


MATERIAL SAFETY DATA SHEET  
Vulkanol 85 DLC® -A

Date Revised: September 27, 2011

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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Vulkanol 85 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 2 - HAZARDOUS INGREDIENTS

INGREDIENT	CAS REGISTRY	PERCENT
Silicon Dioxide	112926-00-8	26 - 30
Polyether-thioether	68958-65-6	70 - 74

SECTION 3 - PHYSICAL DATA

Boiling Point:	225 C (437 F)	Specific Gravity:	1.21
Vapor Pressure (mm Hg) :	<75 @ 50 C	Percent Volatiles:	Negligible
Vapor Density (Air = 1):	N/DA	Evaporation Rate:	N/DA
Solubility in Water:	50g/l @20C	Appearance:	Off-white powder
Odor:	foul-smelling.		

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT: 183°C (341°F) PMCC

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 5 - PERMISSIBLE EXPOSURE LIMITS

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

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SECTION 6 - HEALTH HAZARD DATA

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CAUTION! Irritating gases / fumes may be given off during burning or thermal decomposition. May cause skin irritation. May cause eye irritation. May be harmful if swallowed.

Toxicity Data for polyether-thioether:

Acute Oral Toxicity: LD50 1,600 mg/kg (rat)

Skin Irritation: slightly irritation (rabbit)

Eye irritation: slightly irritating (rabbit)

Mutagenicity: Genetic toxicity in vitro: negative Ames

CHRONIC: An epidemiological study was conducted which included 165 precipitated silica workers who had been exposed for an average time span of 8.6 years. Of these 165 workers, 44 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/m<sup>3</sup> 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. PPG recommends that 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.

IARC reviewed the data on amorphous silica in 1996 and concluded there was inadequate evidence from both epidemiology and experimental studies that amorphous silica is a carcinogenic risk factor. The organization concluded that amorphous silica is in Group 3.

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

CHEMICAL COMPONENTS LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None

NTP: No

IARC: No

OSHA: No

EFFECTS OF EXPOSURE- Skin contact, eye contact, ingestion, inhalation

EYES- May cause irritation with symptoms of reddening, tearing and stinging. Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils.

SKIN- May cause irritation with reddening and itching.

INHALATION- May be harmful if inhaled. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils.

INGESTION – May be harmful if swallowed.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- Polyether-thioether: skin disorders, eye disorders.

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.

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SECTION 7 - EMERGENCY & FIRST AID PROCEDURES

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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. If breathing is difficult, administer oxygen. Contact a physician.

INGESTION: Contact a physician.

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**SECTION 8 - REACTIVITY DATA**

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STABILITY: Stable.

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

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

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

HAZARDOUS POLYMERIZATION: Will not occur.

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**SECTION 9 - SPILL OR LEAK PROCEDURES**

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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.

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**SECTION 10 - SPECIAL PROTECTION INFORMATION**

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

VENTILATION: Ventilation should be provided to control gases and fumes given off during processing. 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.

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**SECTION 11 - SPECIAL PRECAUTIONS**

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HANDLING AND STORAGE: 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.

Store in a cool dry place. Store in original or similar container. Maximum storage temperature is 60C (140F).

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

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SECTION 12 - ENVIRONMENTAL INFORMATION

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Ecological data for polyether-thioether:

Biodegradation: 0% 30 d exposure

Acute and prolonged toxicity to fish: LC0 &gt;50 mg/l (rainbow trout, 72 hr)

Acute toxicity to aquatic invertebrates: EC0 &gt;100 mg/l (water flea, 24hr)

Toxicity to microorganisms: EC50 8,230 mg/l (activated sludge microorganisms)

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

Right to Know – Section 313 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): none

CERCLA Section 102: Reportable Quantity (RQ), EPA Regulation 40 CFR 302: none

SARA Sections 301-313: Threshold Planning Quantity (TPQ), EPA Regulation 40 CFR 355:  
No TPQ for product or any constituent greater than 1% or 0.1% (carcinogen).

SARA Sections 311-312: Hazardous Chemical Reporting, EPA Regulation 40 CFR 370:  
Silicon Dioxide - Acute Hazard  
Polyether-thioether – Acute hazard

RCRA - Appendix VIII Hazardous Constituents: 40CFR261.20-24 If discarded in its purchase form this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product use to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste.

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

TRANSPORTATION: Non-regulated.

Canada DSL – All components of this product are listed.

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

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SECTION 13 - OTHER INFORMATION

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Revision Note: HiSil CAS number changed      Prepared by: Craig Moore

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

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