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*EVALUATION
REPORT*

DIVISION 07142

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Drylar™

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1. Purpose of Evaluation

The proponent sought confirmation from the Canadian Construction Materials Centre (CCMC) that “Drylar™” can serve as a cold, liquid-applied, polymer-enhanced asphalt that produces an elastomeric membrane for waterproofing the exterior of foundation walls to a depth of no more than 3 m, in compliance with the intent of the National Building Code of Canada (NBC) 1995.

2. Opinion

Subject to the limitations and conditions stated in this test report, test results and assessments provided by the proponent show that “Drylar™” complies with CCMC’s Technical Guide for “Liquid-Applied, Bituminous Waterproofing for Foundation Walls, Masterformat number 07142, dated 2002-07-15, and provides a level of performance equivalent to that required in:

- National Building Code of Canada 1995, Articles 5.8.2.2., 9.13.2.1. and 9.13.5.1.

Canada Mortgage and Housing Corporation permits the use of this product in construction financed or insured under the *National Housing Act*.

3. Description

“Drylar™” is a liquid-applied, polymer-enhanced asphalt that is airless spray-applied to the exterior of foundation walls (concrete or block) to create a waterproof membrane with a thickness of 1-3mm.

4. Usage and Limitations

“Drylar™” may be used for waterproofing concrete and concrete block foundation walls subject to the following conditions and limitations:

- The use of “Drylar™” has been evaluated for applications covered in Part 9 of the NBC 1995, in depths of no more than 3.0 m.
- The foundation wall is to be backfilled according to the NBC 1995.
- Not suitable for use in biologically active soils.
- Backfill shall be placed in a manner that does not damage the foundation wall or the waterproof membrane.

- When the backfill contains angular stones or sharp objects, the membrane must be protected with a drainage board.
- The applied membrane should not be exposed to weathering for more than 15 days.
- The wall and footings must be dry. Any water must be removed and the concrete must be dry prior to application of “Drylar™”.
- “Drylar™” is to be applied in accordance with the conditions and procedures set out by the manufacturer.
- Installation: The membrane is only to be applied in accordance with the manufacturer’s directions by installers qualified and approved by Lafarge North America.

5. Performance

Testing was conducted at an independent laboratory recognized by CCMC. The test results for “Drylar™” waterproof membrane are summarized in Table 1.

Table 1. Test Results for the “Drylar™” Waterproof Membrane

Property	Requirement	Result
Viscosity-Graded Asphalt ⁽¹⁾ (Cps)	Report value	200-220
Tensile Strength (kPa)	Report value	151.7
Specific Gravity	Report value	1.02
Viscosity (sec)	Report value	23-25
Dry Film Thickness ⁽²⁾	Report specified value	N/A
Hardness Type 00 (min)	Report value	76-78
Water Vapour Permeance (ng/Pa·sec·m ²)	Report value	6.57
Sag Flow ² (mm)	Shall exhibit a sag flow of not less than that required to obtain the specified dry film thickness.	N/A
Adhesion to Concrete (Peel) ⁽³⁾ (N/m) - after water immersion	> 175 N/m	348.5
Low Temperature Flexibility	No cracking (naked eye)	Pass
Watertightness	No Leakage	Pass
Water Absorption (%)	≤ 3	1.83

Table 1. Test Results for the “Drylar™” Waterproof Membrane (cont’d)

Property	Requirement	Result
Puncture Resistance	29 N for 24 h No perforation	Pass
Impact Resistance (J) - @ 23°C - @ -10°C - watertightness	Report No leakage after impact	19.5 27.1 Pass
Crack Bridging/Cyclic Movement Resistance at -20°C - 30 cycles (un-aged) - 5 cycles (aged specimen)	No visible cracking No visible cracking	Pass
Biological Resistance (soil micro-organism exposure) - tensile strength after 150 days exposure (kPa)	optional > 90% of initial value	-
Chemical Resistance - hydrochloric acid (10%) - lime water saturated - sodium hydroxide (10%)	No loss of film integrity	Pass Pass Pass
Accelerated Weathering - tensile strength after exposure	No deterioration of film > 90% of initial value	Pass Some surface crazing ⁽⁴⁾ 98%

Notes to Table 1:

- (1) ASTM D3236 Brookfield Viscosity, Spindle #5.
- (2) Catalyzed material that sets up immediately. Apply to recommended thickness of 1-3 mm.
- (3) ASTM C907 method used due to fast set up of membrane.
- (4) Deemed acceptable, the effect did not penetrate into the film, (surface phenomena).

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Note: Readers are asked to refer to limitations imposed by NRC on the interpretation and use of this report. These limitations are included in the introduction to CCMC’s Registry of Product Evaluations, of which this report is part.

Readers are advised to confirm that this report has not been withdrawn or superseded by a later issue by referring to <http://irc.nrc.gc.ca/ccmc>, or contacting the Canadian Construction Materials Centre, Institute for Research in Construction, National Research Council of Canada, Montreal Road, Ottawa, Ontario, K1A 0R6; Telephone (613) 993-6189, Fax (613) 952-0268.

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