

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:U

S

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

OXIDE
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 T
DUST; 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 A

ND

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:COTTO
N 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

in 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 REGUL

ATIONS.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.