

CCMC 14136-R

CCMC Canadian code compliance evaluation

CCMC number:	14136-R
Status:	Active
Issue date:	2019-11-13
Modified date:	2023-11-08
Evaluation holder:	<p>James Hardie Europe GmbH Bennigsen-Platz 1, 40474 Düsseldorf Düsseldorf 40474 Germany Website: www.fermacell.com Telephone: +49 203 60 880 8141 Email: fermacell-exportcenter@jameshardie.com</p>
Product names:	<ul style="list-style-type: none"> • fermacell®flooring elements • fermacell®gypsum fibre boards
Compliance:	NBC 2015
Criteria:	CCMC-TG-061626.03-15, "CCMC Technical Guide for Gypsum Fiberboard Floor Underlay Panels"

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

[Learn more about CCMC recognition](#) [Look for the trusted CCMC mark on products to verify compliance.](#)

Compliance opinion

It is the opinion of the Canadian Construction Materials Centre that the evaluated products, when used as a floor underlay in accordance with the conditions and limitations stated in this evaluation, comply with the following code:

National Building Code of Canada 2015

Code provision	Solution type
9.16.4.2. Topping Course	<u>Alternative</u>
9.23.15.2.(1) Material Standards (Subflooring)	<u>Alternative</u>
9.30.2.2. Materials and Thickness (Panel Type Underlay)	<u>Alternative</u>

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 names

- fermacell®flooring elements
- fermacell®gypsum fibre boards

Product description

The product consists of two homogenous fibre gypsum boards that are glued together with an offset of 50 mm to produce a rabbeted edge. They are produced in two different thicknesses (20 mm and 25 mm) and the boards are 1 500 mm long × 500 mm wide, with a total surface area of 0.75 m². The connection between each panel is completed with fermacell® Floor Glue. The panels are placed in succession in a floating installation.

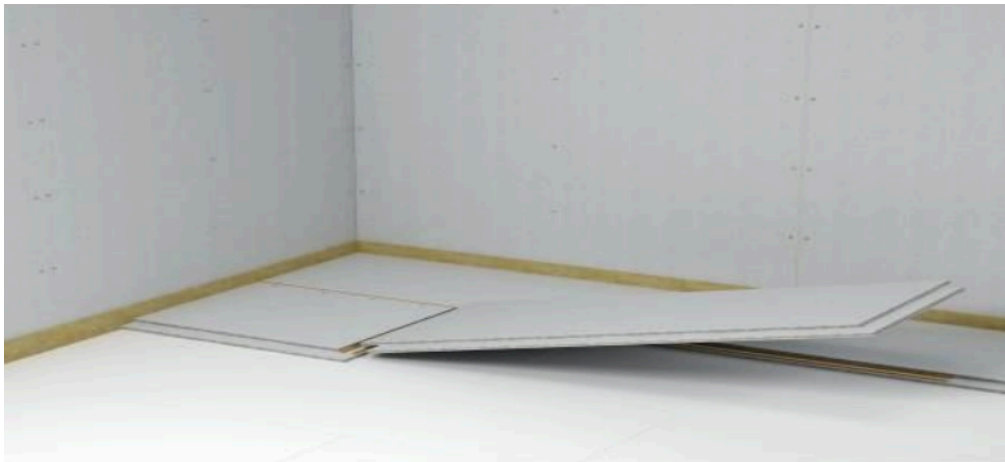


Figure 1. fermacell®

Manufacturing plants

This evaluation is limited to products produced at the following plants:

Product names	Manufacturing plants	
	Orejo, Spain	Wijchen, Netherlands
fermacell®flooring elements	☑	☑
fermacell®gypsum fibre boards	☑	☑

☑ 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 product must be installed in accordance with “fermacell® Flooring Systems Planning and Processing.”
- Access to floor drains or cleanouts should be maintained and not restricted.
- The product packaging must be clearly identified with the phrase, “CCMC 14136-R.”

Technical information

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

Criteria number	Criteria name
CCMC-TG-061626.03-15	CCMC Technical Guide for Gypsum Fiberboard Floor Underlay Panels

The evaluation holder has submitted technical documentation for the CCMC's evaluation. Testing was conducted at laboratories recognized by the CCMC. The corresponding technical evidence for this product is summarized below.

Physical requirements

Table 1. Results of testing of physical requirements of panel underlay

Property	Unit	Requirement	Result (1)
Thickness tolerance	mm	± 0.5	0.05
Width tolerance	mm	± 3.0	1
Length tolerance	mm	± 6.0	0
Concentrated load bearing deflection	mm	≤ 2	0
Resistance to fungus	-	Fungus growth not greater than that on comparative item	Pass
Linear expansion @ 50% to 90% relative humidity (RH)	%	≤ 1.0	0.06 (M)
			0.08 (X)
Edge thickness swelling	%	≤ 1	1.0
Nail pull resistance	N	Report value	1906
Flexural breaking load	N	Report value	1 300 (M)
			1 440 (X)

Note:

¹ "M" stands for "Machine Direction"; "X" stands for "Cross Direction."

Performance requirements

Table 2. Results of testing of ceramic installations, concentrated loadbearing strength and impact load

Property	Unit	Requirement	Result
Robinson test for ceramic installations – assembly: 12.5 mm plywood, strapping 41.2 mm × 41.2 mm, 15.8 mm tongued and grooved plywood, fermacell®, ECO Prim Grip™ by MAPEI bond primer, extra smooth, large and heavy tile mortar with polymer by Keraflex Plus of MAPEI bond coat, 304.8 mm × 304.8 mm porcelain tile (8.0 mm thick) ⁽¹⁾	N/A	No break after 6 cycles	Pass
Hard impact @ 5.4 N·m	mm	Indentation ≤ 1, no fracture or debonding between layers	Pass
Hard impact @ 10.9 N·m	mm	No failure	Pass
Soft impact @ 10.2 N·m	mm	No indentation, no fracture or debonding between layers	Pass
Soft impact @ 20.4 N·m	mm	No failure	Pass

Note

- ¹ The ceramic tile tested represents the smallest and thinnest tiles evaluated. This evaluation does not provide an opinion on ceramic tiles that are smaller or thinner than the referenced assembly.

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.

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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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