

MATERIAL SAFETY DATA SHEET  
Natro-Cel AL

Date Revised: September 26, 2011

Page 1 of 4

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Natro-Cel AL  
CHEMICAL NAME: Ammonium Salts of Alkyl Phosphate on Silicon Dioxide

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

| HMIS RATING  |   |
|--------------|---|
| Health       | 3 |
| 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#        |
|------------------------------------|-------------|
| Neutralized mixed alkyl phosphates | N/DA        |
| Ammonium hydroxide                 | 1336-21-6   |
| Silicon Dioxide                    | 112926-00-8 |

SECTION 3 - PHYSICAL DATA

|  |                                      |
|--|--------------------------------------|
| Boiling Point: N/DA                        | Specific Gravity: 1.201 (Calculated) |
| Vapor Pressure (mm Hg): N/DA               | Percent Volatiles: 14                |
| Vapor Density (Air = 1): N/DA              | Evaporation Rate: N/DA               |
| Solubility in Water: Dispersible           | Odor: slight ammonia                 |
| Appearance: Off white, free flowing powder |                                      |

SECTION 4 - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): 138C (280° F) (TOC)  
FLAMMABLE LIMITS: N/DA  
AUTOIGNITION TEMPERATURE: N/DA  
EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical, water spray.  
SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective equipment and self-contained breathing apparatus.  
UNUSUAL FIRE & EXPLOSION HAZARDS: None known.

SECTION 5 - HEALTH HAZARD DATA

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/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.

PRIMARY ROUTE OF ENTRY- Inhalation.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None.

NTP: No

IARC: No

OSHA: No

#### EFFECTS OF EXPOSURE-

**EYES-** May cause eye irritation with discomfort, tearing, or blurring of vision; eye corrosion with corneal or conjunctival ulceration. Excessive contact with powder can cause drying of mucous membranes of eyes due to absorption of moisture and oils.

**SKIN-** Mildly irritating. Prolonged or repeated contact may dry skin causing cracking and dermatitis.

**INHALATION-** Inhalation of ammonia may cause irritation of the upper respiratory passages or headache, nausea, and weakness. 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-** Ingestion of ammonia may cause corrosive injury to the mouth, esophagus and stomach leading to pain, vomiting and circulatory collapse.

**PHYSIOLOGICAL EFFECTS SUMMARY-** For Product: Oral ALD (rats) >11,000 mg/kg. The product contains an ingredient that is corrosive to the skin and eyes. The product is untested for skin sensitization, but similar compounds are known to cause de-fatting of skin. FOR AMMONIUM HYDROXIDE: Oral LD50 (rats 350 mg/kg (as ammonia). Inhalation LC50 (rats) 7338 ppm/1hr (as ammonia). Inhalation of ammonia causes irritation to the respiratory tract and breathing difficulty. Ames test was negative for ammonia.

**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 preexisting disease of the lung, skin and eyes may have increased susceptibility to the toxicity of excessive ammonia exposure.

**EXPOSURE LIMITS:** For Ammonium Hydroxide- ACGIH TLV/TWA: 25 ppm, 17 mg/cu m (as ammonia);  
OSHA TWA: PEL 36 ppm, 27 cu m (as ammonia).

---

#### SECTION 6 - EMERGENCY & FIRST AID PROCEDURES

---

**EYE CONTACT:** Immediately rinse with clean water for 15 minutes. Retract eyelids often. Consult a physician.

**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. Keep warm and quiet. Give artificial respiration if not breathing. Consult a physician.

**INGESTION:** Do not induce vomiting. Immediately give two glasses of water, or activated charcoal slurry. Never give anything by mouth to an unconscious person. Call a physician.

**INSTRUCTIONS TO PHYSICIAN:** To prepare activated charcoal slurry, suspend 50 g activated charcoal in 400 ml of water in plastic bottle. Shake well. Administer 1 ml/kg or 350 ml for an average adult.

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, nitrogen and phosphorus when burned.

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: Not an RCRA hazardous waste. Dispose 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 - HANDLING

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.

---

#### SECTION 11 - SPECIAL PRECAUTIONS

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

---

#### SECTION 12 - 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                      | ACGIH<br>(TLV) | OSHA<br>(PEL) | UNITS             |
|---------------------------------|----------------|---------------|-------------------|
| Silicon Dioxide                 | 10             | 6             | mg/m <sup>3</sup> |
| Ammonium hydroxide (as ammonia) | 17             | 27            | mg/m <sup>3</sup> |

## SARA TITLE III INFORMATION:

## SECTION 313 - TOXIC CHEMICALS:

This product does not contain any toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40 CFR 372.

## CAS REGISTRY #                      CHEMICAL NAME                      PERCENT BY WEIGHT

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

## SECTION 302 &amp; 304 - EXTREMELY HAZARDOUS SUBSTANCES:

This product does not contain an Extremely Hazardous Substance subject to reporting under 40CFR 355.

## SECTION 311/312 - HAZARD CATEGORIES:

The physical and health hazard categories for this product are:

|                    |     |              |
|--------------------|-----|--------------|
| Silicon Dioxide    | 28% | Acute Hazard |
| Ammonium hydroxide | 4%  | Acute Hazard |

## CERCLA:

This product does not contain any chemical subject to reporting as a CERCLA Hazardous Substance under 40CFR 372.

TRANSPORTATION INFORMATION: Not regulated.

DOT Shipping Name:

DOT Identification Number:

## SECTION 13 - OTHER INFORMATION

Revision Note: Corrected 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

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.