ERIE ENERGY PRODUCTS, INC.
1400 IRWIN DRIVE • ERIE, PENNSYLVANIA 16505 • PHONE (814) 454-2828

SAFETY DATA SHEET - SDS

Product Type: ***Cellulose Insulation with Boric Acid***
Revision Date: ***February 2017***

SECTION 1: IDENTIFICATION AND PRODUCT IDENTIFICATION

Product Name: Therm Shield® Cellulose Insulation
Company Name: ERIE ENERGY PRODUCTS, INC
1400 Irwin Drive
ERIE, PA 16505
Emergency Contact: 814-454-2828
Recommended Use: Insulation

SECTION 2: HAZARDOUS IDENTIFICATION

Hazard Classification: Acute Aquatic Toxicity Category 2
Hazard Symbol: None
Signal Word: Warning
Hazard Statements: Toxic to aquatic life
Other Hazards: None.
Precautions: Wear protective gloves / protective clothing / eye protection / face protection. Avoid generating dust. Keep away from heat, sparks, open flames, and hot surfaces. No Smoking. Dispose of contents/container in accordance with local regulation. Avoid release to the environment.

SECTION 3: COMPOSITION, INFORMATION ON INGREDIENTS

CAS NUMBER	***NAME***	***PERCENT***
65996-61-4	Cellulose Fiber	</= 87%
10043-35-3	Boric Acid	</= 13%

SECTION 4: FIRST-AID MEASURES

Inhalation: Avoid breathing dust. Remove to fresh air. No acute hazard known.
Eye contact: Flush eyes with copious amount of water. No acute hazard known.
Skin contact: Wash exposed skin with soap and water. No acute hazard known.
Ingestion: Contact poison control. Do not induce vomiting. No acute hazard known.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Observation only is required for adult ingestion of a few grams of the product. For ingestion in excess of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

SECTION 5: FIRE-FIGHTING MEASURES

Special Fire Fighting Procedures: Not applicable. The product itself is a flame retardant.

Unusual Fire and Explosion Hazards: None. The product is not flammable, combustible or explosive. None expected for product based on particle size. Note: Airborne concentrations of combustible dust, when combined with an ignition source, can create an explosion hazard if the dust concentration exceeds 15mg/m3.

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Extinguish media: Water spray, CO2 Use extinguishing media that are appropriate to local circumstances and the surrounding environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

General: The product contains water-soluble salts that may cause damage to trees or vegetation by root absorption. Avoid contamination of water bodies.

Dust: Remove with explosion-proof vacuum. Avoid generating dust.

Spill: Sweep up excess material while avoiding generating dust.

Water Spill: The product will cause localized contamination of surrounding waters depending on the quantity dissolved in these waters. At high concentrations some damage to local vegetation, fish and other aquatic life may be expected. The product is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). (Refer to Regulatory Information for additional references and information regarding EPA and California regulations.)

Disposal: In accordance with Federal, State and local refuse regulations

SECTION 7: HANDLING AND STORAGE

Avoid dust formation and accumulation with routine housekeeping. Avoid use around or near ignition sources. Store in a dry location, avoid moisture.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

ACGIH STEL:	ACGIH TLV	OSHA PEL
6 mg/m3	ACGIH TLV-TWA-OEL: 2 mg/m3 inhalable particles	PEL-TWA 15mg/m3 Total PEL-TWA 5mg/m3 Respirable

Respiratory Protection: Use NIOSH/MHSA approved respiratory masks when allowable levels may be exceeded.

Eye Protection: Use goggles or eye glasses are recommended if product is used in a way as to generate high dust levels.

Hand Protection: Not required. If sensitive, wear gloves.

Other Protective Clothing: Outer garments may be desirable in extremely dusty areas.

Ventilation: Use localized exhaust ventilation.

Work/Hygiene: Wash hands with soap and water. Practice standard hygiene.

Use in a processing environment designed to contain combustible dusts, which is free of ignition sources and has an explosion and fire suppression system.

Section 8 Notes: PEL: Permissible Exposure Limit, TLV: Threshold Limit Value, TWA: Time Weighted Average, STE: Short Term Exposure Limit

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: Not Applicable

Boiling Point (F): Not Applicable

Vapor Pressure (mm Hg): Not Applicable

Vapor Density: Not Applicable

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Solubility in Water:	Fiber is not soluble; chemical additive is soluble at a rate of 7.46% at 25°C
Bulk Density (packaged product):	2-3lb/ft3
Reactivity in Water:	Dispersible
Melting Point:	Not Applicable
pH at 25C:	7.2 (2.0% solution)
Appearance & Odor:	Gray fiber. No discernible odor.
LEL/UEL:	No data available.

SECTION 10: STABILITY & REACTIVITY

Stability:	Stable under normal storage conditions
Conditions to Avoid:	Avoid extreme heat and flame
Hazardous Decomposition:	May produce carbon monoxide and carbon dioxide
Possibility of Hazardous Reactions:	Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard
Hazardous Polymerization:	Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

Component	LD50 Oral	LD50 Dermal	LC50 Inhale (dust)
Cellulose Fiber	Non-toxic	Non-toxic	5800 mg/m3 (rat)
Boric Acid	2,550 mg/kg (rat)	>2,000 mg/kg (rabbit)	>2.01 mg/L

* Components not listed are not hazardous substances.

May cause irritation to eye and respiratory system. Persons with respiratory problems should avoid breathing dust. Can cause irritation to mucous membrane and upper respiratory system. Remove to fresh air.

Chronic Health Hazards: No chronic effects from cellulose or boric acid were found in the literature. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to inorganic borates and sodium borate dust.

Reproductive Effects: No reproductive effects found. Borate-treated cellulose insulation contains boric acid and cellulose fiber. Borate-treated cellulose insulation was tested for purposes of hazard classification under the Occupational Safety and Health Administration's 2012 Hazard Communication Standard.

In a study conducted under OECD Guideline 414, there were no developmental effects in rats exposed to up to 270 mg/m3 (the highest exposure tested). In workers chronically exposed to high levels of borates for several years by way of inhalation, food, and drinking water, there was a clear absence of any reproductive effects.

Classification: No classification

Carcinogenity: Cellulose & boric acid are not listed as known or suspected carcinogen by OSHA, ACGIH, NTP, or IARC.

SECTION 12: ECOLOGICAL INFORMATION

Cellulose fiber slowly biodegrades in water, is not eco-toxic and persists in arid soils (landfills). Biodegradation products promote soil fertility and plant growth.

Boron: No information specific to boric acid was found in the literature. The following information is based on other boron compounds and normalized for boron.
LC50 (Water flea, D. magna): 101.2 mg/L (48-hr)
NOEC (Water flea, D. magna): 5.7 mg/L (21-d)
LC50 (Rainbow trout, O. mykiss): 351.7 mg boron/L (96-hr)
LC50 (Bluegill, L. macrochirus): 4.6 mg boron/L (24-hr)

PHYTOTOXICITY: Boron is an essential micronutrient for healthy growth of plants. It can be harmful to boron sensitive plants in higher quantities. Care should be taken to minimize the amount of borate product released to the environment.

PERSISTENCE AND DEGRADABILITY: Biodegradation is not an applicable endpoint since the product is an inorganic substance.

BIOACCUMMULATIVE POTENTIAL: This product will undergo hydrolysis in water to form undissociated boric acid. Boric acid will not biomagnify through the food chain. Octanol/Water partition coefficient: Log Pow = -0.7570 @ 25°C (based on boric acid).

MOBILITY IN SOIL: The product is soluble in water and is leachable through normal soil. Adsorption to soils or sediments is insignificant.

OTHER EFFECTS: None

SECTION 12 NOTES: The information in this section is based on other borates and is normalized to boron content. Boron is the element in boric acid which is used to characterize borate product ecological effects.

SECTION 13: DISPOSAL CONSIDERATIONS

No special requirements. Dispose of in accordance with federal, state, and local regulations. None of the components in this product are listed as a dangerous waste RCRA 40CFR261.

SECTION 14: TRANSPORTATION INFORMATION

Not regulated as a hazardous material for transport.

SECTION 15: REGULATORY INFORMATION

EU Classification:	65996-61-4 is classified as non-hazardous.
WHMIS:	Not considered a controlled product or not listed.
TSCA:	All ingredients of this product are either listed on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.
State Right-to-Know:	California Proposition 65. PA, MA, NJ not listed or regulated.
SARA 313 Information:	This product 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 and 40 CFR section 372.
CERCLA:	This product does not contain ingredients which are subject to the reporting requirements of CERCLA.

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DSL:	Cellulose is on the Domestic Substance List.
SAFE DRINKING WATER ACT:	Cellulose Insulation is not regulated under the SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron.
Clean Water Act (Federal Water	Pollution Control Act): 33 USC 1251 et seq.
	a.) Cellulose Insulation is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33USC 1314
	b.) Not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 129
	c.) Not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.
OSHA:	Cellulose dust is a regulated hazard under the OSHA Hazard Communication Standard (29 CFR 1910.1200).
IARC:	The International Agency for Research on Cancer (of the World Health Organization) does not list or categorize Cellulose Insulation as a carcinogen.
CALIFORNIA PROPOSITION 65:	Cellulose Insulation is not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.
REACH:	Cellulose is exempt from registration under the European REACH regulations.
ENCS:	Cellulose is not listed or is exempt from the Japanese Existing and New Chemical Substances List as regulated by the Ministry of International Trade and Industry.

SECTION 16: OTHER INFORMATION

See NFPA 654 for safe handling of combustible particulate solids.

Information presented herein has been compiled from sources considered dependable and is accurate and reliable to the best of our knowledge and belief, but it is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patents or in violation of any laws or regulations. It is the user's responsibility to determine the suitability of any material for a specific purpose and adopt necessary safety precautions. We make no warranty as to results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.