

CCMC 14130-R

CCMC Canadian code compliance evaluation

CCMC number:	14130-R
Status:	Active
Issue date:	2019-07-26
Modified date:	2023-11-08
Evaluation holder:	<p>Carpenter Co. 57B Olin Way Fogelsville PA 18051 United States Telephone: 610-395-0311</p>
Product name:	Kaycan Styrofold 5 Plus
Compliance:	NBC 2015, NBC 2020
Criteria:	<p>CCMC-TG-072113.10-15A, "CCMC Technical Guide for Re-Siding Underlayment (Insulative)" CCMC-TG-072113.10-20A, "CCMC Technical Guide for Re-Siding Underlayment (Insulative)"</p>

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 product, when used as a residing underlayment to cover existing siding 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>Alternative</u>

National Building Code of Canada 2020

Code provision	Solution type
9.25.2.2. Insulation Materials	<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 name

Kaycan Styrofold 5 Plus

Product description

The product is a faced, moulded expanded polystyrene (EPS) board.

The product is available in 9.5 mm thickness. As a fanfold, it is 1.2 m high and 7.3 m long, with folds every 600 mm. The underlayment has a plastic facer on one side and a foil facer on the other side.

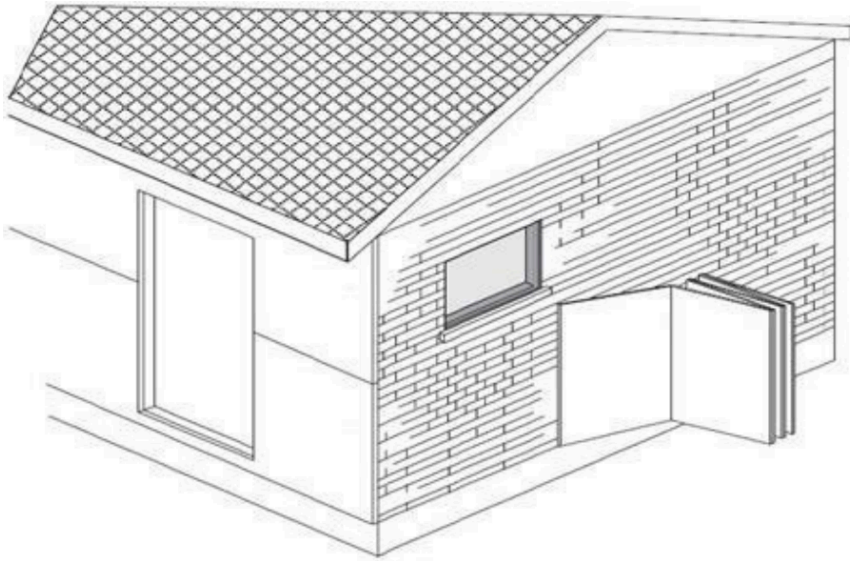


Figure 1. Kaycan Styrofold 5 Plus (image not to scale)

Manufacturing plant

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

Product name	Manufacturing plant
	Fogelsville, PA, US
Kaycan Styrofold 5 Plus	☑

☑ 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 new cladding must be securely fastened as per the NBC 2015 requirements either
 - i. directly through the existing structure; or
 - ii. attached to existing siding, if adequate rigidity and supports are provided and meeting the intent of Article 9.27.5.1., Attachment, of Division B of the NBC 2015.
- **The product may only be installed over existing cladding that has a minimum of 10 mm of air space behind it, which is vented to the exterior and drained. The vented and drained air space must be maintained after the new cladding is installed.**
- The product may be installed with or without a sheathing membrane. If no sheathing membrane is installed, and if the existing cladding is susceptible to moisture damage, then the joints of the product must be taped.
- As stated in Note A-9.25.2.4.(3), Loose-Fill Insulation in Existing Wood-Frame Walls, of Division B of the NBC 2015, necessary steps must be taken prior to retrofit of the existing wall in order to lower the risk of moisture accumulation. Assessment of the existing wall configuration must be performed by an expert in building science prior to retrofitting.
- The product shall be installed with suitable flashing as per Article 9.27.3.7., Flashing Materials, and Article 9.27.3.8., Flashing Installation, of Division B of the NBC 2015 to drain any incidental water from the existing drainage cavity to the exterior and to protect the exposed top edge of the cladding.
- The product or its packaging must be clearly identified with the phrase "CCMC 14130-R."

Explanatory information

The possibility of moisture accumulation within the wall construction is mainly a function of the physical properties of the insulation being installed and its impact on the thermal, air leakage and vapour diffusion characteristics of the existing wall. Consequently, the potential moisture accumulation resulting from the addition of insulation is very specific to the existing wall construction being retrofitted. This also applies to retrofit construction where insulating sheathing is installed over existing exterior walls.

Adding insulation as sheathing is beneficial only in cases where this insulative sheathing adds thermal resistance without increasing the risk of moisture accumulation. If installed properly, with knowledge of the existing wall configuration and performance, the product can provide additional thermal resistance to the wall assembly without any detrimental effects.

Technical information

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

Criteria number	Criteria name
CCMC-TG-072113.10-15A	CCMC Technical Guide for Re-Siding Underlayment (Insulative)
CCMC-TG-072113.10-20A	CCMC Technical Guide for Re-Siding Underlayment (Insulative)

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.

Performance requirements

Table 1. Results of testing the performance requirements of the product

Property	Unit	Requirement	Result
Dimensions (tolerances)	–	As per CCMC technical guide	Pass
Initial thermal resistance, min. (at 25 mm thickness)	m ² .°C/W	0.65	0.66 ⁽¹⁾
Water vapour permeance, min.	ng/(Pa·s·m ²)	130	0.99 ⁽²⁾
Dimensional stability, max.	% linear change	1.5	Pass
Flexural strength, min.	kPa	240	292 ⁽³⁾
Water absorption, max.	% by volume	4	2.9
Compressive strength, min.	kPa	35	34.4 ⁽⁴⁾

Notes

- ¹ This is the average of three specimens. Value is for the 25 mm thickness.
- ² As the water vapour permeance values are below the criteria for breather type, the product is limited to installations on existing cladding systems containing a 10 mm air space.
- ³ Average of three specimens with facers.
- ⁴ Deemed acceptable considering the intended use of the product. Value is based on average results of six specimens with facers.

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.

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:

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