



Evaluation Listing CCMC 13306-L Therm-O-Light (Type 2) / Therm-O-Spray / Therm-O-Barrier

Evaluation Issued:	2008-04-02
Re-evaluated:	2013-06-06
Re-evaluation due:	2016-04-02

Preface: Masterformat 07 21 23.01, Cellulose Fibre Insulation (CFI) For Buildings

Preface Issued:	2011-04-05
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Scope

These Evaluation Listings apply to treated, wood-based, cellulose fibre intended for use as thermal insulation (cellulose fibre insulation, CFI) in new and existing buildings. The continuous use temperature range is within -60°C to 90°C . The proponent has demonstrated that the product meets at least one of the following standards:

- CAN/ULC-S703-01 (including Amendment 1), “Standard for Cellulose Fibre Insulation (CFI) for Buildings.”
- CAN/ULC-S703-09, “Standard for Cellulose Fibre Insulation (CFI) for Buildings.”

The standard describes two types of CFI. They are defined in CAN/ULC-S703-09 as follows:

- Type 1 is intended for pneumatic application into open areas with slopes up to 4.5:12, or injection application into closed cavities, such as walls, floors, and cathedral ceilings. Type 1 may also be manually applied (poured application).
- Type 2 is intended for spray application with water or liquid adhesive into open areas regardless of slope (eg. attics), exposed surfaces (eg. walls or ceilings) and/or into any open cavity (eg. wall, floor, or ceiling cavities) that may be closed later. This product may also contain internal binders to increase the adhesive/cohesive capabilities of the sprayed fibres in order to reduce settlement and/or ensure it remains in place.

Standard (2001 and 2009 Versions)

Table 1. Performance Requirements for Physical Properties of CFI (Type 1 and Type 2)

Property	Unit	Requirement
Thermal resistivity	m-K/W	Minimum 18.5
Open flammability	W/cm ²	Minimum 0.12
Open flammability permanency	W/cm ²	Minimum 0.12
Surface burning characteristics ¹	<u>FSI</u>	Maximum 150 (Type 1) Maximum 25 (Type 2)
Smoulder resistance	%	Maximum 15
Moisture vapour sorption	%	Maximum 20
Corrosiveness	–	No perforations

Table 1. Performance Requirements for Physical Properties of CFI (Type 1 and Type 2) (cont.)

Property	Unit	Requirement
Fungi resistance	–	Fungal growth shall not exceed that of the comparative item
Separation of chemicals	%	Maximum 1.5
Design density	kg/m ³	As determined

Table 2. Additional Requirements for Type 2 Product

Property	Unit	Requirement
Added water ¹	%	Maximum 20
Design Moisture ²	%	Maximum 20
Settlement – open spaces	%	Minimum 5
Cohesion/adhesion exposed surfaces ²	–	Minimum 5 times the mass of the material under the test plate

Notes to Tables 1 & 2:

1 Requirement in CAN/ULC-S703-01 version only.

2 Requirement in CAN/ULC-S703-09 version only.

Labelling

The standard requires that each bag of insulation be identified with the following information:

- manufacturer’s name and address;
- trade name of the product;
- generic product name;
- material type and sub-type (i.e. Type 1 (open spaces) and/or Type 2 (closed cavities));
- package mass;
- standard number CAN/ULC-S703;
- day/month/year of manufacture or traceable code number;
- coverage table(s) providing the information described in the appropriate Subsection of the standard; and
- a cautionary note as follows: **“CAUTION: Maintain building, electrical, gas and oil safety code required clearances between the insulation and heat-emitting devices, such as fuel-burning appliances, chimney pipes, ducts and vents to these appliances (at least 50 mm) and recessed light fixtures (at least 75 mm) unless approved for insulation contact.”**

National Building Code of Canada (NBC)**NBC References**

The CAN/ULC-S703-01 standard is referenced in Clause 9.25.2.2. (1)(e) and Table 5.10.1.1. of Division B of the NBC 2010,

The CAN/ULC-S703-09 standard is not referenced in the NBC 2010.

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1. Evaluation

The product conforms to CAN/ULC-S703-01 and CAN/ULC-S703-09. The insulation coverage per bag is referenced in the following application charts:

Table 1

Closed Cavities (Design Density 24 kg/m ³)			
RSI Value ((m ² ·K)/W)	Minimum Applied Thickness (mm)	Mass per Unit Area (kg/m ²)	Coverage per 15.9-kg Bag (m ²)
2.1	80	1.9	8.2
2.3	89	2.1	7.4
3.5	134	3.2	4.9
3.7	140	3.4	4.7
4.0	152	3.7	4.3
4.8	184	4.4	3.6

Table 2

Open Spaces (Design Density 23.2 kg/m ³)			
RSI Value ((m ² ·K)/W)	Minimum Applied Thickness (mm)	Mass per Unit Area (kg/m ²)	Coverage per 15.9-kg Bag (m ²)
2.1	80	1.9	8.5
3.5	134	3.1	5.1
5.6	215	5.0	3.2
7.0	268	6.2	2.5
8.8	335	7.8	2.0
10.6	402	9.4	1.7

Table 3

Exposed Surfaces (Design Density 40 kg/m ³)			
RSI Value ((m ² ·K)/W)	Minimum Applied Thickness (mm)	Mass per Unit Area (kg/m ²)	Coverage per 15.9-kg Bag (m ²)
0.7	25	1.0	15.9
1.3	51	2.0	8.0
2.0	76	3.0	5.3
2.3	89	3.5	4.6

Table 4

Exposed Surfaces (Design Density 76 kg/m ³)			
RSI Value ((m ² ·K)/W)	Minimum Applied Thickness (mm)	Mass per Unit Area (kg/m ²)	Coverage per 13.6-kg Bag (m ²)
1.1	44	3.4	4.0
1.6	64	4.8	2.8
1.9	76	5.8	2.3
2.2	89	6.8	2.0

Notes to Tables 1 to 4: Coverage values contain no allowance for openings, framing type, size or spacing. For further information, please consult the manufacturer.

2. Description

The product is a Type 2, cellulose fibre thermal building insulation made from recycled newspapers and treated with fire-retardant additives.

3. Standard and Regulatory Information

See the [Preface](#) and the standard for explanation.

Listing Holder

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