

MATERIAL SAFETY DATA SHEET

SARET 500 DLC®-A

Date Revised: August 24, 2010

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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Saret 500 DLC-A

CHEMICAL NAME: Saret crosslinking agent on silicon dioxide

Company:



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

HMIS RATING

Health	2
Flammability	1
Reactivity	2
PPE	D

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- Composition / Information on 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
Saret crosslinking agent, Trifunctional	Proprietary	~70
Amorphous Silica	112926-00-8	~28
Nitroso Aromatic Amine*	Proprietary	~2.1%

* Nitroso aromatic amine is listed by IARC as carcinogen, Group 3, not classifiable as to its carcinogenicity to humans. Subject to SARA 313 requirements. See Section 15.

SECTION 3 – Hazards Identification

CAUTION! Dust may be irritating to the eyes and upper respiratory tract. Prolonged or repeated skin contact may cause irritation. Avoid contact with the eyes. Avoid prolonged or repeated contact with the skin. Avoid inhalation. Use only with adequate ventilation. Ventilation must be sufficient to limit employee exposure to this product below permissible exposure limits. Wear respirator protection when dust exposure is above permissible exposure limits. Wash thoroughly every day after work. Do not eat, drink or smoke in work area.

Unstable (reactive) upon depletion of inhibitor. Unless inhibited, product can polymerize, raising temperature and pressure, possibly rupturing container. Do not blanket or mix with oxygen-free gas as it renders inhibitor ineffective. Prevent freezing; inhibitor separates as solid. If frozen, material must be warmed and remixed gently. Keep below 90 F. Prevent moisture contact. Store in tightly closed containers, away from heat, sparks, open flames, strong oxidizers, radiation, and other initiators. Prevent contamination by foreign materials. Use only non-sparking tools and limit storage time.

Acute Health Effects: Suspect eye irritation hazard. Suspect skin irritation / sensitization hazard. Suspect skin absorption hazard. Suspect respiratory tract irritation hazard. Suspect slight ingestion hazard.

Chronic Health Effects: No information is available on the chronic health effects of the mixture as a whole.

SECTION 4 – First Aid Measures

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. Ensure skin is cleaned and flushed thoroughly to remove all material.

INHALATION: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

INGESTION: If a large quantity is swallowed, give lukewarm water (about a ping) if victim is completely conscious and alert. Do not induce vomiting because the risk of damage to the lungs exceeds the poisoning risk. Obtain emergency medical attention.

EMERGENCY MEDICAL TREATMENT PROCEDURES: If exposed, treat skin and eye burns or irritation conventionally after decontamination. Remove clothing and rinse skin with water. Look for burns or signs of allergic reaction.

SECTION 5 - Fire-Fighting Measures

FLASH POINT (Method Used): >200° F (PMCC)

FLAMMABLE LIMITS: No data available.

EXTINGUISHING MEDIA: Dry chemical, CO₂, foam, water fog, water spray.

Fire and Explosion Hazards: High temperatures, inhibitor depletion, accidental impurities or exposure to radiation or oxidizers may cause spontaneous polymerization. This is a spontaneous reaction generating heat and possibly pressure.

Do not enter fire area without proper protection. Fight fire from safe distance and protected location. Heat and impurities may increase temperature, build pressure, rupture closed containers, spreading fire, increasing risk of burns and injuries. Water may be ineffective in firefighting due to low solubility. Use water spray and/or fog for cooling. Pressure relief system may plug with solids, increasing risk of overpressure. Notify authorities if liquid enters sewers and/or public waters.

SECTION 6 – Accidental Release Measures

In the event of a spill or release, minimize spill area. Sweep up material and place in closed plastic bags for disposal. Dispose of and report per regulatory requirements. Spilled or released material may polymerize and release heat and/or gasses. Extinguish all ignition sources and ventilate the area. Wear protective equipment during clean-up. Dike and recover large spills. Sweep and/or shovel into vented disposal containers. Wash spill area with a strong detergent and water solution; rinse with water but minimize water use during clean-up.

SECTION 7 - Handling and Storage

Wear appropriate protective equipment when handling this material. See Section 8 for PPE details. 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 the material indoors at 32F to 100F (0C to 38C.) Store in original package and do not open until ready to use. Product is package with inhibitor(s). Unless inhibited, the product can polymerize, raising temperature and pressure possibly rupturing the container. The product's inhibitor requires the presence of dissolved oxygen. Maintain the original headspace in the product container and do not blanket or mix with oxygen-free gases, as this renders the inhibitor ineffective. Ensure air space (oxygen) is present.

Use only non-sparking tools. Store in tightly closed container in a properly vented storage area away from heat, sparks, open flame, strong oxidizers, radiation and other initiators. Prevent contamination by foreign materials. Prevent moisture contact. Limit storage time. Unless specified elsewhere, shelf-life is 6 months from date of manufacture printed on the label.

OTHER PRECAUTIONS: Wash with soap and water before eating, drinking, smoking, or using toilet facilities. Launder contaminated clothing before reuse. Follow standard plant procedures or supervisor's instructions for decontamination operations.

SECTION 8 – Exposure Controls / Personal Protection

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 or face shield must be worn to prevent contact with airborne particles. Contact lenses should not be worn.

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

A PEL or TLV has not been established for Saret 500, the main component of this product. The WEEL (Workplace Environmental Exposure Level) as provided by AIHA is 1 mg/m³ (skin) for a time of 8 hours.

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.

SECTION 9 – Physical and Chemical Properties

Boiling Point: 200° F	Specific Gravity: 1.224
Vapor Pressure (mm Hg): NDA	Percent Volatiles: Negligible
Vapor Density (Air = 1): NDA	Evaporation Rate: NDA
Solubility in Water: Negligible	Stability: Stable as shipped.
Appearance: Dark, free-flowing powder	Odor: mild acrylate odor

SECTION 10 - Stability and Reactivity

STABILITY: Stable as shipped. The product may become unstable (reactive) upon loss of inhibitor.

MATERIALS TO AVOID- Avoid alteration of product properties before reuse. Calcining may alter toxicological properties. Avoid strong oxidizers, strong reducers, free radical initiators, inert gases, oxygen scavengers.

CONDITIONS TO AVOID- Avoid high temperatures, localized heat sources, oxidizing conditions, freezing conditions, direct sunlight, ultraviolet radiation, strong oxidizers, strong reducers, free radical initiators, inert gasses, and oxygen scavengers. Inert gas blanketing is to be avoided.

HAZARDOUS DECOMPOSITION PRODUCTS: Acrid smoke, fumes. Oxides of carbon may be released during a fire involving this product.

HAZARDOUS POLYMERIZATION: May occur.

SECTION 11 – Toxicological Information

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.

The trifunctional acrylic ester components of this product have been reported to be mutagenic in the mouse lymphoma assay, but negative in the Ames test. A dermal carcinogenicity study performed on each component was negative. Therefore, there is reason to believe that the mouse lymphoma assay was a false positive finding. It should be noted that this assay system produces a high incidence of false responses.

The Nitroso Aromatic Amine component of this product has induced tumors in a lifetime rodent study, but only with large oral doses. This substance is classified as an IARC group 3 carcinogen, which means it is unclassifiable as to its carcinogenicity in humans. Chronic ingestion of the minor aromatic amine component affected the reproductive capabilities of laboratory animals according to experimental studies conducted in the 1950s.

PRIMARY ROUTE OF ENTRY- Inhalation, Eye, and Skin.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: Nitroso Aromatic Amine
NTP: No IARC: Yes OSHA: No

EFFECTS OF EXPOSURE-

EYES- This product is expected to cause eye irritation. Symptoms of irritation may include a burning sensation, tearing, redness and/or swelling.

SKIN- This material has been shown to be a moderate skin irritant and an allergic sensitizer in susceptible individuals upon repeated exposure. This material is expected to be a health hazard by skin absorption. May cause an allergic skin reaction (sensitization) in susceptible individuals upon repeated exposure.

INHALATION- May cause respiratory tract irritation. Symptoms of irritation may include coughing, mucous production and shortness of breath. The silica component of this product is a nuisance dust. Excessive contact with powder can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils.

INGESTION- Although no appropriate human or animal health effects data are known to exist, this material is not expected to be an ingestion hazard.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE- 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. This material or its emissions may induce an allergic or sensitization reaction and thereby aggravate systemic disease

SECTION 12 – Ecological Information

No data available at this time. See section 15 for regulatory information and labeling instructions.

SECTION 13 – Disposal Considerations

WASTE DISPOSAL METHOD: Non-contaminated, properly inhibited product is not a RCRA hazardous waste. However, contaminated product, soil, or water may be RCRA/OSHA Hazardous Waste due to potential for internal heat generation (See 40 CFR 261 and 29 CFR 1910). It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste. Comply with all applicable federal, state and local regulations. Landfill solids at permitted sites. Use registered transporters. Burn concentrated liquids in systems that use compatible fuel. Dilute with clean, low viscosity fuel. Avoid flameouts. Assure emissions comply with local, state, and federal regulations. Dilute aqueous waste may biodegrade. Avoid overloading and poisoning plant biomass. Assure effluent complies with applicable regulations.

SECTION 14 –Transport Information

TRANSPORTATION: Not regulated.

SECTION 15 –Regulatory Information

TSCA: All components of this product are listed, or excluded from listing on the US EPA Toxic Substances Control Act inventory.

California Prop 65: This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

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
Proprietary	Nitroso Aromatic Amine	2.1

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

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.

Contains no SVHC.

Label Information

Use statement:	For industrial use only.
Signal word:	Warning
Physical Hazards	Unstable (reactive) upon loss of inhibitor.
Health hazards:	May cause skin and eye irritation May cause allergic skin reaction
Precautionary Measures:	Keep container closed when not in use Do not handle near heat, sparks or open flame Avoid contact with eyes, skin and clothing Avoid breathing vapors and / or mists Use only with adequate ventilation and personal protection Wash thoroughly after handling Hazardous polymerization may occur upon depletion of inhibitor Before using this product, read the material safety data sheet (MSDS)

The components of this product are included on the following international inventories:

- Australia (AICS)
- Canada (DSL)
- Europe (EINECS)
- Japan (ENCS)
- Korea (ECL)
- China
- Philippines (PICCS)

WHMIS: the acrylate monomer portion of this product lists trade secret registry number – 4333, filed March 12, 1999. This material contains an inhibitor (HQ MEHQ, etc.) at <1%. The type and amount meet product specifications.

SECTION 16 - OTHER

Revision Note: Update and reissue.	Replaces earlier revision dated June 22, 2001
Revision Date: August 24, 2010	Prepared by: Craig Moore

NA = Not applicable

ND = Not determined

NDA = No Data Available

NE = Not established

The information given in this MSDS was obtained from sources which we believe are reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, Natrochem, Inc. makes no warranty express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon.