

#34920

REPORT NUMBER: 703  
MSDS NO: P16474V  
EFFECTIVE DATE: 01/03/95

VAN WATERS & ROGERS INC.  
MATERIAL SAFETY DATA SHEET

PAGE: 001  
VERSION: 001

PRODUCT: DIATOMACEOUS EARTH, CALCINED

ORDER NO: 425777  
PROD NO : 600203

NAR ENTERPRISES  
KING COUNTY DIRECTORS  
DOORS 19-24 (PO 238882)  
18639 80TH AVE SO  
KENT ,WA 98032

VAN WATERS & ROGERS INC. , SUBSIDIARY OF UNIVAR (206)889-3400  
6100 CARILLON POINT , KIRKLAND , WA 98033

34920

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC  
(800)424-9300

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SECTION I PRODUCT IDENTIFICATION  
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PRODUCT NAME: DIATOMACEOUS EARTH, CALCINED

MSDS #: P16474V

DATE ISSUED: 07/01/93

ISSUED BY: 008374

MATERIAL NAME: FLOOR DRY, SUPER FINE, CELATOM MP GRADES  
CHEMICAL FORMULA: S102  
TRADE NAME: FLOOR DRY, CELATOM  
CHEMICAL FAMILY: AMORPHOUS SILICA  
MATERIAL USE: INDUSTRIAL ABSORBENT

NFPA: 4 - EXTREME 3 - HIGH 2 - MODERATE 1 - SLIGHT 0 -  
INSIGNIFICANT

HMIS: \* - HEALTH 0 - FLAMMABILITY 0 - REACTIVITY E - PROTECTIVE  
EQUIPMENT

SECTION II: HAZARDOUS INGREDIENT OF MATERIAL

34920

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VERSION: 001

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INGREDIENT IDENTIFICATION: DIATOMACEOUS EARTH, CALCINATED  
APPROXIMATE CONCENTRATION %: 100%  
C.A.S. NUMBERS: 91053-39-3  
OSHA PEL (ACGIH TLV): SEE BELOW  
LD50/LC50 SPECIES AND ROUTE: NOT AVAILABLE

INGREDIENT IDENTIFICATION: CRYSTALLINE SILICA (CRISTOBALITE)  
APPROXIMATE CONCENTRATION %: <1%  
C.A.S. NUMBERS: 14464-46-1  
OSHA PEL (ACGIH TLV): 0.05 MG/M3 (0.05 MG/M3)  
LD50/LC50 SPECIES AND ROUTE: NOT AVAILABLE

INGREDIENT IDENTIFICATION: CRYSTALLINE SILICA (QUARTZ)  
APPROXIMATE CONCENTRATION: <1%  
C.A.S. NUMBERS: 14808-60-7  
OSHA PEL (ACGIH TLV): 0.10 MG/M3 (0.10 MG/M3)  
LD50/LC50 SPECIES AND ROUTE: NOT AVAILABLE

FOR SAMPLING SILICA DUSTS REFER TO NIOSH ANALYTICAL METHOD 7500 OR OSHA METHOD ID 142.

### SECTION III: PHYSICAL DATA FOR MATERIAL

PHYSICAL STATE: SOLID  
ODOR AND APPEARANCE: ODDORLESS, GRANULAR PRODUCT, BUFF TO OFF-WHITE  
SPECIFIC GRAVITY: 2.2  
BOILING POINT: NOT APPLICABLE  
VAPOR PRESSURE (MM): NOT APPLICABLE  
VAPOR DENSITY: NOT APPLICABLE  
PH: 7 (10% SLURRY)  
SOLUBILITY/WATER: <2%  
FREEZING POINT: NOT APPLICABLE

### SECTION IV: FIRE AND EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: NO  
MEANS OF EXTINCTION: NOT APPLICABLE  
SPECIAL PROCEDURES: NOT APPLICABLE

### SECTION V: HEALTH HAZARDS

SUMMARY: EXPOSURE TO QUANTITIES OF CRYSTALLINE SILICA DUST IN EXCESS OF THE OSHA PEL OR THE ACGIH TLV LISTED ABOVE IS A KNOWN CAUSE OF SILICOSIS, A PROGRESSIVE, SOMETIMES FATAL, LUNG DISEASE. IN 1987, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) ISSUED MONOGRAPH 42, A REVIEW OF "SILICA AND SOME SILICATES." BASED ON THE CONCLUSIONS IN THE MONOGRAPH (REPORT), CRYSTALLINE SILICA WAS RATED IN CATEGORY 2A AS "PROBABLY CARCINOGENIC TO

34920

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PAGE: 003

VERSION: 001

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HUMANS."

THE MANUFACTURER, IN CONJUNCTION WITH OTHER MEMBERS OF THE INTERNATIONAL DIATOMITE PRODUCERS ASSOCIATION (IDPA), HAS SPONSORED A STUDY TO EXAMINE THE LONG TERM HEALTH EFFECTS AMONG CERTAIN WORKERS IN THE DIATOMACEOUS EARTH (DE) INDUSTRY. THE STUDY WAS CONDUCTED BY THE UNIVERSITY OF WASHINGTON SCHOOL OF PUBLIC HEALTH AND COMMUNITY MEDICINE AND FINAL REPORT WAS ISSUED IN OCTOBER, 1992. THE REPORT CONCLUDED THAT THERE WAS AN INCREASE IN NON-MALIGNANT RESPIRATORY DISEASE (NMRD) AND LUNG CANCER INCIDENCE AMONG THOSE DE WORKERS STUDIED WHEN COMPARED TO NATIONAL AND REGIONAL POPULATIONS (STANDARD MORTALITY RATION OF 2.59 AND 1.43, RESPECTIVELY). THE REPORT FURTHER CONCLUDED THAT RELATIVELY INTENSE EXPOSURES THAT OCCURRED BEFORE THE 1950'S WERE PROBABLY THE MOST IMPORTANT CONTRIBUTORS TO THE EXCESSES IN NMRD AND LUNG CANCER. IN ADDITION, DATA IN THE REPORT INDICATED THAT IMPROVEMENTS IN THE DUST CONTROL IN THE INDUSTRY APPEAR TO HAVE ABATED ANY EXCESS RISK OF SILICOSIS AND LUNG CANCER IN TODAY'S WORK ENVIRONMENT. THE MANUFACTURER INTENDS TO CONTINUE TO SUPPORT MEANINGFUL RESEARCH IN THE FUTURE THROUGH THE IDPA. A SUMMARY REPORT OF THE UNIVERSITY OF WASHINGTON IS AVAILABLE UPON REQUEST.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: PRE-EXISTING DISEASES OF THE UPPER RESPIRATORY TRACT AND LUNG SUCH AS BRONCHITIS, EMPHYSEMA, AND ASTHMA  
ROUTE OF ENTRY: INHALATION (CHRONIC)

TARGET ORGANS: LUNGS

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: UPPER RESPIRATORY IRRITANT - MAY CAUSE COUGHING OR THROAT IRRITATION

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: INHALATION OF CRYSTALLINE SILICA DUST IN EXCESS OF THE THRESHOLD LIMIT VALUE (TLV) RECOMMENDED BY THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH) OR IN EXCESS OF THE PERMISSIBLE EXPOSURE LIMIT (PEL) ESTABLISHED BY OSHA OVER AN EXTENDED NUMBER OF YEARS MAY CAUSE SILICOSIS, A PROGRESSIVE SOMETIMES FATAL LUNG DISEASE. ALTHOUGH SILICOSIS IS A NON-CANCEROUS LUNG DISEASE, THE RECENT STUDY (OCTOBER 1992) CONDUCTED BY THE UNIVERSITY OF WASHINGTON ON CERTAIN DIATOMITE WORKERS INDICATES THAT EXPOSURE TO HIGH CONCENTRATIONS OF CRYSTALLINE SILICA FOR MAY YEARS MAY INCREASE THE POTENTIAL RISK OF DEVELOPING LUNG CANCER. THE STUDY ALSO REPORTS THAT FOR WORKERS HIRED SINCE 1960, NO INCREASE IN LUNG CANCER MORTALITY RISK WAS FOUND. CONSEQUENTLY, MAINTENANCE OF CRYSTALLINE SILICA DUST CONCENTRATIONS AT OR BELOW LEVELS SPECIFIED BY OCCUPATIONAL STANDARD SETTING AGENCIES WILL MINIMIZE, IF NOT ELIMINATE, ANY POTENTIAL RISK OF NMRD OR LUNG CANCER.

IARC - CLASS 2A ("PROBABLY CARCINOGENIC TO HUMANS")

NTP - "SILICA, CRYSTALLINE (RESPIRABLE)", "REASONABLY ANTICIPATED TO BE A CARCINOGEN"

OSHA - HAS NOT CLASSIFIED CRYSTALLINE SILICA AS A CARCINOGEN

#### SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY: YES

INCOMPATIBILITY TO OTHER SUBSTANCES: NO

IF YES, WHICH ONES? HYDROFLUORIC ACID, PRODUCTS CONTAINING SILICA MAY REACT

34920

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VIOLENTLY WITH HYDROFLUORIC ACID  
REACTIVITY AND UNDER WHAT CONDITIONS: NO APPLICABLE  
HAZARD DECOMPOSITION PRODUCTS: NOT APPLICABLE

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

PERSONAL PROTECTIVE EQUIPMENT: BUREAU OF MINES OR NIOSH APPROVED RESPIRATORS FOR PROTECTION AGAINST PNEUMOCONIOSIS PRODUCING DUSTS RECOMMENDED WHEN DUST IS PRESENT. IF THE DUST CONCENTRATION IS LESS THAN TEN (10) TIMES THE PERMISSIBLE EXPOSURE LIMIT(PEL) USE QUARTER OR HALF MASK RESPIRATOR WITH REPLACEMENT DUST FILTER OR SINGLE USE DUST RESPIRATOR WITH VALVE. IF DUST CONCENTRATION IS GREATER THAN TEN (10) TIMES AND LESS THAN ON HUNDRED (100) TIMES THE PEL USE FULL FACEPLATE RESPIRATOR WITH REPLACABLE DUST FILTER; IF GREATER THAN ONE HUNDRED (100) AND LESS THAN TWO HUNDRED (200) TIMES THE PEL USE POWER AIR-PURIFYING (POSITIVE PRESSURE) RESPIRATOR WITH REPLACABLE FILTER; IF GREATER THAN TWO HUNDRED (200) TIMES THE PEL USE TYPE C, SUPPLIED AIR RESPIRATOR, CONTINUOUS FLOW TYPE (POSITIVE PRESSURE), WITH FULL FACEPIECE, HOOD, OR HELMET.

GLOVES: NOT NORMALLY NECESSARY

RESPIRATORY: NOTE ABOVE

EYE: GOGGLES TO PROTECT FROM DUST

FOOTWEAR: NOT NECESSARY

CLOTHING: NOT NORMALLY NECESSARY

ENGINEERING CONTROLS (E.G. VENTILATION, ENCLOSED PROCESS): LOCAL - CONTROL WITHIN RECOMMENDED TLV/PEL. REFER TO ACGIH PUBLICATION "INDUSTRIAL VENTILATION" OR SIMILAR PUBLICATIONS FOR DESIGN OF VENTILATION SYSTEMS.

LEAK AND SPILL PROCEDURE: VACUUM CLEAN SPILLAGE, WET SWEEP OR WASH AWAY. AVOID CREATING DUST.

WASTE DISPOSAL. NON-BIODEGRADABLE. USE SOLID WASTE DISPOSAL COMMON TO LANDFILL TYPE OPERATIONS OR IN SLURRY TO SUMPS. NOT CONSIDERED A HAZARDOUS WASTE UNDER RCRA (40 CFR PART 261)

HANDLING PROCEDURES: AVOID CREATING DUST. REPAIR OR PROPERLY DISPOSE OF BROKEN BAGS

STORAGE REQUIREMENTS: STORE IN A DRY PLACE TO MAINTAIN PRODUCT QUALITY

SPECIAL SHIPPING INSTRUCTIONS: NONE

SECTION VIII - FIRST AID MEASURES

SKIN: NOT ABSORBED BY THE SKIN. MAY CAUSE DRYNESS. USE MOISTURE RENEWING LOTIONS IF DRYNESS OCCURS.

EYE: MAY CAUSE IRRITATION OR INFLAMMATION. WASH WITH GENEROUS QUANTITIES OF WATER. CONSULT PHYSICIAN IF IRRITATION PERSISTS.

INHALATION: ACUTE INHALATION CAN CAUSE DRYNESS OF THE NASAL PASSAGES AND CONGESTION OF THE UPPER RESPIRATORY TRACT. REMOVE TO FRESH AIR.

INGESTION: SHORT-TERM EXPOSURE NOT CONSIDERED HARMFUL. DRINK GENEROUS AMOUNTS OF WATER TO REDUCE BULK AND DRYING EFFECTS

34920

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----- FOR ADDITIONAL INFORMATION -----  
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CONTACT: MSDS COORDINATOR VAN WATERS & ROGERS INC.  
DURING BUSINESS HOURS, PACIFIC TIME (206)889-3400

09/26/96 05:56 PRODUCT: 600203 CUST NO: 101034 ORDER NO: 425777

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