

# Technical DataSheet

## ALL BORATE



ISOLATION • INSULATION



**Product Name:** IGLOO Cellulose

**Ph:** At 25°C, 2% solution: 7.2

**Technical Name:** Loosely packed cellulosic wood fiber

**Packaging:** 25 lbs / bag

**State:** Free flowing-wood base

**Color:** Gray

**Odor:** None

**Dimensional Weight:** 1.49 lbs/ft<sup>3</sup>

### **Chemical Composition:**

- Newsprint fiber C<sub>6</sub>H<sub>10</sub>O<sub>3</sub>
- Boric Acid H<sub>3</sub>BO<sub>3</sub>
- Natural additives for dust control

### **Product Registration:**

- Canadian Construction Materials Center (CCMC)
- Technical product / CCMC #08532-L
- Technical product for walls/ CCMC #12835-R
- R & D Services for laboratory tests
- Meets Standards ASTM C-739, 16CFR Section 1209
- Low VOC Emission Certificat #120120-03 (Berkeley Analytical)
- Greenguard Gold Certificat

### **Installation:**

- IGLOO Cellulose insulation high efficiency relies on air between the fibers, obtained when the cellulose expands during installation.
- Clear up 1 ft<sup>2</sup> for 300 ft<sup>2</sup> of ceiling of air intake
- Apply in places where temperature does not exceed 194°F
- Install 3 in or more away from chimneys or heat source
- Wear a respiratory mask at all times during blowing.
- For soundproofing, contact an acoustical engineer.
- For wall insulation, apply enough product to achieve at least 3 lbs/ft<sup>3</sup> density (Recommended 360HD nozzle)
- Do not apply on built-in-surface mounted light fixtures without proper and approved IC protection.

Date: November 26, 2015

# Technical DataSheet - ALL BORATE

## Installation Chart: Loose Fill Cellulose Bag Label in Accordance with ASTM C739/C1374

R at 75°F	Thickness (in)		Min. Wgt lb/ft <sup>2</sup>	No adjustment for framing		Joists 2 X 6 16 OC	
	Installed	Settled		bags per 1000 ft <sup>2</sup>	ft <sup>2</sup> per bag	bags per 1000 ft <sup>2</sup>	ft <sup>2</sup> per bag
13	3.9	3.5	0.44	17.8	56.3	16.1	62.1
19	5.7	5.1	0.65	25.9	38.6	23.5	42.6
22	6.6	5.9	0.75	30.0	33.3	27.6	36.3
30	9.0	8.1	1.02	41.0	24.4	38.5	26.0
38	11.4	10.2	1.30	51.8	19.3	49.3	20.3
49	14.8	13.2	1.67	67.1	14.9	64.5	15.5
60	18.1	16.1	2.05	82.0	13.7	70.4	14.2

### Thermal Resistivity

- ASTM C518-10
- R = 3.725 per inch

### Surface Combustion Specifications:

- ASTM C739-11 and ASTM E970-14
- Greater than 0.12 W/cm<sup>2</sup>

### Smoldering Combustion:

- ASTM C739-11, section 14
- Less than 15%

### Absorption of Moisture Vapor:

- ASTM C739-11, section 12
- Less than 20%

### Corrosiveness:

- ASTM C739-11, Section 9
- No perforations on Aluminium, Copper and Steel coupon

### Cryptogamic Resistance:

- ASTM C739-11, Section 11 and ASTM C1338-14
- No fungal growth

### Odor Emission:

- ASTM C739-11, Section 13
- No odor

Date: November 26, 2015

# Safety Data Sheet



## Section 1 – Product and Company Information:

**Product :** Igloo Cellulose

**Recommended Use:** Cellulose Insulation

**Manufacturer's Name / Address / Phone Number:**

Igloo Cellulose Inc.,

1485 TransCanada, Dorval, Quebec, Canada, H9P 2V3

Emergency Ph. (514)-694-1485 (8:00 am to 5:00 pm EST Mon-Fri)

**Composition :** Secondary wood fiber paper stock (recycled wastepaper) and fire retardants.

**Chemical Family :** Cellulose Fibers

**Effective:** 1 Sept. 2015

## Section 2 - Hazard Identification:

**Hazard Classification:** None

**Hazard Pictogram:** None

**Signal Word:** None

**Hazard Statements:** None

**Precautionary Statements:** None

**Other Hazards Which Do Not Result In Classification:** None

## Section 3 — Composition and Ingredient Information:

Component	CAS#	% By Weight
Cellulose Fiber	65996-61-4	≤85%
Boric Acid	10043-35-3	≤14%
Vegetable Oil		≤1%

## Section 4-First Aid Measures:

**Ingestion:** Not intended for ingestion. Not a supplement or replacement for human or animal dietary fiber. See physician if ingested.

**Skin:** Does not normally itch or irritate skin. If skin is broken or sensitive, wash with soap and water.

**Inhalation:** Dust may irritate nose or throat. If continued difficulty exists, move to fresh air. Seek Medical attention if conditions persist. Smoking will impair the ability of the lungs to clear themselves of dust.

**Eyes:** Dust may cause eye irritation. Use liquids suitable to cleanse eye for several minutes. If irritation persists, seek medical attention.





## **Section 5 - Fire Fighting and Explosion Hazards:**

**Extinguishing Media:** Water or any other agent rated for a wood fire (Type A).

**Unsuitable Extinguishing Media:** None known.

**Specific Hazards:** Products of combustion may include but not limited to oxides of carbon

**Special Fire Fighting Procedures:** Use standard procedures with full protective clothing and respiratory equipment (SCBA).

## **Section 6 - Accidental Release Measures:**

**General:** Use good housekeeping to minimize dust levels below the exposure limits listed in Section 8. See section 8 for further information on protective clothing and equipment and section 13 for disposal.

**In Case of Spill:** Shovel or sweep up and place in suitable container for disposal. Minimize dust generation. Do not dispose in sewers or waterways.

## **Section 7 - Handling and Storage Information:**

**General:** Avoid contact with skin and eyes. Avoid breathing dust. Do not swallow. Handle and open package with care. Good housekeeping is important to prevent accumulation of dust. When using do not eat, drink, or smoke. Launder contaminated clothing before reuse. Wash hands before eating, drinking, and smoking.

**Storage:** Keep out of the reach of children. Dry storage is recommended at ambient temperatures and atmosphere. Do not store near open flames or temperatures above 180°F.

**Exposure Controls:** See section 8.

## **Section 8 - Exposure Controls / Personal Protection Information:**

### **Exposure Control:**

OSHA PEL-TWA = 15 mg/m<sup>3</sup> total dust

OSHA PEL-TWA = 5 mg/m<sup>3</sup> respirable fraction Cal

OSHA PEL = 10 mg/m<sup>3</sup> total dust

ACGIH TLV-TWA = 10 mg/m<sup>3</sup> total dust

ACGIH TLV-TWA = 5 mg/m<sup>3</sup> respirable fraction

**Hand Protection:** Wear suitable gloves.

**Eye Protection:** Safety glasses or goggles are recommended when using product.

**Inhalation:** Wear suitable respirator for conditions.

**Skin and Body Protection:** Wear suitable protective clothing.

**Other Information:** Do not eat, smoke, or drink where material is handled, processed or stored. Wash hands carefully before eating, drinking, or smoking. Handle according to established industrial hygiene or safety practices.

## **Section 9 - Physical / Chemical**

### **Characteristics**

**Appearance:** Grayish milled fiber  
**Odor Threshold:** No data available. Bulk  
**Density:** 1.5 lb/ft<sup>3</sup> per ASTM C739  
**Boiling, Melting Point:** Not Applicable  
**Vapor Pressure:** No data available.  
**Solubility:** Insoluble, dispersible  
**Auto ignition temperature:** No data available.  
**Decomposition Temperature:** No data available.  
**Partition Coefficient:** No data available.

**Odor:** None to slight paper odor.  
**pH:** 6.0 to 8.0  
**Evaporation Rate:** Not Applicable  
**Viscosity:** Not Applicable **Reactivity in Water:** None  
**Fiber Flash Point:** ≥ 290 degree C  
**Flammability:** Not flammable. **Explosive Limits:** No data available. **Freezing Point:** No data available.

## **Section 10 - Stability and Reactivity Data**

**Reactivity:** No dangerous reaction known under conditions of normal use.  
**Stability:** Stable under normal storage conditions.  
**Possibility of Hazardous Reactions:** None under normal use.  
**Conditions to Avoid:** Moisture and incompatible materials.  
**Incompatible Materials:** Chlorates, nitrates, strong oxidizers, and reducing agents.  
**Hazardous Decomposition Products:** May include but not limited to oxides of carbon.

## **Section 11- Toxicological Information**

**Routes of Exposure:** Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern as cellulose and boric acid is poorly absorbed through intact skin. This product is not intended for ingestion.

**Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:** Products containing this product are not intended for ingestion. Contact of dust with the eyes causes redness, pain, and inflammation of the eyelids. If inhaled, other symptoms include runny nose, sneezing, and coughing.

### **Acute Toxicity for concentrated components:**

#### Cellulose:

Oral LD<sub>50</sub> (rat) : >5,000 mg/kg of body weight  
Dermal LD<sub>50</sub> (rabbit) : >2,000 mg/kg of body weight  
Inhalation LC<sub>50</sub> (rat) : >5.8 mg/L  
Dermal irritation/corrosivity: Nonirritating, no sensitizing.  
Eye irritation: No information found.

#### Boric acid:

Oral LD<sub>50</sub> (rat): 2,550 mg/kg of body weight  
Dermal LD<sub>50</sub> (rabbit) : >2,000 mg/kg of body weight  
Inhalation LC<sub>50</sub> (rat) : >2.01 mg/L  
Dermal irritation/corrosivity: Nonirritating, nonsensitizing.  
Eye irritation: Nonirritating

**Germ Cell Mutagenicity:**

No information found.

**Carcinogenicity:**

Cellulose and boric acid are not listed as a known or suspected carcinogens by OSHA, ACGHI, NTP, or IARC.

**Reproductive Toxicity:** 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/m<sup>3</sup> (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.

For Boric acid and substantially similar mixtures (specially, sodium tetraborate pentahydrate and sodium tetraborate decahydrate), the reproductive toxicity is substantially equivalent; therefore, the same hazard category (i.e., no classification for reproductive toxicity) may be applied.

Classification: No classification.

**Section 12 - Ecological Consideration:**

Not listed as a known marine pollutant according to the IMDG Code. Not known as environmentally hazardous according to UN Model Regulations, ADR, RID, and AON.

**Cellulose insulation:** No information found.

**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 released to environment.

**Persistence and Degradability:** Boron is naturally occurring and ubiquitous in the environment. Boric acid decomposes in the environment to natural borate.

**Bio accumulative Potential:** Not significantly bio accumulative.

**Mobility in Soil:** This product is soluble in water and is teachable through normal soil. Adsorption to soils or sediments is insignificant.

**Section 13 - Waste Disposal:**

Dispose in accordance with all applicable federal, state, and local environmental regulations. Dispose as a non-hazardous waste. Not considered hazardous per Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). Do not dispose in sewers or waterways.

**Section 14 - Transportation Information:**

**General:** Transport in accordance with DOT. Not regulated for transport.

**Section 15 - Regulatory Information**

**Superfund - CERCLA/SARA.** This product is not listed under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or its 1986 amendments, the Superfund Amendments and Reauthorization Act (SARA), including substances listed under Section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65; Section 302 of SARA Extremely Hazardous Substances, 42 USC 110002, 40 CFR 355; or the CERCLA Hazardous Substances list, 42 use 9604, 40 CFR 302.

**RCRA:** This product is not listed as a hazardous waste under any sections of the Resource Conservation and Recovery Act or regulations (40 CFR 261 et seq.)

**EPCRA:** Not considered a hazardous material and a delayed health hazard by the EPA.

**TSCA No:** This product does not appear on the EPA TSCA inventory list.

**IARC:** Not listed on The International Agency for Research on Cancer as a carcinogen.

**NTP Annual Report on Carcinogens:** Not listed.

**Safe Drinking Water Act:** This product is not regulated under the SDWA, 42 USC 300g-1, 40 CFR141 et seq.

## **Section 16 - Other Information**

**Disclaimer / Statement of Liability:** The information presented has been compiled from sources considered to be dependable and is reliable to the best of our knowledge but is not guaranteed to be so. This Safety Data Sheet is offered solely for your information, considerations, and investigations. This SDS is not to be construed as recommending any practice or product in violation of any law or regulation. The user is responsible to determine the suitability of the material for a specific purpose and adopt necessary safety precautions.

This SDS was finalized on September 1, 2015 and is compliant with OSHA HCS/HazCom 2012 Final Rule. This replaces all previous dated versions.