

CCMC 12764-R

CCMC Canadian code compliance evaluation

CCMC number:	12764-R
Status:	Active
Issue date:	1996-08-07
Modified date:	2022-11-21
Evaluation holder:	<p>Kingspan Insulation LLC 2100 Riveredge Parkway, Suite 175 Atlanta GA 30328 United States Website: www.kingspaninsulation.com Telephone: 678-589-7309 Email: craig.lynch@kingspan.com</p>
Product name:	GreenGuard®/Fanfold Underlayment
Code compliance:	NBC 2015, NBC 2020, OBC
Evaluation requirements:	<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.](#)

Code 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 while adding 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>Alternative</u>

National Building Code of Canada 2020

Code provision	Solution type
9.25.2.2. Insulation Materials	<u>Alternative</u>

Ontario Building Code

Ruling No. 09-14-212 (12764-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 2009-08-05 (revised 2018-04-12) 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

GreenGuard
/Fanfold Underlayment

Product description

The product is a faced, extruded polystyrene board that is perforated on both sides.

The product is available in 6.35 mm and 9.5 mm thicknesses. As a fanfold, it is 1.2 m high and 15.2 m long, with folds every 600 mm. The underlayment has perforated plastic facers on both sides and an additional perforated foil/plastic facer on one side. The polystyrene core is either green or pink.

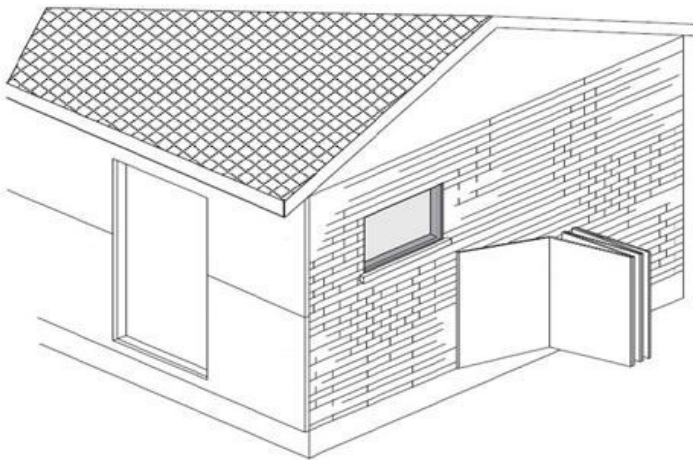


Figure 1. GreenGuard®/Fanfold Underlayment

Manufacturing plant

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

	Manufacturing plant
Product name	Winchester, VA, US
GreenGuard®/Fanfold Underlayment	☑

☑ 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 either:
 - i. directly through the existing structure; or
 - ii. attached to existing siding if adequate rigidity and supports are provided.
- The product may only be installed over existing cladding that has a minimum 10-mm 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.

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. The product can provide additional thermal resistance to the wall assembly without any detrimental effects, if installed properly with knowledge of the existing wall configuration and performance.

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
Thermal resistance, min.	m ² ·°C/W	≥ 0.70	0.723 ⁽¹⁾
Water vapour permeance, min.	ng/(Pa·s·m ²)	≥ 130	60-95 ⁽²⁾
Dimensional stability, max.	% linear change	≥ 1.5	Pass
Flexural strength, min.	kPa	≥ 240	661.3 ⁽³⁾
Water absorption, max.	% by volume	≤ 4	2.72
Compressive strength, min.	kPa	≥ 35	50.3

Notes:

- ¹ Average results of four specimens. Value is for the 25 mm thickness and must be prorated for products that are 6.35 mm and 9.5 mm thick.
- 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 perforated facers.

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.

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

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This PDF is an alternative version. This document was published on 2022-11-21 and may not be the latest version of this evaluation. Users should consult the latest [published assessment](#) on the [CCMC Registry of Product Assessments](#), which contains the most up to date information. This PDF is intended for use as a record, not the latest information available.

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.

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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