

MATERIAL SAFETY DATA SHEET
Natro-Cel BCF-A

Date Revised: September 28, 2011

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SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Natro-Cel BCF-A
CHEMICAL NAME: Polyether on Silicon Dioxide

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

HMS RATING	
HEALTH	2
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 - COMPONENTS

COMPONENT NAME	CAS#	Concentration
5,8,11,13,16,19-Hexaoxatricosane	143-29-3	68 – 71%
Diethylene Glycol Monobutyl Ether	112-34-5	0.7 – 3.6%
Formaldehyde	50-00-0	<0.1%
Silicon Dioxide	112926-00-8	28%

SECTION 3 - PHYSICAL DATA

Boiling Point: N/DA	Specific Gravity: 1.13 (Calculated)
Vapor Pressure (mm Hg): N/A	Percent Volatiles: <1
Vapor Density (Air = 1): N/A	Evaporation Rate: N/A
Solubility in Water: Not applicable	Odor: mild organic
Appearance: Off-white, free flowing powder	

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT: >93C (199F)
FLAMMABLE LIMITS: N/A
AUTOIGNITION TEMPERATURE: N/A

EXTINGUISHING MEDIA: Small Fires: Use water (Spray, fog or in some instances, stream), foam, dry chemical or carbon dioxide. Large Fires: Use water (Spray or stream) or standard foam.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

UNUSUAL FIRE & EXPLOSION HAZARDS: Water may cause frothing.

SECTION 5 - HEALTH HAZARD DATA

HAZARD SUMMARY: WARNING! This material can cause the following: slight irritation; possibly harmful if swallowed; inhalation of vapor, mist or dust can cause headache, nausea and irritation of the nose, throat, and lungs; decreased physical activity; lacrimation; ataxia; difficulty breathing; central nervous system effects. Prolonged or repeated exposure can cause the following: kidney damage; liver damage; liver damage; blood disorders; adverse reproductive effects; teratogenic effects.

CHRONIC HEALTH EFFECTS: 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.

Repeated overexposure to diethylene glycol monobutyl ether can cause the following: kidney damage, liver damage, blood changes. Results from screening testing suggest potential adverse effects on the nervous system (uncoordinated movement, prostration, salivation, lethargy, reduced activity and/or twitching), reproduction/fertility (lowered maternal pregnancy rates), and developmental teratogenicity or birth defects (limb malformations in offspring) in laboratory rats treated with TP90B. The NOAEL in this study was 100mg/kg for all listed effects. Repeated exposure (OECD 422).

ACUTE TOXICITY DATA:

5,8,11,13,16,19-HEXAOXATRICOSANE: Toxic Effects: Not considered an eye or skin irritant.

Acute Toxicity Studies:

Oral-rat LD50: 1746 mg/kg

Oral-mouse LD50: 2700 mg/kg

LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NTP: No

IARC: No

OSHA: No

DIETHYLENE GLYCOL MONOBUTYL ETHER:

Toxic Effects: The pure form of this material can cause moderate eye and mild skin irritation. May be absorbed through the skin. Ingestion can result in nausea, vomiting, diarrhea, and CNS depression (i.e., headache, dizziness, and drowsiness). Inhalation of high concentrations of aerosols can also result in CNS depression. This material does not tend to form vapors at normal room temperatures. No chronic adverse health effects in humans have been reported.

Acute Toxicity Studies:

Oral-rat LD50: 5660 mg/kg

Oral-rabbit LD50: 2200 mg/kg

Oral-guinea pig LD50: 2000 mg/kg

Dermal-rabbit LD50: 4120 mg/kg

Other Toxicity Studies: Topical application to shaved rabbit skin on days 7 & 8 of gestation was not teratogenic at 1000 mg/kg or less. This material was negative in a battery of in vitro genetic toxicity assays, except for the mouse lymphoma assay where there was a weak dosage response. It was also negative in a sex-linked recessive lethal assay in drosophila.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NTP: No

IARC: No

OSHA: No

FORMALDEHYDE:

Toxic Effects: Liquid contacting the eyes can produce severe irritation and permanent corneal opacity. Vapors are also irritating. Prolonged or repeated skin contact, can cause dryness, cracking, and possibly first to second degree burns. Ingestion causes severe irritation to the mouth, throat, and gastrointestinal tract producing nausea, vomiting, and severe abdominal pain. Formaldehyde is a respiratory irritant and can produce serious injury, including pulmonary edema. Formaldehyde is also a respiratory and skin sensitizer.

Acute Toxicity Studies:

Oral-rat	LD50: 800 mg/kg
Oral-mouse	LD50: 42 mg/kg
Oral-rabbit	LD50: 270 mg/kg
Oral-guinea pig	LD50: 260 mg/kg
Dermal-rabbit	LD50: 270 mg/kg
Inhalation-rat	LC50: 590 mg/m ³
Inhalation-mouse	LC50: 400 mg/m ³ /2 hrs.

Chronic Toxicity Studies: Repeated exposure to levels as high as 14.3 ppm induced nasal cavity squamous cell carcinomas in rats and acute necrosis, with increased cell replication, in the nasal mucosa of rats and mice.

Other Toxicity Studies: Formaldehyde is a genotoxic in several in vitro test systems showing properties of both an initiator and promoter.

LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NTP: YES

IARC: YES

OSHA: YES

ACGIH: YES

PRODUCT TOXICITY INFORMATION:

Toxic Effects: Results of a repeated insult test showed some response as a primary irritant and skin fatiguing agent (13 of 50). In addition, three of the 50 test subjects responded in a way to suggest the test material may produce sensitization-type reactions. However, a test in rabbits showed no skin irritation. In another study in guinea pigs, Natro-Cel BCF-A was not found to be a sensitizing agent.

EYE AND/OR SKIN IRRITATION STUDIES:

Eye irritation (rabbit): 5.0/110 at 24-hours and 0/110 at 72 hours; considered minimally irritation. Skin irritation (rabbit): 0/8.0; considered non-irritating.

PRIMARY ROUTE OF ENTRY- Inhalation, eyes, skin.

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, dizziness, difficulty in breathing, nausea and nosebleeds.

INGESTION- Possibly harmful if swallowed. Can cause nausea, vomiting, diarrhea, central nervous system effects, salivation, convulsions, difficulty in breathing; decreased physical activity, lacrimation, ataxia.

ADDITIONAL EFFECTS- Depending on the route, frequency, and duration of exposure, toxicity may effect in the following organs and/or systems: Respiratory System.

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. Individuals with medical conditions involving the respiratory system should take appropriate precautions when handling this product.

SECTION 6 - 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. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration, preferably mouth to mouth.

INGESTION: Seek medical attention. Unless advised otherwise, induce vomiting by giving either syrup of IPECAC followed by 2 glasses of water or by sticking finger down throat. Do not give anything by mouth if the person is drowsy, unconscious, or has no gag reflex.

NOTE TO PHYSICIAN: Treatment should be directed at preventing absorption, administering to the symptoms as they occur, and providing supportive therapy.

SECTION 7 - 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. Avoid oxidizing agents, acids.

CONDITIONS TO AVOID- Avoid high temperature treatment (>800° C). This product will emit trace amounts of formaldehyde if heated to temperatures above 22°F. Higher temperatures will increase the amount of formaldehyde evolved.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon when burned, smoke, and low molecular weight hydrocarbons.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 8 - 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: In accordance with local, state, and federal regulations.

SECTION 9 - 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 10 - SPECIAL PRECAUTIONS

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. Do not store above 110° F.

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

SECTION 11 - REGULATORY INFORMATION

TOXIC SUBSTANCE CONTROL ACT (TSCA):

The components of this product are contained on the Inventory of the Toxic Substance Control Act.

CHEMICAL INVENTORIES:

OSHA:

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 UNITS	AMOUNT	ACGIH (TLV)	ACGIH (STEL)	OSHA (PEL)	OSHA (STEL)
Silicon Dioxide	28%	10		6	mg/m3
Formaldehyde	0.07%	1.2	2.5		mg/m3
Formaldehyde	0.07%	1	2	0.75	2 ppm

SARA 313 TOXIC CHEMICALS: This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and the Pollution Prevention Act of 1990.

CAS REGISTRY #	CHEMICAL NAME	PERCENT BY WEIGHT
50-00-0	Formaldehyde	0.07%
112-34-5	Diethylene Glycol Monobutyl Ether	3.6%

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

SECTION 311/312 - HAZARD CATEGORIES:

The physical and health hazard categories for the hazardous components exceeding the de minimis amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372

Name of Chemical	Hazard	Percent in Product
Silicon Dioxide	Acute	28%
Formaldehyde	Acute & Chronic	0.07%
Diethylene Glycol Monobutyl Ether	Acute	3.6%

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES:

Pursuant to Section 302 of Sara Title III, this product contains the following extremely hazardous substances: Formaldehyde

SECTION 12 - REGULATORY INFORMATION

TRANSPORTATION INFORMATION:

DOT Shipping Name: Not regulated.

DOT Identification Number: Not applicable

DOT Label: Not applicable

SECTION 13 - OTHER INFORMATION

Revision Note: updated CAS number for silica. 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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