

MATERIAL SAFETY DATA SHEET


VULKANOL OT DLC®-A

Date Revised: June 20, 2000

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SECTION I - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Vulkanol OT DLC-A
CHEMICAL NAME: Polyether-thioether on silicon dioxide

Company:  NATROCHEM, INC.
P.O. Box 1205
Savannah, GA 31402-1205

| | |
|--------------|---|
| HMIS RATING | |
| HEALTH | 1 |
| FLAMMABILITY | 1 |
| REACTIVITY | 0 |

Telephone Numbers:

Transportation Emergencies:

CHEMTREC (U.S.A.): (800) 424-9300 (24 hours)

CHEMTREC (International): (202) 483-7616 (24 hours, call collect)

Product Information: (912) 236-4464 (EST, 8:00AM - 4:00PM M-F)

SECTION II - HAZARDOUS INGREDIENTS

The component(s) listed below is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

| INGREDIENT | CAS REGISTRY | PERCENT |
|-----------------|--------------|---------|
| Silicon Dioxide | 7631-86-9 | 28 |

SECTION III - PHYSICAL DATA

| | |
|--|-------------------------------|
| Boiling Point: 446° F | Specific Gravity: 1.12 |
| Vapor Pressure (mm Hg) : < 75 @ 122° F | Percent Volatiles: Negligible |
| Vapor Density (Air = 1): N/DA | Evaporation Rate: N/DA |
| Solubility in Water: Insoluble | |
| Appearance and Odor: Off-white, free flowing powder with foul smelling odor. | |

SECTION IV - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): 334° F (PMCC)

FLAMMABLE LIMITS: N/E

AUTOIGNITION TEMPERATURE: N/E

EXTINGUISHING MEDIA: Water, foam, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Full emergency equipment with self-contained breathing apparatus should be worn by fire fighters. During a fire, irritating and toxic gases and aerosols may be generated by thermal decomposition and combustion.

UNUSUAL FIRE & EXPLOSION HAZARDS: None known.

SECTION V - PERMISSIBLE EXPOSURE LIMITS

Silicon Dioxide: OSHA: 6 mg/m³ (total dust), 8 hr. TWA; 29 CFR 1910.1000 (rev. 3/1/89). PPG Internal Permissible Exposure Limit (IPEL); Synthetic Precipitated Silicate: 5 mg/m³ (respirable dust), 8 hr. TWA.

MARKETED BY
**HARWICK STANDARD
DISTRIBUTION CORPORATION**
60 S. Seiberling Street • Akron, Ohio 44305

SECTION VI - HEALTH HAZARD DATA

CHRONIC HEALTH EFFECTS: Silicon Dioxide: An epidemiological study was conducted which included 165 precipitated silica workers who had been exposed for an average of 18 years. No adverse effects were noted in complete medical examination (including chest roentgenograms) of these workers. Pulmonary function decrements were correlated only with smoking and age but not with the degree or duration of dust exposure. Laboratory studies have also been conducted in small animals via inhalation to levels of precipitated silica dust of up to 126 mg/m³ for periods from six months to two years. Although precipitated silica was temporarily deposited in the animal's lungs, most of the deposited material was cleared soon after the dust exposure ended. The results of all studies performed by, or known to, PPG indicate a very low order of pulmonary activity for synthetic precipitated silica.

PRIMARY ROUTE OF ENTRY- Inhalation, Eye, Skin Contact, Ingestion.

CHEMICAL COMPONENTS LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None
NTP: No IARC: No OSHA: No

EFFECTS OF EXPOSURE-

EYES- Mildly irritating. Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils.

SKIN- Mildly irritating.

INHALATION- Nuisance dust. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds.

INGESTION- Not significantly toxic.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- Silicon Dioxide: Persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection.

SECTION VII - EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Immediately rinse with clean water for 15 minutes. Retract eyelids often. If irritation persists, seek medical attention.

SKIN CONTACT: Immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops.

INHALATION: If overcome by exposure, remove victim to fresh air.

INGESTION: Contact a physician.

SECTION VIII - REACTIVITY DATA

STABILITY: Stable.

MATERIALS TO AVOID- Avoid alteration of product properties before reuse. Calcining, which may result in crystalline formation or mixing with additives may alter toxicological properties.

CONDITIONS TO AVOID- Avoid high temperatures (> 800° C) treatment.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and sulfur, others undetermined.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: MINIMIZE SPILL AREA. Vacuum spill material and place in closed plastic bags for disposal.

WASTE DISPOSAL METHOD: Material may be incinerated or landfilled in accordance with local, state, and federal regulations.

SECTION X - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use a respirator such as 3M 9900 or equivalent for protection against pneumoconiosis producing dusts.

VENTILATION: Provide explosion proof ventilation as required to control airborne dust levels. The sum total of all ingredients may emit vapors during normal processing. All possible health effects are not known and individual sensitivities will vary. Effective exhaust ventilation should always be provided to draw dust, fumes and vapors away from workers to prevent routine inhalation. Ventilation should be adequate to maintain ambient workplace atmosphere below the limits listed in Section V.

PROTECTIVE GLOVES: Impervious gloves to protect against contact with product.

EYE PROTECTION: Safety goggles.

OTHER PROTECTIVE EQUIPMENT: Protective clothing, eye wash station, safety shower.

SECTION XI - SPECIAL PRECAUTIONS

HANDLING AND STORAGE: SHELF LIFE: One year. Handling can create explosive dust clouds. Eliminate ignition sources, use explosive proof equipment. Conveying and processing equipment should be spark-proof, well bonded and grounded. Avoid dust accumulations.

OTHER PRECAUTIONS: Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Launder contaminated clothing before reuse.

SECTION XII - ENVIRONMENTAL INFORMATION

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

| CAS REGISTRY # | CHEMICAL NAME | PERCENT BY WEIGHT |
|----------------|---------------|-------------------|
|----------------|---------------|-------------------|

NONE.

This information must be included in all MSDS' that are copied and distributed for this material.

THE FOLLOWING INFORMATION MAY BE USEFUL IN COMPLYING WITH VARIOUS STATE AND FEDERAL LAWS AND REGULATIONS UNDER VARIOUS ENVIRONMENTAL STATUES:

Reportable Quantity (RQ), EPA Regulation 40 CFR 302 (CERCLA Section 102):

No RQ for product or any constituent greater than 1% or 0.1% (carcinogen).

Threshold Planning Quantity (TPQ), EPA Regulation 40 CFR 355 (SARA Sections 301-313):

No TPQ for product or any constituent greater than 1% or 0.1% (carcinogen).

Hazardous Chemical Reporting, EPA Regulation 40 CFR 370 (SARA Sections 311-312):

Silicon Dioxide- Acute Hazard

The components of this product are included on the TSCA Chemical Substance Inventory.

TRANSPORTATION: Not regulated.

SECTION XIII - OTHER INFORMATION

Revision Note: Added CHEMTREC information.

Prepared by: James L. Pye, Jr.

Title: Safety Coordinator

N/A = Not applicable N/D = Not determined N/DA = No Data Available

N/E = Not established

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