



Evaluation Listing CCMC 13683-L Icynene ProSeal™ (MD-C-200v3)

Evaluation Issued: 2014-04-16

Re-evaluation due: 2017-04-16

Preface: Masterformat 07 21 19.02, Spray-Applied Rigid Polyurethane Foam Insulation, Medium Density

Preface Issued: 2014-04-11

Scope

These Evaluation Listings apply to spray-applied rigid polyurethane foam, medium density, intended for use as thermal insulation for both building and non-building applications, whether applied on a building site or in a prefabrication (manufacturing) process. This material is also known as foamed in-situ insulation. The continuous-use temperature is within the range of -60°C to $+80^{\circ}\text{C}$.

The proponent has demonstrated that the product meets the following standard (see Table 1 for the performance requirements):

- CAN/ULC-S705.1-01 (with Amendments No. 1 and 2), “Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Material Specification”; or
- CAN/ULC-S705.1-01 (with Amendments No. 1, 2 and 3), “Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Material Specification.”

Spray-applied rigid polyurethane foam, medium density, shall be installed by a licensed installer in accordance with the manufacturer’s instructions and the following standard:

- CAN/ULC-S705.2-05, “Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Application.”

For compliance to CAN/ULC-S705.2, users should contact the third-party organization that has been identified by the foam manufacturer as the third party operating the field quality assurance program (FQAP) for the foam product (see product listing).

Standard

Table 1. Performance Requirements for Physical Properties

Property		Unit	Requirement		
			Minimum	Maximum	
Air permeance (mandatory material testing)		L/s @ 75 Pa	No min.	0.02	
Air permeance (optional system testing)		L/s @ 75 Pa	No min.	0.05	
Apparent core density		kg/m ³	28	No max.	
Compressive strength		kPa	170	No max.	
Dimensional stability volume change at		-20°C	%	No min.	-1
		80°C	%	-1	8
		70°C, 97 ± 3% RH	%	No min.	14
Surface-burning characteristics - flame spread		—	No min.	500 ¹	
Open-cell content volume		%	No min.	8	
Initial thermal resistance of a 50-mm-thick specimen after 3 days at 23 ± 2°C		m ² ·°C/W	Declare	No max.	
Conditioned thermal resistance of a 50-mm-thick specimen after		180 days at 23 ± 2°C	m ² ·°C/W	Declare ²	No max.
		90 days at 60 ± 2°C			
Long-term thermal resistance (LTTR) of a 50-mm-thick specimen – Type 1		m ² ·°C/W	1.8	No max.	
LTTR of a 50-mm-thick specimen – Type 2		m ² ·°C/W	2.0	No max.	
Tensile strength		kPa	200	No max.	
Volatile organic emissions		—	Pass ³	No max.	
Water absorption by volume		%	No min.	4	
Water vapour permeance of a 50-mm-thick specimen		ng/(Pa·s·m ²)	No min.	60	

Notes to Table 1:

¹ Results are valid for qualification to the standard. As noted in the standard, “for building code purposes, the flame-spread rating shall be conducted in accordance with the code-specified flame-spread test details with respect to the number of specimens to be tested, specimens tested intact and cut specimens.”

² This requirement is only referenced in CAN/ULC-S705.1-01 (with Amendments No. 1 and 2).

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- 3 “Pass” means that after 30 days the volatile organic compound emissions do not exceed the maximum indoor air concentration stated in Table 2 of CAN/ULC-S705.1. In cases of retrofit construction (e.g., occupied buildings), CAN/ULC-S705.2 requires that the ventilation rate be no less than 0.3 air changes per hour within the working area during the application of the product and that the working area be isolated during spraying. The same ventilation rate is required after the product has been sprayed and for the time period determined in accordance with CAN/ULC-S705.1. See the product listing for the time period required before occupancy.
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Labelling

In compliance with CAN/ULC-S705.1-01 (with Amendments No. 1 and 2), each liquid component container shall be identified as either the polyisocyanate component (“A”) or the resin component (“B”). Unless otherwise specified, each container shall be marked with the following information:

- manufacturer’s name;
- product name;
- type of material (e.g., insulation);
- net mass of the contents of the packaged material;
- country of manufacture;
- lot number;
- date of manufacture;
- “use before” date;
- the means to identify the installed product; and
- conformance with CAN/ULC-S705.1.

In compliance with CAN/ULC-S705.1-01 (with Amendments No. 1, 2 and 3), each liquid component container shall be identified as either the polymeric isocyanate component (“A”) or the resin component (“B”). The polymeric isocyanate component shall be marked with the following information:

- manufacturer’s name;
- product name;
- type of material (e.g., insulation);
- net mass of the contents of the packaged material;
- country of manufacture;
- lot number; and
- date of manufacture.

The resin component shall be marked with the following information:

- manufacturer’s name;
- product name;
- type of material (e.g., insulation);
- net mass of the contents of the packaged material;
- country of manufacture;
- lot number;
- date of manufacture;
- “use before” date;
- the means to identify the installed product;
- “CAN/ULC-S705.1”; and
- LTTR (50 mm) RSI result.

National Building Code of Canada (NBC)

NBC References

CAN/ULC-S705.1-01 is referenced in Table 5.10.1.1. and Clause 9.25.2.2.(1)(g) of Division B of the NBC 2010.

CAN/ULC-S705.2-05 is referenced in Sentences 5.3.1.3.(3) and 9.25.2.5.(1) and Table 5.10.1.1. of Division B of the NBC 2010.

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1. Evaluation

This product conforms to CAN/ULC-S705.1-01 (with Amendments No. 1, 2 and 3), Type 2.

For retrofit constructions, time before occupancy is one (1 day).

The LTTR for 50 mm is RSI 2.02.

2. Description

The product is a Type 2, spray-applied rigid polyurethane foam of medium density. The foam system consists of two components: “Icynene Base Seal®” isocyanate and a polyurethane resin identified as “Icynene ProSeal™ (MD-C-200v3).” The two components are mixed on-site by a qualified installer with fixed-ratio positive displacement equipment.

The colour of the final cured product is platinum.

3. Standard and Regulatory Information

Morrison Hershfield (MH) has been identified by Icynene Inc. as the third-party organization that operates the FQAP for the product in accordance with CAN/ULC-S705.2-05.

MH can be contacted at 800-796-5792.

See the [Preface](#) and the standard for explanation.

Listing Holder

Icynene Inc.
6747 Campobello Road
Mississauga, ON L5N 2L7

Telephone: 905-363-4040

Fax: 905-363-0102

Plant(s)

Mississauga, ON

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