

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

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===== 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

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===== 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.

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===== 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.

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===== 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.

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===== 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.

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===== 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.

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===== 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.

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

HCC:N1

Spec Gravity:2.1

Solubility i

n Water:COMPLETE

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

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===== 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.

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

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

TIONS.AVOID CREATING DUST.

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