



## Evaluation Report CCMC 13547-R

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# WrapShield®

## 1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that “WrapShield®”, when used as a breather-type sheathing membrane in accordance with the conditions and limitations stated in Section 3 of this Report, complies with the National Building Code 2010:

- 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

This opinion is based on CCMC's evaluation of the technical evidence in Section 4.1 provided by the Report Holder.

## 2. Description

The product is a 0.51-mm-thick spun-bonded, nonwoven, polypropylene breathable sheathing membrane. It is orange in colour and is available in rolls 1.5 m wide and 50 m long.

## 3. Conditions and Limitations

CCMC's compliance opinion in Section 1 is bound by the “WrapShield®” 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 radiation from the sun within 60 days.
- The product must be installed with a minimum 10 mm air space between the sheathing membrane and the cladding, unless the cladding has been deemed not to require an air space (e.g. deemed by CCMC or deemed by building officials based on past cladding performance).
- When the product is used in applications where a concealed air space exceeds 25 mm in width, the concealed air space must contain proper fire stopping in accordance with Subsection 9.10.16., Fire Blocks, of Division B of the NBC 2010.

- The product must be installed in accordance with Article 9.27.3.3., Required Sheathing Membrane and Installation, of Division B of the NBC 2010 and the manufacturer's instructions. If manufacturer's instructions differ, then the installation requirements of the NBC 2010 takes precedence.

## 4. Technical Evidence

CCMC's Technical Guide for “WrapShield®” sets out the nature of the technical evidence required by CCMC to enable it to evaluate a product as an acceptable or alternative solution in compliance with the NBC 2010. The Report Holder has submitted test results for CCMC's evaluation. Testing was conducted at independent laboratories recognized by CCMC. The corresponding test results for “WrapShield®” are summarized below.

### 4.1 NBC 2010 Compliance Data for “WrapShield®” on which CCMC Based its Opinion in Section 1

#### 4.1.1 Material Requirements

##### 4.1.1.1 Test Results for Material Properties

Table 4.1.1.1

| Property                | Unit | Requirement | Result    |
|-------------------------|------|-------------|-----------|
| Sheet width (tolerance) | mm   | $\geq -6$   | +4 (Pass) |

#### 4.1.2 Performance Requirements

##### 4.1.2.1 Test Results for Performance Properties

Table 4.1.2.1

| Property   | Unit                   | Requirement            | Result                 |
|--|------------------------|------------------------|------------------------|
| Tensile strength   | N/mm                   | $\geq 3.5$             | 8.89                   |
| Water vapour permeance <sup>1</sup>  | ng/Pa·s·m <sup>2</sup> | $\geq 170$             | 1203                   |
| Water ponding (original) <sup>2</sup>  | -                      | No leakage             | Pass                   |
| Tensile strength (% retention of original) <ul style="list-style-type: none"> <li>• after UV exposure</li> <li>• after UV exposure and heat aging</li> </ul> | %                      | $\geq 90$<br>$\geq 85$ | $\geq 92$<br>$\geq 92$ |
| Water vapour permeance <ul style="list-style-type: none"> <li>• after UV exposure and heat aging</li> </ul>  | ng/Pa·s·m <sup>2</sup> | $\geq 170$             | 1300                   |
| Water ponding <ul style="list-style-type: none"> <li>• after UV exposure and heat aging</li> </ul>   | -                      | No leakage             | Pass                   |

##### Notes to Table 4.1.2.1

<sup>1</sup> ASTM E 96/E 96M-10, “Water Vapour Transmission of Materials,” (Desiccant Method).

<sup>2</sup> The water ponding test requires that the membrane retain 25.4 mm of water with no passage of water through the membrane for two hours.

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