

## MATERIAL SAFETY DATA SHEET

### SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

<b>Product Identifier</b>	"Pro-Cell" Green cellulose fibre insulation for attics and walls (Type 1)	
<b>Manufacturer's Information</b>	Thermo-Cell Industries Ltd.	
	123 Clement Road Vars, Ontario, Canada K0A 3H0 (613) 443-5100	1822 Plains Road Debert, Nova Scotia, Canada B0M 1G0 (902) 662-3600
	Emergency Phone # (800) 267-1433 8am – 5pm EST Mon – Fri.	
<b>Product Description &amp; Use</b>	Cellulose fibre insulation is a non-hazardous, natural material composed of recycled newspapers and treated with fire retardant chemicals (it does not contain asbestos or glass fibre). It is a residential/commercial thermal and acoustical insulation.	
<b>Date of MSDS Preparation</b>	April 2011	

### SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Registry Number	% in Product	LD50	LDLo	TLV-TWA	PEL
Boric Acid	10043-35-3	5-10 w/w	2660 mg/kg oral - rat	200 mg/kg oral - woman	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup> Total Dust
Boric Acid is categorized under WHMIS as Class D-2A.						

### SECTION 3 - HAZARDS IDENTIFICATION

<b>Relevant Routes of Exposure</b>	Eye contact, skin contact, inhalation and ingestion	
<b>Adverse potential health effects from exposure to product or ingredients</b>	Eye	Slight irritation
	Skin	Slight irritation
	Inhalation	Slight irritation to upper respiratory tract (coughing, sneezing)
	Ingestion	Nausea, vomiting, diarrhea
This product is listed/regulated by OSHA and ACGIH as a "nuisance dust".		

## SECTION 4 - FIRST AID MEASURES

<b>Eyes</b>	Flush eyes with copious amounts of warm water.
<b>Skin</b>	Wash skin with soap and water. If skin is broken, flush area with warm water.
<b>Inhalation</b>	Remove to fresh air.
<b>Ingestion</b>	Rinse mouth and drink plenty of water.
<b>Note to physician</b>	Exposure to dust may aggravate symptoms of persons with pre-existing respiratory conditions.

## SECTION 5 - FIRE FIGHTING MEASURES

<b>Flash point and method</b>	Not Applicable
<b>Upper and lower flammable (explosive) limits in air</b>	Not Applicable
<b>Auto-ignition temperature</b>	270°C (dry condition)
<b>Hazardous combustion products</b>	Primarily CO and CO <sub>2</sub> with some NO <sub>x</sub> and SO <sub>x</sub> .
<b>Conditions under which flammability could occur</b>	Extreme heat and open flame for sustained periods.
<b>Extinguishing media</b>	Foam, water, CO <sub>2</sub> and dry chemical.
<b>Sensitivity to explosion by mechanical impact</b>	None
<b>Sensitivity to explosion by static discharge</b>	None

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

<b>Procedures for dealing with a release or spill</b>	Sweep and/or vacuum up material.
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## SECTION 7 - HANDLING AND STORAGE

<b>Handling practices and equipment</b>	Use care to minimize dust in surrounding airspace.
<b>Appropriate storage practices &amp; requirements</b>	Store in a cool, dry, well-ventilated area away from sources of heat and open flame.

## SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

<b>Applicable control measures, including engineering controls</b>	Provide adequate local ventilation.
<b>Personal protective equipment for each exposure route</b>	Eyes - Safety goggles
	Skin - Cotton work gloves
	Respiratory - Nuisance dust mask (NIOSH approved 3M 8210 N95 particulate or equivalent).

## SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance	Loose, fibrous, grey material
Odour	None
Physical State	Solid
pH	6.8 to 7.4
Vapour Pressure and Reference Temperature	Not Applicable
Vapour Density	Not Applicable
Boiling Point	Not Applicable
Freezing/Melting Point	Not Applicable
Specific Gravity or Density	Not Applicable
Evaporation Rate	Not Applicable
Partition Coefficient	Not Applicable
Odour Threshold	Not Applicable
Viscosity	Not Applicable
Solubility in Water	Material is not soluble; it will absorb water.

## SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability	Stable
Conditions to Avoid	Contamination from oils, fuels and other combustible materials
Incompatibility with other materials	Presence of alkalis (bases) may cause the release of NH <sub>3</sub> gas when mixed with water
Hazardous Decomposition Products	Sulphur Oxide gases may be formed in a fire
Hazardous Polymerization	Will not occur

## SECTION 11 - TOXICOLOGICAL INFORMATION

Effects of Short-term (Acute) Exposure	See Section 3	
Effects of Long-term (Chronic) Exposure	None known	
Irritancy	May cause slight irritation	
Sensitization	May be allergenic to some	
Carcinogenicity / Teratogenicity / Mutagenicity	Not listed by IARC, ACGIH, NTP or OSHA	
Name of Toxicologically Synergistic Products	None	
Exposure Limits	TLV = 10 mg/m <sup>3</sup> TWA	PEL = 15 mg/m <sup>3</sup> Total Dust
Toxicity	LD50 > 5 g/kg oral (rat)	LC50 > 5800 mg/m <sup>3</sup> /4H inhalation (rat)

## SECTION 12 - ECOLOGICAL INFORMATION

Boric Acid is practically non-toxic to fish, aquatic invertebrates and birds. It has a low bioaccumulation potential.

## SECTION 13 - DISPOSAL INFORMATION

**Waste Disposal**

Bag and remove according to local regulations.

## SECTION 14 - TRANSPORT INFORMATION

**Shipping Information such as Shipping Classification**

TDG Shipping code: Non-hazardous

## SECTION 15 - REGULATORY INFORMATION

Cellulose insulation is listed as a "restricted" product under the Hazardous Products Act (Canada). It is considered "non-hazardous" under the Hazard Communication Standard 29 CFR 1910.1200 (US).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (Canada) and the MSDS contains all of the information required by the Controlled Products Regulations.

## SECTION 16 - OTHER INFORMATION

The information presented in this MSDS was obtained from sources believed to be true and accurate and up-to-date. Thermo-Cell Industries Ltd provides no warranties whether expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein.