



Evaluation Listing CCMC 13478-L JM Corbond III®

Evaluation Issued:	2010-11-25
Re-evaluated:	2014-02-14
Re-evaluation due:	2016-11-25

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 1 and 2), “Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Material Specification”; or
- CAN/ULC-S705.1-01 (with Amendments 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 1 and 2).

-
- 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.
-

Labelling

In compliance with CAN/ULC-S705.1-01 (with Amendments 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 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.

Evaluation Listing CCMC 13478-L: JM Corbond III®

Evaluation Issued:	2010-11-25
Re-evaluated:	2014-02-14
Re-evaluation due:	2016-11-25

1. Evaluation

The product conforms to CAN/ULC-S705.1-01 (including Amendments 1 and 2), Type 2.

For retrofit construction, the time period before occupancy is one (1) day.

2. Description

The product is a Type 2, spray-applied, rigid polyurethane foam of medium density. The foam system consists of two components: isocyanate and “JM Corbond III®” polymeric resin. The two components are mixed on-site by a qualified installer with fixed-ratio positive displacement equipment.

The final cured product is grey.

The long-term thermal resistance (LTTR) for 50 mm is RSI 2.0.

3. Standard and Regulatory Information

Exova has been identified by Corbond Corporation as the third-party organization that operates the field quality assurance program (FQAP) for the products in accordance with CAN/ULC-S705.2-05. Exova can be contacted at (905) 822-4111.

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

Listing Holder

Johns Manville
717-17th Street
Denver, CO 80202-3330
U.S.A.

Telephone: 303-978-2000

Fax: 303-978-2108

Plant(s)

Belgrade, MT, U.S.A.

Disclaimer

This Listing is issued by the Canadian Construction Materials Centre, a program of NRC Construction at the National Research Council of Canada. The Listing must be read in the context of the entire CCMC Registry of Product Evaluations.

Readers must confirm that the Listing is current and has not been withdrawn or superseded by a later issue. Please refer to http://www.nrc-cnrc.gc.ca/eng/solutions/advisory/ccmc_index.html, or contact the Canadian Construction Materials Centre, NRC Construction, National Research Council of Canada, 1200 Montreal Road, Ottawa, Ontario, K1A 0R6. Telephone (613) 993-6189. Fax (613) 952-0268.

NRC has evaluated the material, product, system or service described herein only for those characteristics stated herein. The information and opinions in this Listing are directed to those who have the appropriate degree of experience to use and apply its contents. This Listing is provided without representation, warranty, or guarantee of any kind, expressed, or implied, and the National Research Council of Canada (NRC) provides no endorsement for any evaluated material, product, system or service described herein. NRC accepts no responsibility whatsoever arising in any way from any and all use and reliance on the information contained in this Listing. NRC is not undertaking to render professional or other services on behalf of any person or entity nor to perform any duty owed by any person or entity to another person or entity.

Date modified:
2014-07-15