

CCMC 12835-R

CCMC Canadian code compliance evaluation

CCMC number:	12835-R
Status:	Active
Issue date:	1997-12-08
Modified date:	2022-01-31
Evaluation holder:	<p>Igloo Cellulose Inc. 148, route Transcanadienne Dorval QC H9P 2V3 Canada Website: www.cellulose.com Telephone: 514-694-1485 Email: igloo@cellulose.com</p>
Product name:	IGLOO Wall Insulation
Code compliance:	NBC 2015, OBC
Evaluation requirements:	CCMC-TG-072123.06-15 "CCMC Technical Guide for Loose-Fill Cellulose Insulation System for Walls/Ceilings"

In most jurisdictions this document is sufficient evidence for approval by Canadian authorities.

[Learn more about CCMC recognition](#)

Code compliance opinion

It is the opinion of the Canadian Construction Materials Centre that the evaluated product, when used as a system to install thermal insulation in accordance with the conditions and limitations stated in this evaluation, complies with the following code:

National Building Code of Canada 2015

Code provision	Solution type
9.25.2.2.(1)(f) Insulation Materials	<u>Acceptable</u>
9.25.2.4. Installation of Loose-Fill Insulation	<u>Acceptable</u>

Ontario Building Code

Ruling No. 06-02-146 (12835-R) authorizing the use of this product in Ontario, subject to the terms and conditions contained in the Ruling, was made by the Minister of Municipal Affairs and Housing on 2006-01-31 (revised 2019-08-02) pursuant to s.29 of the Building Code Act, 1992 (see Ruling for terms and conditions). This Ruling is subject to periodic revisions and updates.

The above opinion is based on the evaluation by the CCMC of technical evidence provided by the evaluation holder, and is bound by the stated conditions and limitations. For the benefit of the user, a summary of the technical information that forms the basis of this evaluation has been included.

Product information

Product name

IGLOO Wall Insulation

Product description

The "IGLOO Wall Insulation" system is built on the job site. The system comprises three components: the thermal insulating product, the frame wall construction and the installation method.

The insulating product is the loose-fill cellulose insulation produced by Igloo Cellulose Inc. and bearing the phrase "CCMC 08532-L." The framing consists of conventional 38-mm × 140-mm or 38-mm × 89-mm wood studs spaced at either 400 mm or 600 mm.

The product is dry-blown using one of two retaining methods: the 360 HD method, which uses a vapour barrier with reinforced vertical strips and horizontal furring, or a knitted membrane method. Each retaining method uses a membrane that permits inspection of the installed product before closing the wall with the interior finishes.

360 HD method

The 360 HD method uses a polyethylene vapour barrier (minimum 6 mil) certified by the Canadian General Standards Board (CGSB). Reinforced vertical strips are stapled every 100 mm with 12.5 mm or larger staples. Wooden furring strips measuring 25 mm × 75 mm are installed horizontally at 400 mm or 600 mm on centre (o.c.). As illustrated in Figure 1, a 75-mm × 75-mm incision is made in the vapour barrier approximately one third from the top of the wall cavity to allow the insertion of a specialized ventilated rotary nozzle (360 HD), which is used to fill the cavity. As the cavity is being filled from the bottom up, the nozzle must be constantly rotated to ensure uniform, high-density compaction of the insulation at a minimum specified design density of 48 kg/m³. An auto adhesive patch is placed over the incision onto the existing vapour barrier.

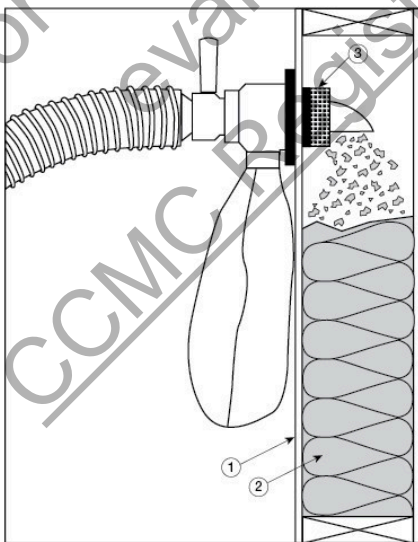


Figure 1. "IGLOO Wall Insulation" - 360 HD cellulose cavity fill method (vapour barrier)

1. vapour barrier
2. cellulose fill

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3. 360 HD nozzle

Knitted membrane method

The knitted membrane method uses netting that is stapled 50 mm o.c. across the interior stud wall. A 75-mm × 75-mm incision is made in the netting approximately 450 mm to 600 mm from the top of the wall cavity. As shown in Figure 2, the hose is inserted through the opening, filling the cavity from the bottom to the top. The vapour barrier is then installed over the membrane.

The installation equipment consists of an adjustable blowing machine and a 75-mm diameter blowing hose with a minimum length of 30 m. By carefully controlling the filling time and filling pressure with the blowing equipment, the cavity will be filled completely to a minimum specified design density of 48 kg/m³.

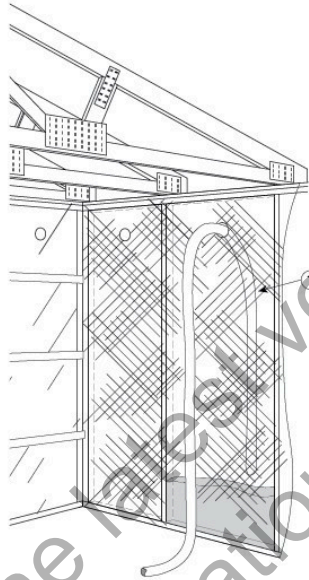


Figure 2. knitted membrane cavity fill method

1. "IGLOO Wall Insulation" - knitted membrane cavity fill method

Manufacturing plant

This evaluation is valid only for products produced at the following plant:

Product name	Dorval, Québec, Canada
IGLOO Wall Insulation	◇

◇ indicates that the product from this manufacturing facility has been evaluated by the CCMC

Conditions and limitations

The CCMC's compliance opinion is bound by this product being used in accordance with the conditions and limitations set out below.

- The "IGLOO Wall Insulation" system is designed to act as a thermal insulation in wood-frame walls (the coverage chart is shown in the table below).
- The thermal insulating product that is used must be cellulose insulation bearing the valid phrase "CCMC 08532-L." The blowing equipment used shall be approved by Igloo Cellulose Inc.
- The insulation must be kept away from heat-emitting devices such as recessed light fixtures, chimneys, and propane or natural gas sources, at a distance of at least 75 mm or the distance required by the local authority having jurisdiction (AHJ).
- The pierced vapour barrier must be repaired in accordance with current trade practices.
- The installation must be done by an installer trained by Igloo Cellulose Inc. in accordance with the manufacturer's current installation instructions and the usage and limitations in this Report. The installer must carry an identification card bearing their photograph and signature issued by Igloo Cellulose Inc.

Technical information

This evaluation is based on demonstrated conformance with the following criteria:

Criteria number	Criteria name
CCMC-TG-072123.06-15	CCMC Technical Guide for Loose-Fill Cellulose Insulation System for Walls/Ceilings

Performance requirements

Density

The measured densities, which were determined on wall sections using 89-mm- and 140-mm-deep studs spaced at 400 mm and 600 mm, ranged from 55 to 57 kg/m³.

Thermal resistance

The average density used to determine the thermal resistance was approximately 56 kg/m³. The thermal resistance per unit thickness ranged from 25.69 to 25.73 m²·K/W/m. Using 25.7 m²·K/W/m for design calculations, the thermal resistance of the insulation is 3.6 m²·K/W in a 140-mm-thick wall and 2.3 m²·K/W in an 89-mm-thick wall.

This product shall be applied using the following wall coverage chart as a guide.

Table 1. Coverage chart for the product

	Wall thickness		Thermal resistance		Minimum wall coverage per 11.36-kg (25-lb) bag	
	mm	in.	RSI	R	m ²	ft ²
Wood-frame wall						
38 mm × 89 mm with 400-mm spacing (2 in. × 4 in. with 16 in. spacing)	89	3.5	2.3	13.1	2.28	24.5
38 mm × 89 mm with 600-mm spacing (2 in. × 4 in. with 24 in. spacing)	89	3.5	2.3	13.1	2.28	24.5
38 mm × 140 mm with 400-mm spacing (2 in. × 6 in. with 16 in. spacing)	140	5.5	3.6	20.4	1.45	15.6
38 mm × 140 mm with 600-mm spacing (2 in. × 6 in. with 24 in. spacing)	140	5.5	3.6	20.4	1.45	15.6

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Administrative information

Disclaimer

This evaluation is issued by the Canadian Construction Materials Centre (CCMC), a part of the Construction Research Centre at the National Research Council of Canada (NRC). The evaluation must be read in the context of the entire [CCMC Registry of Product Assessments](#) and the legislated applicable building code in effect.

The CCMC was established in 1988 on behalf of the applicable regulator (i.e., the provinces and territories) to ensure—through assessment—conformity of alternative and acceptable solutions to regional building codes as determined by the local authority having jurisdiction (AHJ) as part of the issuance of a building permit. It is the responsibility of the local AHJs, design professionals, and specifiers to confirm that the evaluation is current and has not been withdrawn or superseded by a later issue. Please refer to [the website](#) or contact:

Canadian Construction Materials Centre
Construction Research Centre
National Research Council of Canada
1200 Montreal Road
Ottawa, Ontario, K1A 0R6
Telephone: 613-993-6189
Fax: 613-952-0268

The NRC has evaluated the material, product, system or service described herein only for those characteristics stated herein. The information and opinions in this evaluation are directed to those who have the appropriate degree of experience to use and apply its contents (i.e., AHJs, design professionals and specifiers). This evaluation is only valid when the product is installed in strict compliance with the stated conditions and limitations of evaluation and the applicable local building code. In circumstances where no applicable local building permit is issued and that no confirmation of compliance 'for use in the intended field application' is undertaken, this evaluation is null and void in all respects. This evaluation is provided without representation, warranty, or guarantee of any kind, expressed, or implied, and the NRC provides no endorsement for any evaluated material, product, system or service described herein. The NRC accepts no responsibility whatsoever arising in any way from any and all use and reliance on the information contained in this evaluation with respect to its compliance to the referenced code(s) and standard(s). The NRC is not undertaking to render professional or other services on behalf of any person or entity nor to perform any duty owed by any person or entity to another person or entity.

Language

Une version française de ce document est disponible.
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CCMC recognition

The Canadian Construction Materials Centre (CCMC) assesses compliance with Canadian building, energy and safety codes. We are the only construction code compliance service supported and operated by the Government of Canada. Trusted by over 6,000 regulators across Canada.

Most Canadian authorities having jurisdiction (AHJs) consider CCMC product assessments acceptable as evidence for product approval.

CCMC assessments are recognized by construction authorities across Canada:

Alliance of Canadian Building Official Associations (ACBOA)



[\(Alliance of Canadian Building Official Associations \(ACBOA\)\)](#)

First Nations National Building Officers Association (FNNBOA)



[\(First Nations National Building Officers Association \(FNNBOA\)\)](#)

Canadian Home Builders' Association (CHBA)



[\(Canadian Home Builders' Association \(CHBA\)\)](#)

Alberta Building Officials Association (ABOA)



[\(Alberta Building Officials Associations \(ABOA\)\)](#)

Saskatchewan Building Officials Association (SBOA)



[\(Saskatchewan Building Officials Association \(SBOA\)\)](#)

Manitoba Building Officials Association (MBOA)



[\(Manitoba Building Officials Association \(MBOA\)\)](#)

Ontario Building Officials Association (OBOA)



[\(Ontario Building Officials Association \(OBOA\)\)](#)

New Brunswick Building Officials Association (NBBOA)



[\(New Brunswick Building Officials Association \(NBBOA\)\)](#)

Nova Scotia Building Officials Association (NSBOA)



[\(Nova Scotia Building Officials Association \(NSBOA\)\)](#)

The CCMC provides code compliance assessments to Canadian code requirements, consulting nationwide with construction regulators to elicit regional variations in code requirements as well as provincial and local interpretations. Users are advised to review the technical information presented in CCMC assessments when making approval decisions. [Learn more about how the CCMC provides a unique service for Canada.](#)

For more information, contact the CCMC by phone at (613) 993-6189 or by email at ccmc@nrc-cnrc.gc.ca

Code compliance as an acceptable solution

Code Compliance via Acceptable Solutions

If a building design (e.g. material, component, assembly or system) can be shown to meet all provisions of the applicable **acceptable solutions** in Division B (e.g. it complies with the applicable provisions of a referenced standard), it is deemed to have satisfied the objectives and functional statements linked to those provisions and thus to have complied with that part of the Code.

— National Building Code of Canada, Sentence A-1.2.1.1.(1)(a)

The CCMC has determined that compliance with this provision of the Code has been demonstrated as an **Acceptable Solution**. The evaluation report provides a summary of the basis of CCMC's compliance opinion.

CCMC's code compliance opinions

All CCMC evaluation reports are opinions of code compliance established in accordance with the National Building Code of Canada, Subsection 1.2.1. "Compliance with this Code," which requires compliance to be achieved by:

- complying with the applicable acceptable solutions in Division B, or
- using an alternative solution that will achieve at least the minimum level of performance required by Division B in the areas defined by the objective and functional statements attributed to the applicable acceptable solutions.

The CCMC assesses compliance with Canadian building, energy and safety codes, and is trusted by over 6,000 regulators across Canada.

Code compliance as an alternative solution

Code Compliance via Alternative Solutions

Where a design differs from the acceptable solutions in Division B, then it should be treated as an **"alternative solution."** A proponent of an alternative solution must demonstrate that the alternative solution addresses the same issues as the applicable acceptable solutions in Division B and their attributed objectives and functional statements. However, because the objectives and functional statements are entirely qualitative, demonstrating compliance with them in isolation is not possible. Therefore, Clause 1.2.1.1.(1)(b) identifies the principle that Division B establishes the quantitative performance targets that alternative solutions must meet. In many cases, these targets are not defined very precisely by the acceptable solutions [...] Nevertheless, Clause 1.2.1.1.(1)(b) makes it clear that an effort must be made to demonstrate that an alternative solution will perform as well as a design that would satisfy the applicable acceptable solutions in Division B—not “well enough” but “as well as.”

— National Building Code of Canada, Sentence A-1.2.1.1.(1)(b)

The CCMC has determined that compliance with this provision of the Code has been demonstrated as an **Alternative Solution**. The evaluation report provides a summary of the basis of CCMC's compliance opinion.

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