



Evaluation Report CCMC 14119-R PSL Vinylroc

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1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that “PSL Vinylroc,” when used as an interior finish on walls for manufactured housing in accordance with the conditions and limitations stated in Section 3 of this Report, complies with the National Building Code (NBC) of Canada 2015:

- Clause 1.2.1.1.(1)(a) of Division A, using the following acceptable solutions from Division B:
 - Article 9.10.17.1., Flame-Spread Rating of Interior Surfaces
- Clause 1.2.1.1.(1)(b) of 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:
 - Sentence 9.29.5.2.(1), Materials (Gypsum Board Finish (Taped Joints))
 - Sentence 9.29.5.3.(1), Maximum Spacing of Supports
 - Article 9.29.5.8., Spacing of Nails

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

2. Description

The product is made from nominal 12.7-mm or 15.9-mm-thick gypsum board laminated with vinyl on one side. The gypsum board is manufactured in accordance with ASTM C 1396/C 1396M-14, “Gypsum Board.”

3. Conditions and Limitations

The CCMC compliance opinion in Section 1 is bound by the “PSL Vinylroc” being used in accordance with the conditions and limitations set out below:

- The product is intended to be used for the interior finish of exterior and interior walls of manufactured, single-family, detached one-storey houses only.
- The product must be installed parallel to framing and include perpendicular let-in furring (studs notched to allow furring installation). The framing must not be spaced more than 600 mm on centre (o.c.) and must comply with Table 9.23.10.1., Size and Spacing of Studs, of Division B of the NBC 2015.
- The fasteners must be installed at 150 mm o.c. around the perimeter and the adhesive must be installed on all framing and furring. The adhesive must be third-party- or CCMC-evaluated to ASTM C 557-03(2009)e1, “Adhesives for Fastening Gypsum Wallboard to Wood Framing.”
- In locations where the seismic $S_a(0.2)$ is less than 0.70, or the 1-in-50 hourly wind pressure is less than 0.80 kPa (refer to Table C-2, Climatic Design Data for Selected Locations in Canada, Table C-3 Seismic Design Date for Selected Locations in Canada in Appendix C of Division B of the NBC 2015 for locations of low to moderate wind and seismic zones), the exterior walls must be sheathed in accordance with Article 9.23.17.2., Thickness, Rating and Material Standards, of Division B of the NBC 2015.
- In locations where the seismic $S_a(0.2)$ is greater than 0.70, or the 1-in-50 hourly wind pressure is greater than 0.80 kPa (refer to Table C-2 and Table C-3 in Appendix C of Division B of the NBC 2015 for locations of high wind and seismic zones), bracing to resist lateral load must be designed and constructed in accordance with Articles 9.23.13.4., Braced Wall Bands, to 9.23.13.7., Additional System Considerations, of Division B of the NBC 2015.

- A vapour barrier must be installed as per Subsection 9.25.4., Vapour Barriers, of Division B of the NBC 2015.
- An air barrier system must be installed as per Subsection 9.25.3., Air Barrier Systems, of Division B of the NBC 2015.
- The product must not be used to support insulation.
- The product must not be used for the protection of foamed plastics.
- The product must not be used where a fire separation is required.
- The product must be clearly identified with the phrase “CCMC 14119-R”

4. Technical Evidence

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

4.1 Material Requirements

Table 4.1.1 Results of Testing the Gypsum Board (12.7-mm and 15.9-mm thick) Properties of the Product

	Property	Unit	Requirement	Result
Flexural strength (Method B) ⁽¹⁾	bearing edges perpendicular to panel length	N	≥ 476	Pass
	bearing edges parallel to panel length	N	≥ 160	Pass
Humidified deflection (Method B) ⁽¹⁾		mm	≤ 32	Pass
Nail-pull resistance (Method B) ⁽¹⁾		N	≥ 343	Pass
Hardness (Method B) ⁽¹⁾	core	N	≥ 49	Pass
	end	N	≥ 49	Pass
	edge hardness	N	≥ 49	Pass

Note to Table 4.1.1:

(1) Method B is a test method from ASTM C 473-12, “Test Methods for Physical Testing of Gypsum Panel Products.”

4.2 Performance Requirements

4.2.1 Racking Load

Table 4.2.1.1 Results of Testing the Racking Load of the Product

Property		Unit	Control Specimen ⁽¹⁾	12.7-mm Result ⁽²⁾	15.9-mm Result
Deflection	3.5 kN	mm	3.570	2.81 ⁽³⁾	2.60
	7.0 kN	mm	– ⁽⁴⁾	7.74 ⁽⁴⁾	8.51
	10.5 kN	mm	– ⁽⁴⁾	6.17 ⁽⁴⁾	17.10
Residual deflection	3.5 kN	mm	2.160	1.14 ⁽³⁾	1.66
	7.0 kN	mm	– ⁽⁴⁾	3.59 ⁽⁴⁾	4.53
	10.5 kN	mm	– ⁽⁴⁾	3.56 ⁽⁴⁾	9.94
Residual/Deflection	3.5 kN	%	60.5	41 ⁽³⁾	64
	7.0 kN	%	– ⁽⁴⁾	48 ⁽⁴⁾	53
	10.5 kN	%	– ⁽⁴⁾	58 ⁽⁴⁾	58

Notes to Table 4.2.1.1:

- (1) Control specimen: single layers of 12.7-mm gypsum board were fastened using 32-mm galvanized ringed wallboard nails every 200 mm o.c. at the edges and in-field. The framing consisted of 38 mm × 89 mm fir wood studs at 406 mm o.c. spacing. The wall specimen was 2.4 m × 2.4 m.
- (2) “PSL Vinylroc” specimen: the framing was notched to accommodate two 25 mm × 100 mm Spruce-Pine-Fir (S-P-F) furring evenly spaced across the studs at 800 mm o.c. The furring were fastened using 56-mm nails. Structural adhesive was applied to the furring strips in a 9.5-mm bead and serpentine pattern. The “PSL Vinylroc” sheathing was fastened to the framing using 6.35 mm × 31.75 mm staples on the perimeter at 152.4 mm o.c. spacing. The wall specimen was 2.4 m × 2.4 m.

- (3) “PSL Vinylroc” does not exceed the control specimen; therefore, it meets the requirements. See Section 3, Conditions and Limitations, in this Report for the installation requirements as per Subsection 9.23.13., Bracing to Resist Lateral Loads Due to Wind and Earthquake, of Division B of the NBC 2015.
- (4) The control specimen and the “PSL Vinylroc” specimen failed prior to reaching the applied racking load. As a result, no deflection or residual deflection was recorded.

4.2.2 Flame-spread Rating

Table 4.2.2.1 Results of Testing the Flame-spread Rating and Smoke Developed Classification of the Product

Property	Requirement	Result
Flame-spread rating	≤ 150	20
Smoke Developed Classification	≤ 300	35

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