

MATERIAL SAFETY DATA SHEET

TBEP DLC®-A


Date Revised: June 21, 2000

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SECTION I - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: TBEP DLC-A

CHEMICAL NAME: Tributoxyethyl phosphate 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 II - COMPONENTS

COMPONENT NAME	CAS#
Tributoxyethyl phosphate	78-51-3
Silicon Dioxide	7531-86-9
2-Butoxyethanol	111-76-2

SECTION III - PHYSICAL DATA

Boiling Point: 448° F Specific Gravity: 1.176 (Calculated)
Vapor Pressure (mm Hg): 0.03 @ 302° F Percent Volatiles: N/DA
Vapor Density (Air = 1): N/DA Evaporation Rate: < 1
Solubility in Water: <0.2% water soluble
Appearance and Odor: Off-white, free flowing powder with mild odor.

SECTION IV - FIRE & EXPLOSION DATA

FLASH POINT (Method Used): 270° F (PMCC)

FLAMMABLE LIMITS: N/DA

AUTOIGNITION TEMPERATURE: N/DA

EXTINGUISHING MEDIA: Water spray, dry chemicals or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Use standard fire fighting techniques to extinguish fires involving this material.

UNUSUAL FIRE & EXPLOSION HAZARDS: Products of combustion are irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed several hours or longer depending upon the extent of exposure. As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate nonessential personnel from the fire area. Fire fighters should wear full face, self-contained breathing apparatus and impervious clothing.

SECTION V - 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/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.

SECTION V - HEALTH HAZARD DATA (cont)

PRIMARY ROUTE OF ENTRY- Inhalation and skin contact.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: None

NTP: No

IARC: No

OSHA: No

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 and nosebleeds. Inhalation of vapors may produce neurotoxicity. Signs and symptoms of neurotoxicity may include weakness, numbness and tingling sensation of the hands and feet, muscle cramps and loss of motor functions.

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. 2-Butoxyethanol, which may comprise up to 0.4% of this product, has caused increased fragility of the red blood cell in some experimental animals. These effects disappeared rapidly after exposure was eliminated. In humans, exposure to high levels of this material showed no blood effects at all. Prolonged exposure to vapors of 2-Butoxyethanol may cause liver and kidney damage.

SECTION VI - 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. Seek medical attention if respiratory irritation occurs or if breathing becomes difficult.

INGESTION: If swallowed, immediately give several glasses of water but do not induce vomiting. If vomiting occurs, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuations of stomach. Do not give anything by mouth to an unconscious person.

SECTION VII - 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.

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

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon when burned, irritating fumes of phosphoric acid, and/or phosphorous oxides.

SECTION VII - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VIII - 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 IX - 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 X - 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.

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

SECTION XI - 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 (TLV)	OSHA (PEL)	UNITS
Silicon Dioxide	10	6	mg/m ³
2-butoxyethanol	120	240	mg/m ³

SECTION XI - REGULATORY INFORMATION

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
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None.

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

SECTION 302 & 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 - Acute Hazard- 28%

CERCLA:

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

RCRA:

This product is not a hazardous waste as listed in 40CFR 261.33. It does not exhibit any of the hazardous characteristics listed in 40CFR 261 Subpart C.

TRANSPORTATION INFORMATION:

DOT Shipping Name: N/A

DOT Identification Number:

SECTION XII - OTHER INFORMATION

Revision Note: Added CHEMTREC information.

Prepared by: James L. Pye, Jr.

Title: Safety Coordinator

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

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