Evaluation Report CCMC 14043-R
Sagiwall

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1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that "Sagiwall," when used as an exterior cladding for buildings of combustible and noncombustible construction 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), Division A, using the following acceptable solutions from Division B:
  - Article 3.1.5.5., Combustible Cladding on Exterior Walls
  - Subsection 9.27.2., Required Protection from Precipitation
  - Subsection 9.27.3., Second Plane of Protection
  - Subsection 9.27.4., Sealants
  - Subsection 9.27.5., Attachment of Cladding

- 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 9.27.12.1., Material Standard (Vinyl Siding)
  - Subsection 9.37.1., Objectives and Functional Statements

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

2. Description

The wall cladding profiles are made of heavy gauge polyvinyl chloride (PVC) and coated with a PVC film (Renolit) designed for exterior applications. The profiles are tongue and groove, and fastened to the building structure through pre-punched nailing slots located along the top edge of the profiles, which are concealed after the upper profile is installed. All accessories are made of aluminum covered with the PVC film (Renolit).

3. Conditions and Limitations

The CCMC compliance opinion in Section 1 is bound by the "Sagiwall" being used in accordance with the conditions and limitations set out below:

- The siding panels must be installed on furring providing a second plane of protection that consists of a continuous, clear, uninterrupted vented air space of 10 mm outboard of the sheathing membrane.
- The furring must be installed over the sheathing membrane.
- The system requires flashing at appropriate locations in order to drain water to the outside.
- Furring for the attachment of the cladding must be not less than 19 mm × 38 mm, securely nailed to the sheathing or framing, and spaced not more than 600 mm on centre (o.c.).
- The product must be clearly identified with the phrase "CCMC 14043-R" on its packaging.

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

4.1.1 Physical Properties

Table 4.1.1.1 Results of Testing the Physical Properties of the Product

Property	Requirement	Result
Thermal expansion	Not to exceed 8.1×10^{-5} °C^{-1}	Pass
Flammability	Linear burn rate/Maximum allowable burn rate	Pass
Colour	Uniform	Pass
Specular gloss	8 points	Pass
Shrinkage	≤ 3%	Pass
Warp	≤ 3 mm	Pass
Weatherability	In progress	–
Impact resistance	≥ 6.3 J at 23°C	Pass
Surface distortion	Free from bulges, waves or ripples	Pass
Thickness	Face ≥ 0.7 mm	Pass
	Nail slots ≥ 0.9 mm	

4.2 Performance Requirements

4.2.1 Wind Load Resistance

Table 4.2.1.1 Results of Testing the Wind Load Resistance of the Product at $Q_{50} < 0.75$ kPa

Property	Requirement	Result
Deformation (sustained pressure)	Sustained for 1 h ≥ 750 Pa	Pass
Repeated positive and negative pressure test (cyclic pressure) 2 000 cycles	1 090 Pa	Pass
Safety test (gust loads) (Pa)	Resist gust wind above 1 630 Pa	Pass

4.2.2 Full Scale Fire Test of Exterior Wall Assemblies

Table 4.2.2.1 Results of Testing to CAN/ULC-S134, Fire Test of Exterior Wall Assemblies of the Product

Property	Requirement	Result
Flaming	Flaming on or in the wall assembly does not spread more than 5 m above the opening.	Pass
Heat flux	Heat flux during the flame exposure on the wall assembly is not more than 35 kW/m^2 measured at 3.5 m above the opening.	Pass

Report Holder

Sagiper North America
13179 156 Street NW
Edmonton, AB T5V 1V2

Telephone: 780-238-1667
Email: info@sagipernorthamerica.com
Web site: www.sagipernorthamerica.com

Plant(s)

Vagos, Portugal

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