

SAFETY DATA SHEET

Natro-Cel[®] 519-A

Date Revised: April 10, 2015

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1 - Identification

TRADE NAME: Natro-Cel 519-A
CHEMICAL NAME: Chemical Mixture

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

HMIS RATING	
Health	2
Flammability	1
Reactivity	2

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)

Product Information:

Product name: Natro-Cel 519-A

Chemical Family: acrylic ester on silica

Product Use: coatings, paints, electronics, elastomers, inks, adhesives

2 – Hazards Identification

Emergency Overview

Color: yellow

Physical state: powder

Odor: acrylic-like

Classification of the substance or mixture:

Skin irritation, Category 2, H315

Eye irritation, Category 2A, H319

Skin sensitization, Sub-category 1A, H317

*For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms:



Signal word: **Warning**

Hazard statements:

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.

H319 : Causes serious eye irritation.

Supplemental Hazard Statements:

Processing may release vapors and/or fumes which cause eye, skin and respiratory tract irritation.

Precautionary statements:**Prevention:**

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 : Wash skin thoroughly after handling.

P272 : Contaminated work clothing should not be allowed out of the workplace.

P280 : Wear eye protection/ face protection.

P280 : Wear protective gloves.

Response:

P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 : If eye irritation persists: Get medical advice/ attention.

P362 : Take off contaminated clothing and wash before reuse.

Disposal:

P501 : Dispose of contents/ container to an approved waste disposal plant.

Supplemental information:

Potential Health Effects: Effects due to processing releases or residual monomer: Irritating to eyes, respiratory system and skin. Prolonged or repeated exposure may cause: headache, drowsiness, nausea, weakness.(severity of effects depends on extent of exposure) .

Other: This product may release fume and/or vapor of variable composition depending on processing time and temperature. Possible cross sensitization with other acrylates and methacrylates

H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

Supplemental Hazard Statements None

According to European Directive 67/548/EEC as amended

Hazard symbol(s)

R-phrase(s)

R22

R36/37/38

Harmful if swallowed.

Irritating to eyes, respiratory system and skin.

S-phrase(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37 Wear suitable protective clothing and gloves.

3.3 Other hazards None

3 - Composition/Information on Ingredients

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

INGREDIENT	CAS REGISTRY	PERCENT
Silicon Dioxide	112926-00-8	~28
Alkylated Phenol	88-27-7	~3
Trimethylolpropane Triacrylate aka 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester	15625-89-5	~69

GHS Classification H315, H319, H317 (For the full text of the H-Statements, see Section 16.)

4 - First Aid measures

Inhalation: If inhaled, remove victim to fresh air. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

5 - Firefighting measures

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

FLAMMABLE LIMITS: N/A

AUTOIGNITION TEMPERATURE: N/A

EXTINGUISHING MEDIA: Dry chemical, water spray (fog), foam or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: 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 for cooling. Pressure relief system may plug with solids, increasing risk of overpressure. Notify authorities if liquid enters sewer and public waters.

UNUSUAL FIRE & EXPLOSION HAZARDS: High temperature, inhibitor depletion, accidental impurities, exposure to radiation or oxidizers may cause spontaneous polymerizing reaction, generating heat and/or pressure. Closed containers may rupture and explode during runaway polymerization.

A component of this product (Alkylated phenol) can form an explosive dust air mixture and has a severe dust explosivity rating. See Section XI for special handling of this component.

Protective equipment: Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice: Fight fire from a protected location.

Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards: When burned, the following hazardous products of combustion can occur:

Carbon oxides, Hazardous organic compounds. Polymerization is exothermic and can degenerate into an uncontrolled reaction.

6 - Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Avoid generation of vapors. Vacuum spill material and place in closed plastic bags for disposal. Spilled or released material may polymerize, release heat, gases. Extinguish all ignition sources. Blanket with firefighting foam. Report per regulatory requirements.

WASTE DISPOSAL METHOD: Contaminated product, soil, water may be RCRA and OSHA hazardous waste due to potential for internal heat generation (See 40 CFR 261 and 29 CFR 1910). Landfill solids at permitted sites. Use registered transporters.

7 - Handling and Storage

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.

Unless inhibited, product can polymerize, raising temperature and pressure, possibly rupturing container. Check inhibitor content often, adding to bulk liquid if needed. Do not blanket or mix with oxygen free gas as it renders inhibitor ineffective. Do not store at or below 32° F, inhibitor can separate as a solid.

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

General information on handling: Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

General information on storage conditions: Keep in a dry, cool place. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store out of direct sunlight in a cool well-ventilated place. Keep stabilizer levels constant to avoid explosive polymerization. An air space is required above the liquid in all containers; avoid storage under an oxygen-free atmosphere.

Temperature tolerance – Do not store below: 32 °F (0 °C)
Temperature tolerance – Do not store above: 100 °F (38 °C)

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: Chemical safety goggles.

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

Airborne Exposure Guidelines:

2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester (15625-89-5)

US. OARS. WEELs Workplace Environmental Exposure Level Guide

Skin designation: Can be absorbed through the skin. time weighted average 1 mg/m³. Avoid skin or eye contact with liquids or aerosols.

Listed: Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls: Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection: NIOSH approved respiratory protection equipment appropriate to the material and/or its components and substances released during processing. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection: Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Avoid natural rubber gloves. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

Eye protection: Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

Avoid high temperature treatment (>800° C). Avoid heat, direct sunlight, strong oxidizing conditions, freezing conditions, ultraviolet radiation. Avoid inert gas blanketing.

Hazardous decomposition products: Acrid smoke and fumes may result during the initial stages of a fire.

Hazardous polymerization: May occur.

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.

9 - Physical and chemical properties

Boiling Point: N/DA	Specific Gravity: Apparent: 1.239
Vapor Pressure (mm Hg): N/DA	Percent Volatiles: Negligible
Vapor Density (Air = 1): N/DA	Evaporation Rate: N/DA
Solubility in Water: Negligible	Odor: acrylic-like, pungent
Appearance: Yellow, free flowing powder	Flash point 200°F (94°C) (Pensky-Martens closed cup)

10 - Stability and reactivity

STABILITY: Stable.

MATERIALS TO AVOID- Avoid alteration of product properties before reuse. Avoid calcining, which may result in crystalline formation. Avoid mixing with additives which may alter toxicological properties. Avoid strong oxidizers, free radical initiators, inert gases and oxygen scavengers.

Stability: This material is chemically stable under normal and anticipated storage, handling and processing conditions. However, this material can undergo hazardous polymerization.

Hazardous reactions: Hazardous polymerisation may occur. Polymerization is exothermic and can degenerate into an uncontrolled reaction.

Materials to avoid: Strong oxidizing agents, Strong reducing agents, Free radical generators, Inert gas, Oxygen scavengers, Peroxides.

Conditions / hazards to avoid: This material polymerizes exothermically in the presence of heat, contamination, oxygen free atmosphere, free radicals, peroxides and inhibitor depletion liberating heat. Avoid direct sunlight. Do NOT expose to ultraviolet light.

Hazardous decomposition products: Thermal decomposition giving flammable and toxic products: Carbon oxides, Acrylate, Hazardous organic compounds.

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.

PRIMARY ROUTE OF ENTRY- Inhalation, eye, skin.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None.

NTP: No IARC: No OSHA: No

EFFECTS OF EXPOSURE-

EYES- Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils. Expected to be an eye irritant, including burning sensation, tearing, redness or swelling.

SKIN- Exposure to this material can result in absorption through skin causing health hazard. May cause delayed skin irritation and blistering. Repeated exposure may cause sensitization; and allergic response of the skin.

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.

Aerosols or vapors which may be generated at elevated processing temperatures may cause respiratory tract irritation. Symptoms of irritation may include coughing, mucous production and shortness of breath.

INGESTION- Not significantly toxic.

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.

Data for SR351

Acute toxicity

Oral: Practically nontoxic. (Rat) LD50 > 5,000 mg/kg.

Dermal: Practically nontoxic. (Rabbit) LD50 = 5,170 mg/kg.

Practically nontoxic. (Rat) LD50 > 2,000 mg/kg.

Inhalation: No deaths occurred. (Rat) 6 h LC0 > 0.55 mg/l. (vapor)

Skin Irritation: Causes mild skin irritation. (Rabbit) Irritation Index: 2.2 - 3.8 / 8. (4 h)

Causes skin irritation. (Rabbit) (6 h) (Repeated skin exposure)

Eye Irritation: Causes serious eye irritation. (Rabbit) Irritation Index: 44/110.

Skin Sensitization: May cause an allergic skin reaction. Repeated skin exposure. (Guinea pig) Skin allergy was observed. (Strong sensitizer) Not a sensitizer. Mouse ear swelling assay. No skin allergy was observed

Repeated dose toxicity Repeated dermal administration to rat, mouse, rabbit / affected organ(s): skin / signs: Local irritation / No adverse systemic effects reported.

Genotoxicity

Assessment in Vitro: Both positive and equivocal responses have been reported in tests using: bacteria
Genetic changes were observed in laboratory tests using: animal cells

Assessment in Vivo: No genetic changes were observed in a laboratory test using: mice

Developmental toxicity Exposure during pregnancy. Oral (Rat) / No birth defects were observed.

Human experience Skin contact: Skin: Skin allergy was observed. Sensitization described in isolated cases. (based on reports of occupational exposure to workers)

The Alkylated Phenol (88-27-7) component of the product may be toxic by inhalation, in contact with skin and if swallowed.

SECTION 12 – Ecological Information

This product contains the following no 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):

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

Chemical Fate and Pathway Data on this material and/or a similar material are summarized below.

Data for SR351

Biodegradation: Readily biodegradable. (28 d) biodegradation 86 %

Octanol Water Partition Coefficient: log Pow = 0.67

Ecotoxicology Data on this material and/or a similar material are summarized below.

Data for SR351

Aquatic toxicity data: Toxic. *Leuciscus idus* (Golden orfe) 96 h LL50 = 1.47 mg/l

Aquatic invertebrates: Harmful. *Daphnia magna* (Water flea) 48 h EC50 = 19.9 mg/l

Algae: Toxic. *Desmodesmus subspicatus* (green algae) 96 h EC50 = 4.86 mg/l

Microorganisms: Activated sludge 30 min EC20 (Respiration inhibition) = 625 mg/l

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

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

Alkylated phenol - Acute Hazard, Reactive Hazard

TMPTA - Reactive Hazard

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

SECTION 13 - Disposal considerations

Waste disposal: Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

SECTION 14 - Transportation Information

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.

Unless inhibited, product can polymerize, raising temperature and pressure, possibly rupturing container. Check inhibitor content often, adding to bulk liquid if needed. Do not blanket or mix with oxygen free gas as it renders inhibitor ineffective. Do not store at or below 32° F, inhibitor can separate as a solid.

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

US Department of Transportation (DOT): not regulated

International Maritime Dangerous Goods Code (IMDG): not regulated

SECTION 15 - Regulatory Information

Chemical Inventory Status

EU. EINECS EINECS Conforms to US. Toxic Substances Control Act TSCA The components of this product are all on the TSCA Inventory. Australia. Industrial Chemical (Notification and Assessment) Act AICS Conforms to Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
DSL All components of this product are on the Canadian DSL. Japan. Kashin-Hou Law List ENCS (JP) Conforms to Korea. Existing Chemicals Inventory (KECI) KECI (KR) Conforms to Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act PICCS (PH) Conforms to China. Inventory of Existing Chemical Substances IECSC (CN) Conforms

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals: The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories: Acute Health Hazard, Reactivity Hazard

SARA Title III – Section 313 Toxic Chemicals: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ): The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations

New Jersey Right to Know No components are subject to the New Jersey Right to Know Act.

Pennsylvania Right to Know Chemical Name. 2 -Propenoic acid, 2-ethyl-2-[[1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester. CAS-No 15625-89-5

California Prop. 65 WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Chemical Name Benzene, methyl- CAS-No.108-88-3

SECTION 16 – Other Information

Full text of H-Statements referred to under sections 2 and 3.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Revision Note: Updated and reissue. Revision Date April 10, 2015

Prepared by: Craig Moore

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

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