

MATERIAL SAFETY DATA SHEET
Zeonet-PB DLC[®]-A

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1 - CHEMICAL PRODUCT & COMPANY IDENTIFICATION

CHEMICAL NAME: Blend of tetra-n-butyl phosphonium benzotriazolote with ethylene glycol and silicon dioxide.



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)

2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT NAME	CAS#	PERCENT
Zeonet PB	109348-55-2	70.9
Ethylene glycol	107-21-1	1.1
Silicon Dioxide	112926-00-8	28

Contains no detectable crystalline silica (detection limit <0.01% by weight).

3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is an off-white powder. Harmful if inhaled, ingested, or absorbed through the skin. Processing operations may produce vapors, mist or dust that may cause eye, skin, and respirator tract irritation. Toxic combustion products may be released under fire conditions.

CAUTION! May cause irritation. Possible routes of entry include skin & eye contact and process vapor or dust inhalation. May be moderately toxic if ingested. May cause severe eye injury, which may not be reversible, and mild skin irritation. May be harmful if inhaled, ingested or absorbed through the skin. At processing temperatures, the combined ingredients may emit fumes and vapors that may cause irritation to the eyes, skin, nose, throat, and respiratory tract. Processing under conditions of inadequate ventilation may produce symptoms of nausea, dizziness, or headaches. Typically these effects are reversible upon removal from exposure and no lasting effects are expected. The potential for irritation will depend on the effectiveness of exhaust ventilation provided in the process area.

Contains ethylene glycol, which may cause eye, skin and respiratory tract irritation. Prolonged or repeated exposure to vapors may cause damage to kidneys, liver, lung, blood or the central nervous system.

EYE: Avoid contact with eyes; may cause irritation and pain. Symptoms include stinging, tearing, and redness.

SKIN: Avoid prolonged, repeated, or excessive contact with skin, may cause irritation and discomfort.

INGESTION: N/DA

INHALATION: Avoid prolonged or repeated inhalation of dust. May irritate the respiratory tract.

4 - FIRST AID MEASURES

INHALATION: If inhaled, remove the affected individual to fresh air. Seek medical assistance.

EYE/SKIN CONTACT: In case of contact, immediately flush eyes and skin with plenty of water (soap and water on skin) for at least 15 minutes. Get medical attention if irritation develops.

INGESTION: Not a likely route of exposure.

NOTES TO PHYSICIAN: Treat symptomatically.

5 - FIRE FIGHTING MEASURES

FLASH POINT: >215°C (418°F)

EXTINGUISHING MEDIA: Water, ABC dry chemical, or Protein type air foams are recommended.

SPECIAL FIREFIGHTING PROCEDURES: Wear positive pressure self-contained breathing apparatus during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

6 - ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Sweep, shovel or vacuum material into closed containers for proper reuse or disposal.

7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE: Store in a dry area away from direct light. When transferring material into flammable solvents, use proper grounding to avoid electrical sparks. Product surface alterations caused by calcining or mixing with additives may alter toxicological properties. This product may emit fumes when heated. Provide ventilation and avoid continued or prolonged breathing of process vapors. Wash thoroughly after processing this material. Do not use or consume food in processing areas. Do not use processing equipment to heat food. Process in fume condensates, which may include toxic contaminants, may be combustible and should be periodically removed from exhaust hoods, ductwork, and other surfaces.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

8-hour Time Weighted Average (TWA); 15-minute Short-Term Exposure Limit (STEL)

OSHA: 6 mg/m³ (total dust) TWA. 29 CFR 1910.1000

ACGIH: 10 mg/m³ (total amorphous dust) TWA. 3 mg/m³ (respirable nuisance particulate) TWA.

RESPIRATORY PROTECTION: Use NIOSH approve dust filter respirator for exposure above permissible exposure limits. The respiratory-use limitations made by NIOSH or the manufacturer must be observed. Respiratory protection programs must be in accordance with 29 CFR 1910.134. Wear a positive pressure air-supplied respirator in situations where there may be potential for elevated airborne exposure such as during equipment malfunction, or product hang-up or stagnation during processing that may result in decomposition.

VENTILATION: General or local exhaust must be used to draw fumes, vapors or dust away from workers to prevent inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below exposure limits.

EYE AND FACE PROTECTION: If eye exposure to powder is likely, use tight fitting protective goggles.

PROTECTIVE GLOVES: Cloth. Leather. Rubber

OTHER PROTECTIVE EQUIPMENT: Boots, apron, or chemical suits should be used when necessary to prevent skin contact. Personal protective clothing and use of equipment must be in accordance with 29 CFR 1910.132 (general requirements), .133 (eye and face protection), and .138 (hand protection).

9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A	VAPOR DENSITY (Air=1): N/A
SPECIFIC GRAVITY (Water = 1): N/D	FREEZING/MELTING POINT: 31C
SOLUBILITY (wt.% in water): 66%	VAPOR PRESSURE: N/D
PHYSICAL STATE: powder	ODOR: slight organic
COLOR: off-white	FLASH POINT: 215C

10 - STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Overheating can generate benzotriazole. Avoid calcining, (>800°C) which may result in crystalline formation. Avoid mixing with additives that may alter toxicological properties.

HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS: Fumes produced when heated to decomposition temperature may contain carbon monoxide, carbon dioxide, oxides of nitrogen and sulfur, benzotriazole, and phosphorous anhydride. Combustion products are considered toxic.

11 - TOXICOLOGICAL INFORMATION

ACUTE INHALATION LC50: Nuisance dust
ACUTE DERMAL LD50: N/A
SKIN IRRITATION: (rabbit) very slight.
EYE IRRITATION: (rabbit) severe
ACUTE ORAL LD50: >700 mg/g.
Sensitization: (Guinea Pig) negative.
Mutagenicity: Negative in Bacterial Mutation Assay.

CHRONIC EFFECTS/CARCINOGENICITY: This product is not listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

MEDICAL CONDITIONS AGGRAVATED: None known.

EFFECTS OF OVEREXPOSURE:

ACUTE: Excessive contact with powder can cause drying of mucous membranes of nose, eyes, and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds. Eye contact with powder can result in mild irritation.

CHRONIC: An epidemiological study was conducted which included 165 precipitated silica workers who had been exposed an average time span of 8.6 years. Of these 165 workers, 44 had been exposed for an average of 18 years. No adverse effects were noted in complete medical examinations (including chest roentgenograms) of these workers. Pulmonary function decrements were correlated only with smoking and age but not with the degree of duration of dust exposures. Laboratory studies have also been conducted in small animals via inhalation to levels of precipitated silica dust of up to 126 mg/m³ per periods from six months to two years. Although precipitated silica was temporarily deposited in the animals' lungs, most of the deposited material was cleared soon after the dust exposure ended. The results of the studies performed by, or known to, PPG indicate a very low order of pulmonary activity for synthetic precipitated silicas.

PPG recommends that person with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection.

Ethylene glycol is reported to cause birth defects in laboratory animals when administered by gavage.

12 - ECOLOGICAL INFORMATION

No information available.

13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Waste from this product may be disposed of in a sanitary landfill if state and local regulations permit. Care should be taken to avoid creation of dust during disposal operations. Waste resulting from this product is not known to be classified as a hazardous waste per the current listings and characteristics contained in 40 CFR part 261, and its Appendices. It is the generator's responsibility to determine the applicability of the RCRA as well as other regulations to the particular waste materials prior to treatment or disposal.

14 - TRANSPORT INFORMATION

USA DOT DESCRIPTION: Not Regulated.
Proper Shipping Name: Not regulated.

15 - REGULATORY INFORMATION

USA TSCA: Silicon dioxide is listed on the TSCA Inventory as its general CAS# 7631-86-9. Zeonet PB and all its components are listed on the U.S. EPA Toxic Substances Control Act Inventory, and does not contain any components subject to TSCA 12(b) export notification requirements.

EUROPE EINECS: Silicon dioxide is listed on EINECS (231-545-4) as its general CAS# 7631-86-9

CANADA DSL: Silicon dioxide is listed on the Canadian DSL.

AUSTRALIA AICS: Silicon dioxide is listed on AICS.

KOREA ECL: Silicon dioxide is listed on ECL.

JAPAN MITI (ENCS): This product is listed on MITI.

PHILIPPINES PICCS: Silicon dioxide is listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS).

SARA TITLE III: (311,312) Hazard Class: Silicon Dioxide – Acute Health Hazard.

SARA (313) Chemicals: Ethylene Glycol in Zeonet PB exceeds the de minimis amount subject to reporting under Section 313 of Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.

SARA Section 302: Not listed as an Extremely Hazardous Substance.

16 - OTHER INFORMATION

Revision Note: Review and reissue

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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