY CAUSE LUNG INJURY. SKIN:-THE PRODUCT DUST MAY DRY THE
SKIN. THIS MATERIAL BECOMES HOT WHEN IT FIRST COMES INTO CONTACT W/
MOISTURE. THE HOT MATERIAL CO ULD CAUSE THERMAL BURNS. EYE-DUST
&/OR PRODUCT MAY CAUSE EYE DISCOMFORT &/OR IRRITATION SEEN AS
TEARING & REDDENING. INGESTION-THE PRODUCT GETS HOT AS IT AB
SORBS
WATER. BURNS TO MOIST BODY TISSUES CAN RESULT IF CONTACT IS
PROLONGED. INHALATION-INHALATION OF PRODUCT &/OR DUST MAY CAUSE
IRRITATION OF THE RESPIRATORY TRACT. IRRITATION MAY BE ACCOMPANIED
BY COUGHING & CHEST DISCOMFORT.
Explanation of Carcinogenicity:INTERNATIONAL AGENCY FOR RESEARCH ON
CANCER (IARC): SILICON OXIDE (SYNTHETIC)-NOT CLASSIFIABLE AS HUMAN
CARCINOGEN (GROUP 3). U.S. NATIONAL TOXICOLOGY PROGRAM (NTP):
NEITHER THE PRODUCT NOR THE COMPON ENT(S) ARE

CLASSIFIED. U.S.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA): NEITHER THE PRODUCT NOR THE COMPONENT(S) ARE CLASSIFIED OR REGULATED.

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

First Aid:SKIN: WASH AFFECTED AREA WITH SOAP AND WATER. EYE: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. INGESTION: DRINK AT LEAST 2 GLASSES OF WATER. OBTAIN MEDICAL ATTENTION. INHALATION: REMOVE AFFECTED PERSON TO FRESH AIR. IF RESPIRATORY PROBLEMS DEVELOP, OBTAIN

MEDICAL ATTENTION. NOTES TO PHYSICIAN: THIS PRODUCT IS A DESICCANT AND GENERATES HEAT AS IT ABSORBS WATER. THE USED PRODUCT CAN CONTAIN MATERIAL OF A HAZARDOUS NATURE. IDENTIFY THAT MATERIAL AND TREAT SYMPTOMATICALLY.

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

Flash Point:NOT COMBUSTIBLE.

Autoignition Temp:Autoignition Temp Text:NP

Lower Limits:NOT GIVEN

Upper Limits:NOT GIVEN

Extinguishing Media:UNUSED MATERIAL WILL NOT BURN. USE MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Unusual Fire/Explosion Hazard:USED MATERIAL MAY CONTAIN MATERIALS OF A HAZARDOUS NATURE. THE USER OF THIS PRODUCT MUST IDENTIFY THE HAZARDS OF THE RETAINED MATERIAL AND INFORM THE FIRE FIGHTERS OF THESE HAZARDS.

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

Spill Release Procedures:SMALL SPILL: SWEEP OR VACUUM SPILLED PRODUCT INTO APPROPRIATE CONTAINER (DO NOT USE A VACUUM IF MATERIAL HAS CONTACTED A HYDROCARBON). PRODUCT SHOULD BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT REGULATIONS. "SEE OTHER INFORMATION"

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

Handling and Storage Precautions:STORE IN TIGHTLY CLOSED, PROPERLY LABELED CONTAINERS. A COPY OF UOP'S BOOKLET, " PRECAUTIONS AND SAFE PRACTICES FOR HANDLING MOLECULAR SIEVES IN PROCESS UNITS," M-1001, CAN BE OBTAINED FROM YOUR UOP REPRESENTATIVE AT NO COST.

Other Precautions:THIS PRODUCT (IN ITS FRESH UNUSED STATE)

ATE) IS NOT

LISTED BY GENERIC NAME OR TRADEMARK NAME IN THE U.S. EPA RESOURCE CONSERVATION & RECOVERY ACT (RCRA) HAZARDOUS WASTE MANAGEMENT REGULATIONS & DOES NOT POSSESS ANY OF THE FOUR IDENTIFYING CHARACTERISTICS OF HAZARDOUS WASTE (IGNITABILITY, CORROSIVITY, REACTIVITY, TOXICITY).

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

Respiratory Protection: WHERE NATURAL VENTILATION IS INADEQUATE, USE MECHANICAL VENTILATION, OTHER ENGINEERING CONTROLS, OR A TOXIC DUST RESPIRATOR (IN USA - NIOSH/MSHA APPROVED) TO PREVENT INHALATION OF PRODUCT DUST.

Ventilation: WHERE NATURAL VENTILATION IS INADEQUATE, USE MECHANICAL VENTILATION, OTHER ENGINEERING CONTROLS.

Protective Gloves: GLOVES AS NECESSARY TO PREVENT REPEATED OR PROLONGED SKIN CONTACT.

Eye Protection: SAFETY GLASSES OR GOGGLES AS NECESSARY TO PREVENT EYE CONTACT.

Other Protective Equipment: WORK UNIFORM AS NECESSARY TO PREVENT REPEATED/ PROLONGED SKIN CONTACT.

Supplem

ental Safety and Health

PRODUCT NAME: MOLECULAR SIEVE TYPE 4A. CHEMICAL NAME: SODIUM ALUMINOSILICATE. SYNONYMS: ZEOLITE. TRADE NAME: UOP MOLECULAR SIEVE.

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

HCC:N1

Boiling Pt: B.P. Text: NOT GIVEN

Melt/Freeze Pt: M.P/F.P Text: NOT GIVEN

Decomp Temp: Decomp Text: NOT GIVEN

Vapor Pres: NOT GIVEN

Vapor Density: NOT GIVEN

Spec Gravity: 1.1PC; 2.1CRYST

pH: 8 - 11

Viscosity: NA

Evaporation Rate & Reference: NOT GIVEN

Solubility in Water

r:NOT GIVEN

Appearance and Odor:TAN PELLETS/BEADS, WHITE POWDER OR CAKE, ODOR:NONE.

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

Stability Indicator/Materials to Avoid:YES

SUDDEN CONTACT WITH HIGH CONCENTRATIONS OF CHEMICALS HAVING HIGH HEATS OF ADSORPTION SUCH AS OLEFINS, HCl, ETC.

Stability Condition to Avoid:THE ADDITION OF MOISTURE (WATER) WITHOUT FLOODING CAN CAUSE RISE IN TEMPERATURE FROM HEAT OF ADSORPTION. CONTACT WITH SKIN MIGHT RESULT IN BURNS.

Haza

rdous Decomposition Products:HYDROCARBONS/OTHER MATERIALS THAT CONTACT THE PRODUCT DURING NORMAL USE CAN BE RETAINED ON THE PRODUCT. IT IS REASONABLE TO EXPECT THAT DECOMPOSITION PRODUCT WILL COME FROM THE RETAINED MATERIALS USED.

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

Toxicological Information:ACUTE ORAL TOXICITY: THE FOLLOWING IS FOR A PRODUCT WITH A SIMILAR COMPOSITION. THE LD50 IS GREATER THAN 5 G/KG (RAT). ACUTE DERMAL TOXICITY: A DERMAL LD50

0 IS NOT AVAILABLE FOR

THIS PRODUCT. ACUTE INHALATION TOXICITY:AN INHALATION LC50 IS NOT AVAILABLE FOR THIS PRODUCT. IRRITATION: NOT AVAILABLE. ADDITIONAL TOXICOLOGICAL INFORMATION: A SIMILAR PRODUCT HAS AS EXTREMELY LOW ORDER OF TOXICITY BY SWALLOWING. THIS SIMILAR PELLETS WERE PULVERIZED & SUSPENDED IN SEMI-SOLID AGAR FOR EASE OF ADMINISTRATION. WHEN THE MOLECULAR SIEVE WAS ADMINISTERED BY STOMACH INTUBATION TO MALE RATS, THE ANIMALS SURVIVED MASSIVE DOSES EQUIVALENT TO 32.0 G/K

IVALENT TO 32.0 G/K

===== Ecological Information =====

Ecological:AQUATIC TOXICITY: NONE KNOWN. WATERFOWL TOXICITY: NONE KNOWN. BIOCHEMICAL OXYGEN DEMAND: NONE. FOOD CHAIN CONCENTRATION POTENTIAL: NONE EXPECTED.

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

Waste Disposal Methods:DISCARD ANY PRODUCT (INCLUDING ANY RETAINED MATERIALS OF USE), DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL C

OMPLIANCE WITH ALL
APPLICABLE GOVERNMENT REGULATIONS. "SEE OTHER PRECAUTION"

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

Transport Information:US DEPARTMENT OF TRANSPORTATION SHIPPING NAME:
NOT REGULATED. INTERNATIONAL MARITIME ORGANIZATION (IMO): NOT
REGULATED.

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

SARA Title III Information:SUPERFUND AMENDMENTS & REAUTHORIZATION ACT
TITLE II, SECTION 313: THE FOLLOWING COMPONENT(S) OF
THIS PRODUCT
ARE SUBJECT TO RELEASE REPORTING UNDER 40 CFR 302 WHEN A RELEASE
EXCEEDS THE REPORTABLE QUANTITY (RQ) &/OR THE COMPONENT(S)ARE
SUBJECT TO THE EMERGENCY PLANNING PROVISIONS OF 40 CFR 355 WHEN
THERE ARE AMOUNTS PRESENT WHICH ARE EQUAL TO OR GREATER THAN THEIR
THRESHOLD PLANNING QUANTITY (TPQ). -NONE-. SUPERFUND AMENDMENTS &
REAUTHORIZATION ACT TITLE III: NO COMPONENTS OF THIS PRODUCT ARE
SUBJECT TO EMERGENCY PLANNING BASED ON TPQ'S & RELEASE REPORTING

BASED ON RQ'S IN 40 CFR 355 (USED FOR SARA 302, 304, 311 & 312).

Federal Regulatory Information:TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL
THE INGREDIENTS OF THIS MIXTURE ARE REGISTERED IN THE TSCA CHEMICAL
SUBSTANCE INVENTORY.

State Regulatory Information:STATE COMMUNITY RIGHT-TO-KNOW LEGISLATION:
THE FOLLOWING COMPONENTS OF THIS PRODUCT ARE REGULATED UNDER
CALIFORNIA'S PROPOSITION 65: NONE.

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

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department
of Defense. The United States of America in no manner whatsoever,
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document should seek competent professional advice to verify and
assume responsibility for the suitability of this information to their
particular situation.