

GRACE W R AND CO -- FORMED MOLECULAR SIEVE -- 6850-00-159-4466

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

Product ID:FORMED MOLECULAR SIEVE

MSDS Date:07/20/1998

FSC:6850

NIIN:00-159-4466

Status Code:A

MSDS Number: CKXNY

=== Responsible Party ===

Company Name:GRACE W R AND CO

Address:7500 GRACE DRIVE

City:COLUMBIA

State:MD

ZIP:21044

Country:US

Info Phone Num:410-531-4000 OR 410-531-4323

Emergency Phone Nu

m:410-531-4764; 301-874-2009

Resp. Party Other MSDS Num.:REF. NO. 2501

CAGE:1L2Z7

=== Contractor Identification ===

Company Name:DAVISON CHEMICAL DIVISION OF WR GRACE & COMPANY

Address:5500 CHEMICAL RD

Box:City:BALTIMORE

State:MD

ZIP:21226-1698

Country:US

Phone:410-354-8954

CAGE:7U659

Company Name:GRACE W R AND CO

Address:7500 GRACE DRIVE

Box:City:COLUMBIA

State:MD

ZIP:21044

Country:US

Phone:410-531-4000 OR 410-531-4323

Contract Num:SP0450-01-M-D499

CAGE:1L2Z7

===== Composition/Informa

tion on Ingredients =====

Ingred Name:SODIUM OXIDE
CAS:1313-59-3
OSHA PEL:NOT LISTED
ACGIH TLV:NOT LISTED

Ingred Name:CALCIUM OXIDE
CAS:1305-78-8
RTECS #:EW3100000
OSHA PEL:5 MG/M3
ACGIH TLV:2 MG/M3

Ingred Name:POTASSIUM OXIDE
CAS:12136-45-7
OSHA PEL:NOT LISTED
ACGIH TLV:NOT LISTED

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

LD50 LC50 Mixture:NO DATA PROVIDED BY MANUFACTURER

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

Health Hazards Acute and Chr

onic:MOLECULAR SIEVES ARE NON-FIBROUS,

SYNTHETIC ALUMINOSILCATES (ZEOLITES) NOT TO BE CONFUSED WITH NATURAL ZEOLITES. ALL STUDIES TO DATE INDICATE THAT THEY DO NOT CAUSE SIGNIFIGANT HEALTH PROBLEMS. WHEN A CTIVATED, MOLECULAR SIEVES ACT AS A DESSICANT AND CAN CAUSE DRYING IRRITATION OF THE MUCOUS MEMBRANES AND SKIN IN CASES OF SEVERE EXPOSURE. THE AVERAGE CONCENTRATION OF QUARTZ IN THIS MATERIAL IS LESS THAN 2% (MAXIMUM IS = 3.0). THE PRIMARY ROUTE OF ENTRY IS INHALATION.

Explanation of Carcinogenicity:THE MOST RECENT IARC CLASSIFICATION OF CRYSTALLINE QUARTZ IS THAT CRYSTALLINE SILICA INHALED IN THE FORM OF QUARTZ OR CRISTOBALITE FROM OCCUPATIONAL SOURCES IS CARCINOGENIC TO HUMANS (GROUP 1). QUARTZ CAN CAUSE CANCER, SILICOSIS OR OTHER FIBROTIC LUNG DISEASE WITH PROLONGED EXPOSURE.

Effects of Overexposure:AVOID PROLONGED BREAHING OF THE DUST OR CONTACT OF DUST WITH THE SKIN. THE DRYING ACTION OF THIS MATERIAL CAN CAUSE IRRITATION OF

THE MUCOUS MEMBRANES OF THE NOSE AND THROAT AND IRRITATION OF THE SKIN .

Medical Cond Aggravated by Exposure:DAVISON KKNOWS OF NO MEDICAL CONDITIONS ABNORMALLY AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

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First Aid Measures
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First Aid:EYES: IMMEDIATELY WASH FROM EYES WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING UPPER AND LOWER EYE LIDS. IF IRRITATION OCCURS AND PERSISTS, SEEK MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATE

R. INGESTION: MATERIAL WILL PASS THROUGH BODY NORMALLY. INHLATION: REMOVE TO FRESH AIR.

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Fire Fighting Measures
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Flash Point:NONFLAMMABLE

Extinguishing Media:NO DATA PROVIDED BY MANUFACTURER.

Fire Fighting Procedures:NO DATA PROVIDED BY MANUFACTURER.

Unusual Fire/Explosion Hazard:NO DATA PROVIDED BY MANUFACTURER.

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Accidental Release Measures
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Spill Release Procedures:VACUUM OR SWEEP UP OR FLUSH TO SEWER TRE ATED FOR SUSPENDE SOLIDS REMOVAL.

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Handling and Storage
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Handling and Storage Precautions:KEEP CONTAINERS TIGHTLY SEALED TO PROTECT PRODUCT QUALITY. WHEN POURING INTO A CONTAINER OF FLAMMABLE LIQUID, GROUND BOTH CONTAINERS ELECTRICALLY TO PREVENT A STATIC ELECTRIC SHOCK. WILL RELEASE HEAT WHEN ADSORBING WATER.

Other Precautions:WHEN TRANSFERRING BEADED MOLECULAR SIEVES WITH HIGH PRESSURE AIR, WEAR GOGGLES. MALFUNCTION OF EQUIPM ENT CAN PROPEL BEADS WITH ENOUGH VELOCITY TO PENETRATE SKIN. MAKE SURE THAT THE TRANSFER SYSTEM AND RECEIVING VESSELS ARE PROPERLY GROUNDED. FOLLOW STANDARD OPERATING INSTRUCTIONS. FOLLOWING CONTACT WITH TYPICAL (OTHER)

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Exposure Controls/Personal Protection
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Respiratory Protection:IF DUSTY CONDITIONS PREVAIL, USE OF AN APPROVED NIOSH/MSHA DUST MASK IS RECOMMENDED.

Ventilation:NO DATA PROVIDED BY MANUFACTURER.

Protective Gloves:LOOSE WEAVE COTT

ON GLOVES.

Eye Protection:WHEN TRANSFERRING BEADED MOLECULAR SIEVES WITH HIGH PRESSURE AIR, WEAR GOGGLES.

Other Protective Equipment:F ITS USE REQUIRES MAUNAL HANDLING, WEAR LOONG SLEEVES AND CLOSE-WEAVE COTTON GLOVES WITH TIGHT-FITTING WRISTLETS.

Work Hygienic Practices:NO DATA PROVIDED BY MANUFACTURER.

Supplemental Safety and Health

NO DATA PROVIDED BY MANUFACTURER.

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

HCC:B3

Spec Gravity:2.1

pH:10.3-10.5 SLRRY

Sol

ubility in Water:INSOLUBLE

Appearance and Odor:WHITE, GRAY, OR TAN, BEADS; ODORLESS

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

Stability Indicator/Materials to Avoid:YES

REACTS WITH HF AND STRONG ACIDS OR ALKALI.

Stability Condition to Avoid:NO DATA PROVIDED BY MANUFACTURER.

Hazardous Decomposition Products:NO DATA PROVIDED BY MANUFACTURER.

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

Toxicological Information:ANIMAL TOXICOLOGY: TESTS ON NA2OX-T
YPE SIEVES

GAVE THE FOLLOWING RESULTS: 1-HOUR LC50 (RAT) > 2.8 G/L. 48-HOUR
ORAL LD50 (RAT) EST. > 31,600 MG/KG. 48-HOUR DERMAL LD50 (RABBIT)
EST. > 2,000 MG/KG. NO T CONSIDERED AN OCULAR IRRITANT. TESTS FOR
FDA APPROVAL FOR USE IN FOOD: NOT A FOOD GRADE PRODUCT.

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

Ecological:NOT KNOWN TO HAVE ANY ADVERSE EFFECT ON THE AQUATIC
ENVIRONMENT WHEN PROPERLY DISPOSED. INSOLUBLE AND NONTOXIC.

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Disposal Considerations =====

Waste Disposal Methods:LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. COVER TO AVOID BLOWING OF DUST.

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

Transport Information:DOT: NOT CLASSIFIED AS A HAZARDOUS MATERIAL.

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

SARA Title III Information:THIS PRODUCT CONTAINS NO TOXIC CHEMICALS IN EXCESS OF THE APPLICABLE DE MINIMIS CONCENTRATIONS SPECIFIED UNDER 313 OF TITLE III SARA.

Federal Regulatory Information:OSHA: PEL: MOLECULAR SIEVE-NOT LISTED IN 29 CFR 1910.1000. NIOSH: NOT INCLUDED ON THE LIST OF SUBSTANCES REQUIRING TOXICITY STUDIES. ACGIH: TLV: MOLECULAR SIEVE-NOT LISTED IN ACGIH-TLV'S. USDA: NOT APPLICABLE. FDA: NOT APPLICABLE.

State Regulatory Information:NO DATA PROVIDED BY MANUFACTURER.

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

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