



Greenshield® Premium Cellulose Insulation Stabilized Formula

SAFETY DATA SHEET

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 07/01/2015

Supersedes: 10/01/2009

Version: 0.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product Identifier

Product form: recycled fibers, fire retardant chemicals, adhesive packaged in 30# and 26# poly bags

Substance name: GREENSHIELD® PREMIUM CELLULOSE INSULATION
Stabilized Formula

CAS No.: see Section 3

Formula:

Synonyms: Stabilized Cellulose insulation

Intended Use of the Product

Use of the substance/mixture:

Building products material used as insulation in building construction attics, walls and floors

Name, Address, and Telephone of the Responsible Party

Carolina Precision Fibers

PO Box 624

Elkin, NC

28261

336-527-4140

Emergency telephone number

Emergency number : 1-866-476-3278

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call Carolina Fibers– Day or Night

SECTION 2: Hazards Identification

Avoid extreme heat and open flame. This product may emit carbon monoxide gas, boric acid and other hazardous particulates during thermal decomposition. GREENSHIELD insulation is a finely milled, gray material with no perceptible odor. It presents no unusual hazard if involved in a fire.

Physical Characteristics (for the insulation formulated as a finished product)

Boiling point	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Solubility in water	Insoluble; dispersible
Specific Gravity (H ₂ O=1)	Not applicable
Reactivity in water	None
Melting point	Not applicable

Potential Health Effects (for the insulation formulated as finished product)

Inhalation	Slightly irritating to upper respiratory system. Persons with respiratory problems should avoid breathing dust
Eyes	Slight irritant, In case of irritation flush with water.
Ingestion	Small amounts are not likely to cause harm. Ingestion of large amounts may



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	cause rash, diarrhea or nausea
Skin	Does not normally irritate skin. In case of broken skin, wear gloves and wash dust from skin with soap and plenty of water.
Acute	Not anticipated as references earlier
Chronic	None
Cancer	Neither the product or any of its components

Other hazards

No additional information available

Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

Substances

COMPONENTS	CAS	%	OSHA PEL
Newsprint (Cellulose Fiber)	65996-61-4	Not less than 85%	OSHA PEL-TWA = 15mg/m ³ total dust (PNOC) OSHA PEL-TWA = 5mg/m ³ respirable fraction ACGIH TLV-TWA= 10 mg/m ³ inhalable (PNOS) ACGIH TLV-TWA = 3mg/m ³ respirable (PNOS)
Ammonium Sulfate (NH ₄) ₂ SO ₄	7783-20-2	Not more than 11%	OSHA PEL-TWA=15mg/m ³ total dust (PNOR) OSHA PEL-TWA=5mg/m ³ respirable fraction (PNOR) ACGIH TLV-TWA=10mg/m ³ inhalable (PNOS) ACGIH TLV-TWA=3mg/m ³ respirable (PNOS)
Boric Acid H ₃ BO ₃	10043-35-3	Not more than 10%	OSHA PEL-TWA = 15mg/m ³ total dust (PNOR) OSHA PEL-TWA = 5mg/m ³ respirable fraction ACGIH TLV-TWA = 2 mg/m ³ inhalable ACGIH TLV-STEL = 6 Mg/m ³ inhalable fraction
Guar / Starch	9005-25-8	Not more than 3%	OSHA PEL-TWA = 15MG/M ³ total dust (PNOR) OSHA PEL-TWA = 5MG/M ³ respirable fraction (PNOR) ACGIH TLV-TWA = 10mg/m ³ inhalable (PNOS) ACGIH TLV-TWA = 3mg/m ³ respirable (PNOS)
Mono-Ammonium Phosphate NH ₄ H ₂ PO ₄	7722-76-1	Not more than 2%	OSHA PEL-TWA=15mg/m ³ total dust (PNOR) OSHA PEL-TWA=5mg/m ³ respirable fraction (PNOR) ACGIH TLV-TWA=10mg/m ³ inhalable (PNOS) ACGIH TLV-TWA=3mg/m ³ respirable (PNOS)
Zinc Sulfate ZnSO ₄ H ₂ O	7446-19-7	Not more than 2%	OSHA PEL-TWA=15mg/m ³ total dust (PNOR) OSHA PEL-TWA=5mg/m ³ respirable fraction (PNOR) ACGIH TLV-TWA=10mg/m ³ inhalable (PNOS) ACGIH TLV-TWA=3mg/m ³ respirable (PNOS)



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SECTION 4: First aid measures

Full text of H-phrases: see section 16

INHALATION	Slightly irritating. Persons with respiratory problems should avoid breathing	Move to fresh air. If irritation persists, seek medical attention.
SKIN CONTACT	Not usually problematic	Wash with soap and large amounts of water. If irritation persists, seek medical attention.
EYE CONTACT	Slightly Irritating - Wear Eye Protection	Open eyelids and flush thoroughly with water. If irritation persists, seek medical attention.
INGESTION	Do not ingest.	Diarrhea, nausea and vomiting are symptoms of ingestion. Seek medical attention if ingested and symptoms occur.
CANCER	None.	Neither the end product nor any of its components.
NOTE TO PHYSICIANS	Exposure to dust may aggravate symptoms of persons with pre-existing respiratory tract conditions and may cause skin and gastrointestinal symptoms.	

SECTION 5: Firefighting measures

Avoid extreme heat and open flame.

May emit carbon monoxide gas, boric acid and other hazardous particles during thermal decomposition.

FLASH POINT	N/A
COMBUSTIBLE	Material may decompose on contact with extreme temperatures and open flames.
FLAMMABLE LIMITS	LEL: Not applicable UEL: Not applicable
AUTOIGNITION TEMPERATURE	Not determined
EXPLOSION HAZARD	None expected for product based on particle size. Airborne concentrations of combustible dust, when combined with an ignition source, can create an explosion hazard if the dust concentration exceeds 15 mg/m ³
EXTINGUISHING MEDIA	Water, dry chemical and other agents rated for Type A fires (wood fire). Use Type A extinguisher.
FIRE FIGHTING INSTRUCTIONS	Evacuate the area and notify the fire department. If possible, isolate the fire. If the fire is small use a hose-line or Type A extinguisher. If possible, dike and collect water used to fight fires. Fire-fighters should wear full bunker gear and positive- pressure, self-contained breathing apparatus.



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SECTION 6: Accidental release measures

These products contain inorganic mineral salts which may damage trees or vegetation if exposed to large quantities.

LAND: Shovel, sweep, vacuum product

WATER: Large quantity spill may cause localized contamination of surrounding waters depending on the volume spilled. At very high concentrations may cause damage to localized vegetation, fish and aquatic life. This 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).

Environmental precautions

Prevent entry to sewers and public waters.

Methods and material for containment and cleaning up

Shovel, sweep and/or vacuum materials

Reference to other sections

Refer to regulatory information for additional information regarding EPA and California regulations.

SECTION 7: Handling and storage

GENERAL	No special handling is required.
HANDLING PRECAUTIONS:	Use good housekeeping and engineering controls so that dust levels are below the exposure limits listed in Section II.
STORAGE TEMPERATURE	Ambient
STORAGE PRESSURE	Atmospheric
STORAGE REQUIREMENTS:	Storage of sealed bags in a dry, indoor location is recommended.

SECTION 8: Exposure Controls | Personal Protection

Personal protective equipment	: Fireproof clothing. Insufficient ventilation: wear respiratory protection. Protective goggles. Gloves.	
Hand protection	: Wear chemically resistant protective gloves.	
Eye protection	: Chemical goggles or safety glasses.	
Skin and body protection	: Wear fireproof clothing.	
Respiratory protection	: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.	
Thermal hazard protection	: Wear suitable protective clothing.	
Ventilation	: Normal and adequate	
Work hygienic practices	: Standard	
Occupational exposure	: This product is listed regulated by OSHA and CA/OSHA as "particulates not otherwise regulated" or "Nuisance Dust".	



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SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

BOILING POINT:	N/A	SPECIFIC GRAVITY (H ₂ O = 1):	N/A
VAPOR PRESSURE (mmHg):	Negligible @ 20 °C	MELTING POINT:	N/A
VAPOR DENSITY (Air-1):	N/A	EVAPORATION RATE:	N/A
SOLUBILITY IN WATER:	Insoluble; dispersible		
APPEARANCE AND ODOR:	Gray in color with no odor		

Other information

No additional information available

SECTION 10: Stability and reactivity

STABILITY:	Stable
HAZARDOUS DECOMPOSITION:	None
HAZARDOUS POLYMERIZATION:	Will not occur
MATERIALS TO AVOID:	Metal Hydrides, Alkali Metals, Strong Oxidizers, Hydrogen Peroxide and Chlorine.

SECTION 11: Toxicological Information

BORIC ACID	
EYE	None listed, is expected to be an eye irritant.
SKIN	Mild irritation based on Standard Draize Test. LDLo, skin, Human, 1200 mg/kg
INGESTION	LDLo, oral, human, 429 mg/kg. LD40, oral, rat, 2600 mg/kg
INHALATION	LCLo, inhalation, rat, 28 mg/m ³ /4H
SUBCHRONIC	TDLo, oral, rat, 45 gm/kg/90D-C
CHRONIC	TDLo, oral, rat, 244 gm/kg/2Y-C
TERATOLOGY	None reported
REPRODUCTION	TDLo, oral, rat, 660 mg/kg, specific developmental abnormalities—musculoskeletal system
MUTAGENICITY	Mutation in microorganisms, Escherichia Coli, 17000 ppm/24H



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AMMONIUM SULFATE

EYE	none listed
SKIN	none listed
INGESTION	TDLo, oral, human, 1500 mg/kg, diarrhea, nausea, vomiting, LD50, oral, rat, 2840 mg/kg
INHALATION	non reported
SUBCHRONIC	none reported
CHRONIC	none reported
TERATOLOGY	none reported
REPRODUCTION	none reported
MUTAGENICITY	none reported

STARCH

EYE	None reported
SKIN	Mild irritation based on Standard Draize Test
INGESTION	None reported
INHALATION	None reported
SUBCHRONIC	None reported
CHRONIC	None reported
TERATOLOGY	None reported
REPRODUCTION	None reported
MUTAGENICITY	None reported

MONO AMMONIUM PHOSOPHATE (MAP)

EYE	Irritation with the extent of damage depending on duration of contact
SKIN	Contact dermatitis may follow repeated skin contact
INGESTION	With large doses there is the possibility of dieresis and systemic poisoning
INHALATION	None reported
SUBCHRONIC	None reported
CHRONIC	None reported
TERATOLOGY	None reported
REPRODUCTION	None reported
MUTAGENICITY	None reported



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ZINC SULFATE

ROUTE OF ENTRY	Ingestion or inhalation
TARGET ORGANS	Respiratory system, eyes and skin.
ACUTE EXPOSURE	May cause skin irritation, eye irritation, possible corneal burn, irritation to nose and throat.
CHRONIC EXPOSURE	May cause skin dermatitis, eye conjunctivitis
CHRONIC	No known ingestion reaction anticipated
TERATOLOGY	May cause inhalation reflex bronchoconstriction

PHYSICAL DATA

PHYSICAL STATE	White powder or granules	VAPOR DENSITY	0 (water = 1)
BOILING POINT	N/A	GRAVITY SOLUBILITY IN WATER	30% at 70 F
MELTING POINT	No Data	APPEARANCE	White powder or granules
CRYSTALLIZATION POINT	70 F	EVAPORATION RATE	N/A

SECTION 12: Ecological information

BORIC ACID

ECOTOXICITY	LC50, Daphnia magna, 133 mg/l/48H. RfD, oral, human, 0.09 mg/kg/day, testicular atrophy, spermatogenic arrest. LC50, Trout, 100 ppm.
CHEMICAL FATE INFORMATION	Boron is absorbed into clay particles, with the maximum absorption in the pH range of 7-9. The amount of boron absorbed depends on the surface area of the clay.

AMMONIUM SULFATE

ECOTOXICITY	TLm, Daphnia magna, 423 mg/L/24H.
CHEMICAL FATE INFORMATION	Not Listed.

MONO-AMMONIUM PHOSPHATE

ECOTOXICITY	Not Listed.
CHEMICAL FATE INFORMATION	Not Listed.

STARCH

ECOTOXICITY	Not Listed.
CHEMICAL FATE INFORMATION	Not Listed.



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ZINC SULFATE (PERSONAL PROTECTIVE EQUIPMENT)	
RESPIRATOR	If exposure cannot be maintained at or below established OSHA guidelines, respiratory protection must be provided in accordance with 29 CFR 1910.134 requirements.
SKIN PROTECTION	Wear appropriate protective clothing and chemical resistant gloves as needed to prevent skin contact. Consult manufacturer to determine appropriate type of gloves or clothing for your particular application. Clean contaminated clothing and protective equipment before reuse. Wash thoroughly after handling material.
EYE PROTECTION	Wear splash proof or dust proof safety goggles whenever there is a potential for eye contact.
VENTILATION	Provide local exhaust or process enclosing ventilation to maintain exposure below OSHA guidelines 29 CFR 1910.1000 subpart 7.

SECTION 13: Disposal considerations

Dispose as non-hazardous waste

SECTION 14: Transport information

May be shipped normally as a non-hazardous material.

SECTION 15: Regulatory information

SUPERFUND	If exposure cannot be maintained at or below established OSHA guidelines, respiratory protection must be provided in accordance with 29 CFR 1910.134 requirements.
RCRA	Wear appropriate protective clothing and chemical resistant gloves as needed to prevent skin contact. Consult manufacturer to determine appropriate type of gloves or clothing for your particular application. Clean contaminated clothing and protective equipment before reuse. Wash thoroughly after handling material.
SAFE DRINKING WATER ACT	Wear splash proof or dust proof safety goggles whenever there is a potential for eye contact.
CALIFORNIA PROPOSITION 65	Provide local exhaust or process enclosing ventilation to maintain exposure below OSHA guidelines 29 CFR 1910.1000 subpart 7.
OSHA CARCINOGEN	Not listed.



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CLEAN WATER ACT	33 USC 1251 et seq.: This product is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33 USC 1314. This product is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 116. This product is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.
TSCA NO.	This product does not appear on the EPA TSCA inventory list. Ammonium sulfate and boric acid appear on the EPA TSCA inventory list under the CAS Nos. 7783-20-2 and 10043-35-3 respectively.
OSHA/Cal/OSHA	This MSDS document meets the requirements of OSHA and Cal/OSHA hazard communication standards. Refer to Section VIII for regulatory exposure limits.
IARC	The international Agency for Research on Cancer does not list or categorize this product as a carcinogen.
NTP ANNUAL REPORT OF CAR- CINOGENS	Not Listed

SECTION 16: Other information

Indication of changes : 05/28/2015

ALL INFORMATION, RECOMMENDATIONS AND SUGGESTIONS APPEARING HEREIN CONCERNING OUR PRODUCTS ARE BASED UPON TESTS AND DATA BELIEVED TO BE RELIABLE. HOWEVER, IT IS THE USER'S RESPONSIBILITY TO DETER- MINE THE SAFETY, TOXICITY AND SUITABILITY FOR HIS/HER OWN USE OF THE PRODUCT DESCRIBED HEREIN. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL WE MAKE NO GUARANTEE, EXPRESSED OR IMPLIED, AS TO THE EFFECTS OF SUCH USE, THE RESULTS TO BE OBTAINED OR THE SAFETY AND TOXICITY OF THE PRODUCT: NOR DO WE ASSUME ANY LIABILITY ARISING OUT OF USE, BY OTHERS, OF THE PRODUCT REFERRED TO HEREIN. THE INFOR- MATION HEREIN IS NOT TO BE CONSTRUED AS ABSOLUTELY COMPLETE SINCE ADDITIONAL INFORMATION MAY BE NECESSARY OR DESIRABLE WHEN PARTICULAR OR EXCEPTIONAL CONDITIONS OR CIRCUMSTANCES EXIST OR BE- CAUSE OF APPLICABLE LAWS OR GOVERNMENT REGULATIONS.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

LEGEND:

CAS	Chemical abstract services	OSHA	Occupational Safety and Health Organization
mg/m ³	Milligrams per cubic meter	PNOR	Particulates not otherwise regulated
LCLo	Lethal concentration low	PNOS	Particulates not otherwise specified
LDLo	Lethal dose low	PEL	OSHA permissible exposure limits
LC50	Lethal concentration 50%	ppm	Parts per million
LD50	Lethal dose 50%	RfD	Reference dose
LOAEL	Lowest observed adverse effect level	RTECS	Registry of Toxic Effects of Chemical Substances
mg/l/H	Milligrams per liter per hour	TDLo	Toxic dose low
mg/kg	Milligrams per kilogram	TLV	ACGIH Threshold limit value
ACGIH	American Conference of Governmental Industrial Hygienist	TWA	8 hour time weighted average exposure



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