



## Evaluation Report CCMC 13657-R J-DRain Wrap (Dampproofing)

<b>MASTERFORMAT:</b>	07 11 19.01
<b>Evaluation issued:</b>	2015-04-13
<b>Re-evaluation due:</b>	2018-04-13

### 1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that “J-DRain Wrap (Dampproofing)”, when used as dampproofing for basement walls 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:
  - Sentence 9.13.2.2.(1), Material Standards (Dampproofing)

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

### 2. Description

The product is an extruded high-density polyethylene drainage core bonded with a non-woven filter fabric. The dimples are approximately 7.87 mm high and are intended to provide an air gap between the wall and the adjacent soil. The product is 7.9 mm thick available in rolls that weigh 17, 27, and 34 kg, in widths of 1.22 m, 1.83 m, and 2.4 m respectively. The length of the rolls is 19.81 m.

Figure 1 illustrates generic installation details for the product.

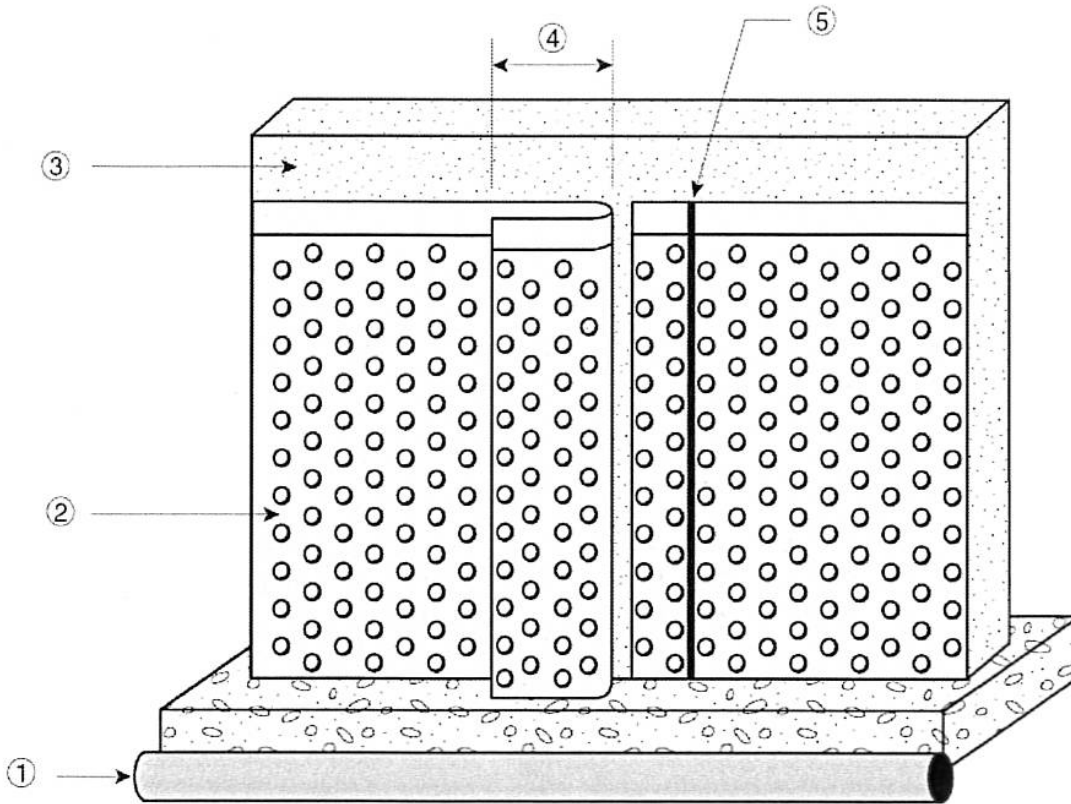


Figure 1. Installation of “J-DRain Wrap (Dampproofing)”

1. drainage tile
2. membrane
3. concrete foundation
4. membrane overlap
5. mechanically fastened and sealed at top edge and all laps

### 3. Conditions and Limitations

CCMC’s compliance opinion in Section 1 is bound by the “J-DRain Wrap (Dampproofing)” being used in accordance with the conditions and limitations set out below.

- The product was evaluated for use against cast-in-place and concrete block foundations only.
- The product must be used in locations where the foundation wall is well drained in accordance with Subsection 9.14.2., Foundation Drainage, of Division B of the NBC 2010.
- The product must be installed in accordance with the manufacturer’s instructions and be protected from exposure to ultraviolet radiation from the sun within 30 days.
- The product is evaluated for use in depths up to 3.7 m below grade. Application depths greater than 3.7 m are considered to be outside the scope of this Report.
- The product must cover the foundation wall from the top of the footing to the final grade.
- The top of the membrane and all vertical joints and terminations must be mechanically fastened and sealed to prevent soil particles from entering behind the membrane.
- As the dampproofing membrane does not have to adhere to the surface and can permanently bridge any normal joint, tie hole, fault or shrinkage crack, the wall surface does not have to be parged, cleaned, patched or sealed before hanging the membrane.
- The product label and/or packaging must be clearly identified with the following:
  - the manufacturer’s name or logo, and
  - the phrase “CCMC 13657-R”.

### 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

Table 4.1.1 Results of Testing of Performance Properties of “J-DRain Wrap (Dampproofing)”

Properties		Requirements	Results	
Thickness of flat area (mm)		Report	0.71	
Thickness of dimpled area (mm)		Report	0.91	
Weight (g/m <sup>2</sup> )		≥ 500	736	
Dynamic impact		rating of 3	3	
Static puncture		rating of 3	3	
Cold bending at -30°C		No visible cracking	Pass	
Water vapour permeance (ng/Pa·s·m <sup>2</sup> )		≤ 37.2	3.92	
Original tensile strength at yield (kN/m)		≥ 8	MD 10.6, XD 8.41	
Original elongation at break (%)		≥ 25	MD 50.8, XD 30	
Water immersion	tensile strength at yield (%)	≥ 80 of original	MD 106.6, XD 114.3	
	elongation at break (%)	≥ 70 of original	MD 113, XD 113.7	
Heat aging	dimensional change (%)	≤ ±1	MD -0.5, XD -0.4	
	weight change (%) .	≤ ±0.10	-0.3 <sup>2</sup>	
	tensile strength at yield (%)	≥ 80 of original	MD 113.2, XD 103.6	
	elongation at break (%)	≥ 70 or original	MD 106.9, XD 101.0	
Chemical attack exposure	ammonium chloride	tensile strength at yield (%)	≥ 80 of original	MD 107.5, XD 146.4
		elongation at break (%)	≥ 70 of original	MD 109.6, XD 129.7
	sodium sulfate	tensile strength at yield (%)	≥ 80 of original	MD 116, XD 106
		elongation at break (%)	≥ 70 of original	MD 98.6, XD 109.3
Compressive strength (kN/m <sup>2</sup> )		≥ 100	960	

### Notes to Table 4.1.1:

- <sup>1</sup> MD refers to the “machine direction” of the product. XD refers to “cross direction” of the product.  
<sup>2</sup> Despite the product not meeting the weight change criteria, it was deemed to pass after the aged sample met the compression resistance requirement of the CCMC Technical Guide.

## Report Holder

JDR Enterprises Inc.  
 292 South Main Street, Suite 200  
 Alpharetta, GA  
 USA, 30009

**Telephone:** 800-843-7569

**Fax:** 770-664-7951

## Plant(s)

Alpharetta, GA. USA

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