

CCMC 12344-R

CCMC Canadian code compliance evaluation

CCMC number:	12344-R
Status:	Active
Issue date:	1992-07-09
Modified date:	2023-11-15
Evaluation holder:	<p>CCI Manufacturing Inc. (a division of Soprema Inc.) 16355-130 Avenue Edmonton AB T5V 1K5 Canada Telephone: 780-453-3610, ext. 1005</p>
Product name:	WallBAR
Compliance:	NBC 2015, NBC 2020, OBC
Criteria:	<p>CCMC-TG-072129.03-15A, "CCMC Technical Guide for Sprayed Mineral/Cellulose Fibre Insulation in Walls with Netting" CCMC-TG-072129.03-20A, "CCMC Technical Guide for Sprayed Mineral/Cellulose Fibre Insulation in Walls with Netting"</p>

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

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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 codes:

National Building Code of Canada 2015

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

National Building Code of Canada 2020

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

Ontario Building Code

Ruling No. 94-04-04 (12344-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 1994-09-28 (revised 2014-10-27) 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(s) is/are 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

WallBAR

Product description

The product consists of cellulose fibre insulation that is manufactured in accordance with CAN/ULC-S703-09, “Standard for Cellulose Fibre Insulation (CFI) for Buildings,” and that incorporates approximately 0.5% by weight of powdered adhesive, which is added during the manufacturing process.

This product is evaluated for use in typical wood-frame constructions using either 38 mm × 89 mm or 38 mm × 140 mm studs at 400 mm or 600 mm on centre (o.c.). The wall is provided with a polyethylene vapour barrier on the inside and permeable or semi-permeable sheathing material such as waferboard, fibreboard, glass-fibre thermal insulating sheathing or plywood on the outside.

The insulation is injected into the stud cavities by one of two methods:

1. Through a polypropylene/polyester woven fabric netting (WallNET[®]) that is stapled to the face of the studs and plates, which would hold the cellulose insulation in its place (see [Figure 1](#)). The vapour barrier is installed afterward in this method.
2. Through the polyethylene vapour barrier, where vertical splines, horizontal strapping or a combination of both is applied to the vapour barrier prior to installing the cellulose insulation (see [Figure 2](#)).

The insulation is applied in a dry state at a density of 45 kg/m³ or in a damp state with a moisture content of 15 ± 4% of dry weight at a density of 48 kg/m³ (with a range of ± 10%). To apply moisture, the dry insulation is misted with water during the installation process to cause the fibre to meld at interstitial points, forming a cohesive mat.

The installation for sloped and cathedral ceilings is the same as for walls (see [Figure 3](#)), except that there is a ventilation system. The insulation is always dry-blown into cavities, and for areas that are longer than 3 m the insulation must be blown in by stages.

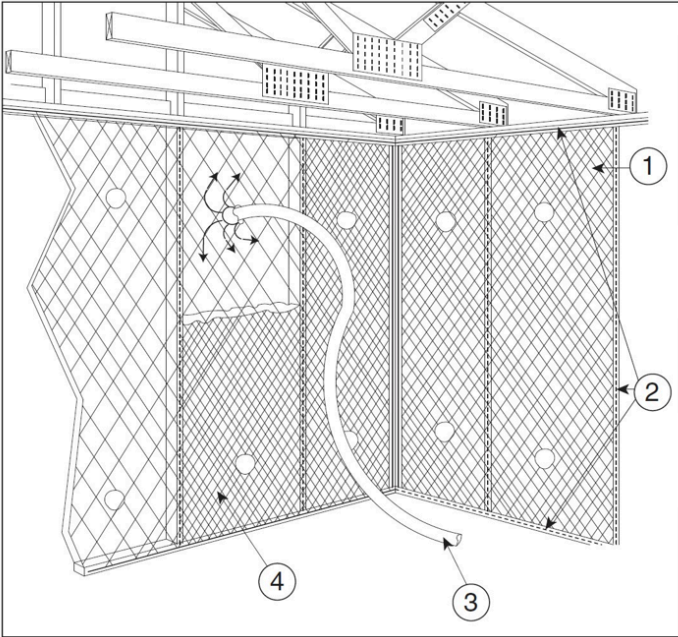


Figure 1. "WallBAR" with netting

1. Polypropylene/polyester woven fabric netting
2. Staples
3. Injection hose
4. Cellulose insulation

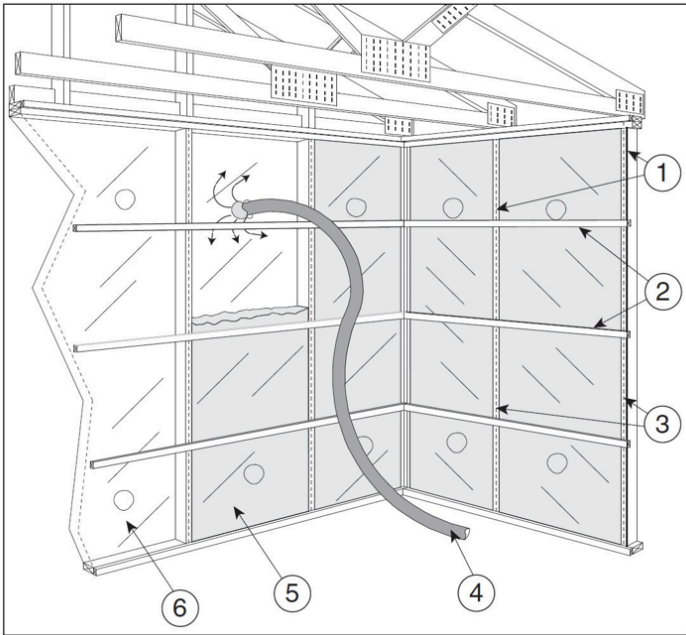


Figure 2. "WallBAR" through vapour barrier

1. Splines (if applicable)
2. 25 mm x 50 mm strapping (if applicable)
3. Staples
4. Injection hose
5. Cellulose insulation

6. 0.15 mm polyethylene vapour barrier

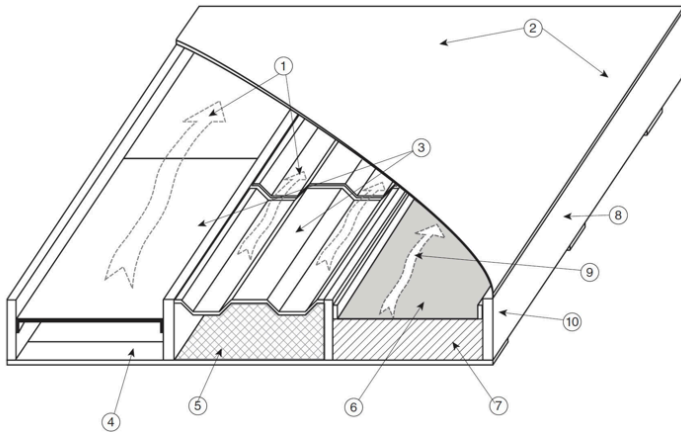


Figure 3. “WallBAR” for sloped and cathedral ceilings

1. Continuous ventilated air space
2. Roof sheathing
3. Corrugated cardboard or expanded polystyrene air flow vents
4. 25 mm × 76 mm furring at 400 mm spacing
5. Netting or vapour barrier retaining membrane
6. WallNET® (stapled to strapping)
7. Insulated cavity
8. Roof rafter or truss
9. Continuous ventilated air space
10. Minimum 19 mm × 38 mm strapping

Site-manufactured product

This is a site-manufactured product; it is finished on site following the pouring or pneumatic installation of raw materials produced at the manufacturing plant(s) below.

Manufacturing plant

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

Product name	Manufacturing plant
	Edmonton, AB, CA
WallBAR	☑

☑ 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 installation of the product must be done by an installer who is certified by CCI Manufacturing Inc. and is performed in accordance with the manufacturer's installation manual, "WallBAR Insulation System," December 2016. Installers must carry a certificate bearing their signature. The manufacturer-certified installer is responsible for ensuring that the installation work is carried out in a workmanlike manner and in accordance with recommendations provided by CCI Manufacturing Inc.
- The product can be applied using any commercially available blowing equipment. The application density can vary depending on the type of blowing apparatus used. The installer should be consulted for the correct application density.
- The vapour barrier must be resealed with a patch according to the manufacturer's installation manual.
- The insulation must be kept away from heat-emitting devices, such as recessed light fixtures, by 75 mm; chimneys and propane or natural gas sources by 50 mm; or the distance required by the local authority having jurisdiction (AHJ).
- The installer must ensure that the moisture content of the lumber is not greater than 19% after the installation in accordance with Article 9.3.2.5., Moisture Content, of Division B of the NBC 2015. The moisture content of the wood frame must be verified and recorded by the installer with a moisture meter after installing the insulation.
- The system can only be used in cathedral ceilings that incorporate a ventilation system constructed in accordance with Subsection 9.19.1., Venting, of Division B of the NBC 2015.
- Air flow vents for sloped ceilings can be manufactured with 175 B or C unwaxed corrugated cardboard, or expanded polystyrene with a minimum 8 mm thickness at a density of 16 kg/m³, or by stapling WallNET® netting to the face of 25 mm × 50 mm (or better) strapping fastened to the edge of the rafter/truss. Venting should be fastened to roof rafters, truss chords, truss webs, strapping or sheathing using 12 mm staples. The area over the top plate of the exterior wall must be blocked to prevent insulation from spilling into the soffit area.

Technical information

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

Criteria number	Criteria name
CCMC-TG-072129.03-15A	CCMC Technical Guide for Sprayed Mineral/Cellulose Fibre Insulation in Walls with Netting
CCMC-TG-072129.03-20A	CCMC Technical Guide for Sprayed Mineral/Cellulose Fibre Insulation in Walls with Netting

Material requirements

Thermal insulation

The thermal insulation used is “Weathershield Cellulose Insulation/Sopra-Cellulose W,” CCMC 09218-L, which is compliant with CAN/ULC-S703-09.

Performance requirements

Moisture content, bulge and density

The results for density and moisture content were determined from material taken from three wall cavities with the same dimensions. The insulation was installed in accordance with the manufacturer’s instructions at densities ranging from 48.5 kg/m³ to 51 kg/m³ for dry applications and from 50 kg/m³ to 52.5 kg/m³ for damp applications. Samples from each cavity were taken, conditioned and then weighed to give the results shown in tables below.

Table 1. Dry application results of testing bulge and density of the product

Property	Unit	Requirement	Result
Bulge	mm	Max. 13 mm	5
Density	kg/m ³	± 10%	Pass

Table 2.

Damp application results of testing the bulge, density, and moisture content of the product

Property	Unit	Requirement	Result
Bulge	mm	Max. 13 mm	1
Density	kg/m ³	± 10%	Pass
Moisture content	%	15	12.6

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Table 3.
Results of testing the thermal resistance of the product

Property	Density (kg/m ³)	Thermal Resistance at 89 mm (m ² ·K/W)	Thermal Resistance at 140 mm (m ² ·K/W)
Dry	45	2.33	3.67
Damp	48	2.33	3.67

Administrative information

Use of Canadian Construction Materials Centre (CCMC) assessments

This assessment must be read in the context of the entire [CCMC Registry of Product Assessments](#), any applicable building code or by-law requirements, and/or any other regulatory requirements (for example, the [Canada Consumer Product Safety Act](#), the [Canadian Environmental Protection Act](#), etc.).

It is the responsibility of the user to confirm that the assessment they are using is current and has not been withdrawn or superseded by a later version on the [CCMC Registry of Product Assessments](#).

Disclaimer

The National Research Council of Canada (NRC) has evaluated only the characteristics of the specific product described 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 (such as authorities having jurisdiction, design professionals and specifiers). This evaluation is valid when the product is used as part of permitted construction, respecting all conditions and limitations stated in the evaluation, and in accordance with applicable building codes and by-laws.

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Language

Une version française de ce document est disponible.

In the case of any discrepancy between the English and French version of this document, the English version shall prevail.

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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

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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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