

W R GRACE & CO. DAVISON CHEMICAL DIVISION -- FORMED MOLECULAR SIEVE 544 --  
6850-00-735-5371

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

Product ID:FORMED MOLECULAR SIEVE 544  
MSDS Date:10/01/1992  
FSC:6850  
NIIN:00-735-5371  
MSDS Number: BXBMC  
=== 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:US

Info Phone Num:301-659-9000;301-659-9058  
Emergency Phone Num:301-659-9000;301-874-2009  
Preparer's Name:J.H.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 O

XIDE  
CAS:1305-78-8  
RTECS #:EW3100000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:5 MG/M3  
ACGIH TLV:2 MG/M3; 9495

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

Ingred Name:SILICA GEL  
CAS:7631-86-9  
RTECS #:VV7322000  
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 TD  
UST; 9495

Ingred Name:KAOLIN  
CAS:1332-58-7  
RTECS #:GF1670500  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:15 MG/M3 TDUST  
ACGIH TLV:2 MG/M3 TDUST; 9495

Ingred Name:SILICA, CRYSTALLINE - FUSED  
CAS:60676-86-0  
RTECS #:VV7328000  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:SEE TABLE Z-3  
ACGIH TLV:0.1 MG/M3 RDUST;9495

Ingred Name:WATER  
CAS:7732-18-5  
RTECS #:ZC0110000  
Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:TLV FOT TOTAL

DUST IS 5MG/M3

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

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

Health Hazards Acute and Chronic:EYES:MAY CAUSE IRRITATION.SKIN:MAY CAUSE IRRITATION AND DRYNESS.INGEST:MAY CAUSE GI TRACT IRRITATION.INHAL:MAY CAUSE RESPIRATORY IRRITATION.CHRONIC:THIS ITEM CONTAINS >3% QUARTZ,WHICH MAY CAUSE SILICO SIS(LUNG CANCER).

Explanation of Carcinogenicity:QUARTZ IS IARC-2A AND NTP-AC.IT CAUSES LUNG CANCER.

Effects of Overexposure:

SKIN:DRYNESS.WHEN TRANSFERRING BEADS WITH HIGH PRESSURE AIR,WEAR GOGGLES;BEADS ARE TRAVELING FAST ENOUGH TO PENETRATE SKIN.

Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN AND RESPIRATORY AILMENTS MAY BE AT INCREASED RISK FROM EXPOSURE.

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

First Aid:SKIN:REMOVE CONTAMINATED CLOTHING;WASH WITH SOAP AND WATER.EYES:FLUSH WITH WATER FOR 15 MINUTES.INHAL:REMOVE TO FRESH AIR.GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED.INGEST:THIS ITEM WILL MOVE THROUGH THE BODY NORMALLY.

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

Flash Point:NONE

Extinguishing Media:USE MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Fire Fighting Procedures:USE A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT.

Unusual Fire/Explosion Hazard:THE FINELY DISPURSED DUST FROM THIS PRODUCT IS A FIRE OR EXPLOSION HAZARD IN THE PRESENCE OF SOURCES OF IGNITION.

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

Spill Release Procedures:VENTILATE AREA.USE PROPER PROTECTIVE AND RESPIRATORY EQUIPMENT.SWEEP OR VACUUM;DO NOT CREATE DUST;PLACE IN A DRY CONTAINER FOR DISPOSAL.CLEAN SPILL AREA WITH WATER.

Neutralizing Agent:NOT APPLICABLE.

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

Handling and Storage Precautions:STORE IN A COOL,DRY,WELL-VENTILATED PLACE.KEEP CONTAINER CLOSED WHEN NOT IN USE.AVOID DUSTING AN

D

INCOMPATIBLE MATERIALS.

Other Precautions:USE GOGGLES WHEN USING HIGH PRESSURE AIR TO TRANFER BEADS.GROUND BOTH CONTAINERS WHEN TRANSFERRING INTO A CONTAINER OF FLAMMABLE LIQUID.THIS MATERIAL RELEASES ENOUGH HEAT TO CAUSE BURN WHEN IT ABSORBS WATER.

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

Respiratory Protection:WHERE ENVIRONMENTAL CONTROLS ARE LACKING OR IN ENCLOSED SPACES USE A NIOSH/MSHA APPROVED RESPIRATOR FOR DUST.

Protective Gloves:COTTON GLOVE WITH WRISTLETS.

Eye Protection:DUST PROOF GOGGLES

Other Protective Equipment:LONG-SLEEVED SHIRT.PROVIDE A LOCAL EYE WASH STATION AND SAFETY SHOWER.

Work Hygienic Practices:USE REASONABLE CARE IN HANDLING THIS PRODUCT.WASH HANDS AFTER USE AND BEFORE EATING.

Supplemental Safety and Health

USE CAUTION WHEN ADDING WATER TO THIS MATERIAL;IT RELEASES HEAT WHEN ABSORBING WATER.

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

HCC:N1

Spec Gravity:2.1

Solubility i

n Water:COMPLETE

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

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

Stability Indicator/Materials to Avoid:YES

STRONG ACIDS,ALKALI,HYDROGEN FLUORIDE.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:NOT REPORTED.

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

Waste Disposal Methods:LANDFILL OR DISPOSE OF IN ACCORDANCE WITH FEDERAL,STATE AND LOCAL REGULA

TIONS.AVOID CREATING DUST.

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, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.