

W R GRACE & CO. DAVISON CHEMICAL DIVISION -- FORMED MOLECULAR SIEVE,514 --  
6850-00-851-8725

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

Product ID:FORMED MOLECULAR SIEVE,514

MSDS Date:06/02/1997

FSC:6850

NIIN:00-851-8725

MSDS Number: CGMWK

=== Responsible Party ===

Company Name:W R GRACE & CO. DAVISON CHEMICAL DIVISION

Address:10 E BALTIMORE STREET

Box:2117

City:BALTIMORE

State:MD

ZIP:21202-1630

Country:U

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Info Phone Num:410-659-9000

Emergency Phone Num:410-659-9058/301-874-2009(J.CONVEY)

CAGE:16210

=== Contractor Identification ===

Company Name:W R GRACE & CO. DAVISON CHEMICAL DIVISION

Address:10 E BALTIMORE STREET

Box:2117

City:BALTIMORE

State:MD

ZIP:21202-1630

Country:US

Phone:410-659-9000

CAGE:16210

===== Composition/Information on Ingredients =====

Ingred Name:SODIUM OXIDE

CAS:1313-59-3

Other REC Limits:NONE RECOMMENDED

Ingred Name:CALCIUM OXIDE

CAS:1305-78-8

RTECS #:EW

3100000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:5 MG/M3  
ACGIH TLV:2 MG/M3; 9596

Ingred Name:POTASSIUM OXIDE  
CAS:12136-45-7  
RTECS #:TT3790000  
Other REC Limits:NONE RECOMMENDED

Ingred Name:SILICA (SYNTHETIC)/SILICA GEL  
CAS:112945-52-5  
RTECS #:VV7310000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:6 MG/M3  
ACGIH TLV:10 MG/M3

Ingred Name:ALPHA-ALUMINA (ALUMINUM OXIDE) (SARA 313)  
CAS:1344-28-1  
RTECS #:BD1200000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST; 959  
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Ingred Name:CLAY/KAOLIN  
CAS:1332-58-7  
RTECS #:GF1670500  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:2 MG/M3 TDUST; 9596

Ingred Name:SILICA, CRYSTALLINE - QUARTZ  
CAS:14808-60-7  
RTECS #:VV7330000  
Fraction by Wt: 3% MAX  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:SEE TABLE Z-3  
ACGIH TLV:0.1 MG/M3 RDUST;9596

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

LD50 LC50 Mixture:LD50 (ORAL, RAT) >31,600 MG/KG (EST.)  
Routes of Entry: Inhalation:YES Skin:NO

Ingestion:NO

Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO

Health Hazards Acute and Chronic:TARGET ORGANS:EYE, SKIN, RESPIRATORY TRACT. ACUTE- MOLECULAR SIEVES ARE NON-FIBROUS, SYNTHETIC ALUMINOSILICATES. THEY DO NOT CAUSE SIGNIFICANT HEALTH PROBLEMS. WHEN ACTIVATED, MAY CAUSE A DRYING IRRITATION OF MUCOUS MEMBRANES AND SKIN IN CASE OF SEVERE EXPOSURE. CHRONIC- MAY CAUSE SILICOSIS OR FIBROTIC LUNG DISEASE.

Explanation of Carcinogenicity:CONTAINS QUARTZ.

Effects

of Overexposure:IRRITATION, COUGH, TEARING, REDNESS

Medical Cond Aggravated by Exposure:NONE

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

First Aid:GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED:MOVE TO FRESH AIR. EYES:IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. SKIN:WASH WITH SOAP AND WATER. ORAL:RINSE OUT MOUTH WITH WATER. MATERIAL WILL PASS THROUGH BODY NORMALLY.

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

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Flash Point:NONE

Lower Limits:NOT RELEVANT

Upper Limits:NOT RELEVANT

Extinguishing Media:WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY CHEMICAL FOR SURROUNDING FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.

Fire Fighting Procedures:WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. IN CONTACT WITH WATER IT BECOMES HOT AND CAN CAUSE THERMAL BURNS OF THE SKIN.

Unusual Fire/Explosion Hazard:NONE

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

Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT. CAREFULLY SWEEP OR VACUUM THE SPILL AREA. COLLECT AND PLACE THE SPILLED MATERIAL IN A WASTE DISPOSAL CONTAINER FOR DISPOSAL. AVOID DUSTING.

Neutralizing Agent:NOT RELEVANT

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

Handling and Storage Precautions:STORE IN DRY PLACE, IN TIGHTLY CLOSED CONTAINER, AWAY FROM INCOMPATIBLES. KEEP OUT OF REACH OF CHILDREN.

Other Precautions:WEAR GOGGLES IF DUST CAUSE

S EYE DISCOMFORT. WEAR A PROPERLY FITTED NIOSH-APPROVED DUST RESPIRATOR FOR DUSTY CONDITIONS. USE WITH ADEQUATE VENTILATION. AVOID CONTACT WITH EYES AND SKIN. AVOID INHALING DUST. PH IN 5% SLURRY: 10.3 - 10.5

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

Respiratory Protection:IF ENGINEERING CONTROLS ARE INADEQUATE TO CONTROL DUST CONCENTRATIONS TO AN ACCEPTABLE LEVEL, A NIOSH-APPROVED DUST RESPIRATOR SHOULD BE WORN. IF RESPIRATORS ARE USED, A PRO

GRAM SHOULD BE INSTITUTED T O COMPLY WITH OSHA 29CFR 1910.134.

Ventilation:USE GENERAL OR LOCAL EXHAUST VENTILATION TO KEEP DUST LEVELS AS LOW AS POSSIBLE.

Protective Gloves:COTTON/RUBBER/LATEX RECOMMENDED

Eye Protection:SAFETY GOGGLES FOR DUSTY CONDITIONS

Other Protective Equipment:LONG SLEEVE WORK CLOTHING, EYE WASH FOUNTAIN

Work Hygienic Practices:OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH AFTER HANDLING AND BEFORE EATING OR DRINKING.

Supplement

al Safety and Health

FORMULA CHANGED. FOR PREVIOUS FORMULATIONS, SEE PNI A-C, SAME NSN.

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

HCC:N1

NRC/State Lic Num:NOT RELEVANT

Spec Gravity:2.1

Viscosity:NOT RELEVANT

Evaporation Rate & Reference:NOT RELEVANT

Solubility in Water:INSOLUBLE

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

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

Stability Indicator/Materials to Avoid:YES

HYDROFLUORIC ACID,

STRONG ACIDS, STRONG ALKALIS

Stability Condition to Avoid:NONE

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

Waste Disposal Methods:LANDFILL IN ACCEPTABLE MANNER, IN FULL COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. REUSING OR RECYCLING IS RECOMMENDED.

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