



Evaluation Report CCMC 13510-R Legerclad (Composite EPS Board and Sheathing Membrane)

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1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that “Legerclad (Composite EPS Board and Sheathing Membrane)”, when used as exterior insulating sheathing with an integral sheathing membrane (weather side) in accordance with the conditions and limitations stated in Section 3 of this Report, complies with the National Building Code 2010:

• Sheathing Membrane

- Clause 1.2.1.1.(1)(a), Division A, using the following acceptable solutions from Division B:
 - Article 9.27.3.3., Required Sheathing Membrane and Installation
- Clause 1.2.1.1.(1)(b), Division A, as an alternative solution that achieves at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statements attributed to the following applicable acceptable solutions:
 - Article 9.27.3.2., Sheathing Membrane Material Standard

• Insulation Panel

- Clause 1.2.1.1.(1)(a), Division A, using the following acceptable solutions from Division B:
 - Clause 9.25.2.2.(1)(c), Insulation Materials

This opinion is based on CCMC's evaluation of the technical evidence in Section 4 provided by the Report Holder.

Ruling No. 15-03-324 (13510-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 2015-01-05 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.

2. Description

The product is a Type 2, preformed, moulded, expanded polystyrene rigid insulation panel (CCMC 12836-L). The panels are plant-laminated to a spun-bonded olefin sheathing membrane (TYPAR® CCMC 12892-R made by Fiberweb, Inc.) with THERMOBOND JPS70300, a hot melt adhesive, applied in 0.51-mm thicknesses every 7.6 mm. The panels are commonly 1 219 mm x 2 438 mm or 1 219 mm x 2 743 mm and are available in 25-mm to 76-mm thicknesses. A sample of the product is shown in Figure 1.



Figure 1. “Legerclad (Composite EPS Board and Sheathing Membrane)” panel

3. Conditions and Limitations

CCMC's compliance opinion in Section 1 is bound by the “Legerclad (Composite EPS Board and Sheathing Membrane)” being used in accordance with the conditions and limitations set out below.

- The product must be installed:
 - with the printed side facing outward and must be protected from exposure to ultraviolet (UV) radiation from the sun within 60 days.
 - in accordance with Article 9.27.3.4., Insulating Sheathing in lieu of Sheathing Membrane, of Division B of the NBC 2010, and the manufacturer's current instructions.
 - with a minimum 10-mm air space between the sheathing membrane and the cladding, unless the cladding has been deemed to not require an air space (e.g., deemed by CCMC or deemed by building officials based on past cladding performance).
- Thicknesses greater than 50 mm and having a water vapour permeance less than $60 \text{ ng/Pa}\cdot\text{s}\cdot\text{m}^2$ must comply with Article 9.25.5.2., Position of Low Permeance Materials, of Division B of the NBC 2010.
- Sheathing tape (CCMC-evaluated) must be used to seal all joints.
- A concealed air space that is more than 25 mm wide must contain proper fire stopping, in accordance with Subsection 9.10.16., Fire Blocks, of Division B of the NBC 2010.
- When sheathing is required, the product must have a minimum thickness of 38 mm as per Table 9.23.17.2.A. of Division B of the NBC 2010.

4. Technical Evidence

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

4.1 Performance Requirements

4.1.1 Sheathing Membrane (TYPAR) with the Adhesive

Table 4.1.1 assesses the effect of the adhesive on the sheathing membrane's performance.

Table 4.1.1 Performance Requirements Results

Property	Unit	Requirement	Result
Tensile strength	N/mm	≥ 3.5	4.27
Breaking force	N	≥ 180 MD ¹	441.7 MD
		≥ 160 XD ²	354.0 XD
Water vapour permeance	ng/Pa·s·m ²	≥ 170	406
Water ponding (original)	—	No leakage	Pass
Tensile strength after UV exposure	% retention of the original	≥ 90	93.9%
Tensile strength after UV exposure and heat aging	% retention of the original	≥ 85	120%
Water vapour permeance after UV exposure and heat aging	ng/Pa·s·m ²	≥ 170	315
Water ponding after UV exposure and heat aging	—	No leakage	Pass

Notes to Table 4.1.1:

¹ MD – machine direction

² XD – cross-machine direction

4.1.2 Legerclad Composite Panel – face down

Table 4.1.2 Water Vapour Permeance Result

Property	Unit	Requirement	Result
Water vapour permeance with NBC-required directionality	ng/Pa·s·m ²	≥ 60	77.0 ¹

Note to Table 4.1.2:

¹ Water vapour permeance tests were conducted on 50-mm-thick product specimens.

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