



Evaluation Listing CCMC 14004-L Halo

Evaluation Issued: 2014-12-09
Revision: 2018-07-26

Preface: Masterformat 07 21 13.06, Expanded Polystyrene Insulation Board and Pipe Covering

Preface Issued: 2012-03-05

Scope

This Evaluation Listing applies to factory-made, rigid expanded polystyrene insulation in the form of pipe covering and boards with or without facings or coatings and made by molding (EPS) or extrusion (XPS) of expandable polystyrene beads. It is intended for use as a thermal insulation in building construction and other applications within the temperature range of -54°C to $+75^{\circ}\text{C}$.

Products covered by one of the standards listed below are also used for sound insulation and in prefabricated thermal insulation systems and composite panels. The performance of systems incorporating these products is not covered by the Evaluation Listing.

The proponent has demonstrated that the product meets at least one of the following standards:

- CAN/ULC-S701-05, “Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering”
- CAN/ULC-S701-11, “Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering”

Products meeting the above standards are classified as Type 1, 2, 3 or 4.

Notes:

1. The molded/expanded polystyrene (EPS) insulation industry subscribes to an accredited certification program as part of their quality assurance. The Listings for EPS insulation products that are published in the Registry are based on the participation of one of the certification organizations accredited by the Standards Council of Canada (SCC).
2. Annex A of CAN/ULC-S701-11 includes requirements for flat, uncoated EPS thermal insulation boards that are to be used in exterior insulation and finish systems (EIFS). Annex A forms a mandatory part of the Standard.

Standard

Table 1. CAN/ULC-S701-05 and CAN/ULC-S701-11¹-Material Properties

Property	Unit	Requirement			
		Type 1	Type 2	Type 3	Type 4
Thermal resistance of a 25-mm-thick specimen	m ² ·°C/W	≥ 0.65	≥ 0.70	≥ 0.74	≥ 0.86
Long-term thermal resistance	–	² and ³			
Water vapour permeance for a 25-mm-thick specimen	ng/(Pa·s·m ²)	≤ 300	≤ 200	≤ 130	≤ 60 (CAN/ULC-S701-05) ⁴ ≤ 90 (CAN/ULC-S701-11) ⁵
Dimensional stability	% linear change	< 1.5	< 1.5	< 1.5	< 1.5
Flexural strength	kPa	≥ 170	≥ 240	≥ 300	≥ 350
Water absorption	% by volume	≤ 6.0	≤ 4.0	≤ 2.0	≤ 0.7
Compressive strength	kPa	≥ 70	≥ 110	≥ 140	≥ 210
Limiting oxygen index	%	≥ 24	≥ 24	≥ 24	≥ 24

Notes to Table 1:

- ¹ As per CAN/ULC-S701-11, where EPS insulation is to be used in EIFS applications, users must refer to Annex A for mandatory additional requirements.
- ² CAN/ULC-S701-05 requires a minimum value of 1.73 m²·°C/W for a 50-mm-thick product. The long-term thermal resistance value must also be reported for the 25-mm- and 75-mm-thick products.
- ³ CAN/ULC-S701-11 requires a minimum value of 1.68 m²·°C/W for a 50-mm-thick product. The long-term thermal resistance value must also be reported for the 25-mm- and 75-mm-thick products.
- ⁴ CAN/ULC-S701-05 requires a maximum value of 60 ng/(Pa·s·m²).
- ⁵ CAN/ULC-S701-11 requires a maximum value of 90 ng/(Pa·s·m²).

Labelling

The product must be marked with the following information:

As per CAN/ULC-S701-05:

- type;
- ULC standard number; and
- manufacturer's name or trademark.

As per CAN/ULC-S701-11:

- ULC Standard number;
- type;
- product thickness;
- thermal resistance per unit of thickness (LTTR for XPS insulation);
- production identification number; and
- manufacturer's name or trademark.

As per both standards, the product shall also be marked with a warning:

“Caution: This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building code.”

National Building Code of Canada (NBC)

NBC References

The NBC 2010 references CAN/ULC-S701-05 in Sentences 9.15.4.1.(1) and 9.25.2.2.(1) and Tables 5.10.1.1. and 9.23.17.2.A. The NBC 2010 does not reference CAN/ULC-S701-11.

Evaluation Listing CCMC 14004-L: Halo

Evaluation Issued:	2014-12-09
Re-evaluation due:	2017-12-09
Revision:	2018-07-26

1. Evaluation

The evaluation of this product is based solely on its certification and listing by QAI conforming to CAN/ULC-S701-11, Type 1, 2, and 3.

2. Description

The product is a Type 1, 2, and 3, moulded/expanded polystyrene (EPS) rigid board thermal insulation.

3. Standard and Regulatory Information

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

Listing Holder

Logix Insulated Concrete Forms Ltd.
199-1917 West 4th Avenue
Vancouver, BC
V6J 1M7

Telephone: 604-734-9244

Plant(s)

Acheson, AB
Chilliwack, BC
Winnipeg, MB
Cobourg, ON

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:
2014-12-11



Expanded Polystyrene Insulation Board and Pipe Covering (Annex)

MasterFormat: 07 21 13.06

Issued: 2016-10-20

Scope

These Evaluation Listings apply to factory-made, rigid expanded polystyrene insulation in the form of pipe covering and boards with or without facings or coatings and made by moulding (EPS) or extrusion (XPS) of expandable polystyrene beads. It is intended for use as a thermal insulation in building construction and other applications within a temperature range of -54°C to $+75^{\circ}\text{C}$.

Products covered by one of the standards listed below are also used for sound insulation and in prefabricated thermal insulation systems and composite panels. The performance of systems incorporating these products is not covered by the Evaluation Listing.

The proponent has demonstrated that the product meets at least one of the following standards:

- CAN/ULC-S701-05, “Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering”
- CAN/ULC-S701-11, “Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering”

Products meeting the above standards are classified as Type 1, 2, 3 or 4.

Notes

The moulded/expanded polystyrene (EPS) insulation industry subscribes to an accredited certification program as part of their quality assurance. The Listings for EPS insulation products that are published in the Canadian Construction Materials Centre (CCMC) Registry are based on the participation of one of the certification organizations accredited by the Standards Council of Canada (SCC).

Annex A of CAN/ULC-S701-11 includes requirements for flat, uncoated EPS thermal insulation boards that are to be used in exterior insulation and finish systems (EIFS). Annex A forms a mandatory part of the standard.

Standard

Table 1 Material Property Standards as per CAN/ULC-S701-05 and CAN/ULC-S701-11¹

Property	Unit	Requirement			
		Type 1	Type 2	Type 3	Type 4
Thermal resistance for 25 mm thickness	$\text{m}^2 \cdot ^{\circ}\text{C}/\text{W}$	≥ 0.65	≥ 0.70	≥ 0.74	≥ 0.86
Long-term thermal resistance (LTTR)	$\text{m}^2 \cdot ^{\circ}\text{C}/\text{W}$	See Table Note 2			
		See Table Note 3			
Water vapour permeance for 25 mm thickness	$\text{ng}/(\text{Pa} \cdot \text{s} \cdot \text{m}^2)$	≤ 300	≤ 200	≤ 130	≤ 60 (CAN/ULC-S701-05)
					≤ 90 (CAN/ULC-S701-11)
Dimensional stability	% linear change	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Flexural strength	kPa	≥ 170	≥ 240	≥ 300	≥ 350
Water absorption	% by volume	≤ 6.0	≤ 4.0	≤ 2.0	≤ 0.7
Compressive strength	kPa	≥ 70	≥ 110	≥ 140	≥ 210
Limiting oxygen index	%	≥ 24	≥ 24	≥ 24	≥ 24

Notes to Table 1:

1. As per CAN/ULC-S701-11, where EPS insulation is to be used in EIFS applications, users must refer to Annex A for mandatory additional requirements.
 2. The requirement of LTTR is applicable to XPS only. CAN/ULC-S701-05 requires a minimum value of $1.73 \text{ m}^2 \cdot ^\circ\text{C}/\text{W}$ for a 50-mm-thick product. The LTTR value must also be reported for the 25-mm- and 75-mm-thick products.
 3. The requirement of LTTR is applicable to XPS only. CAN/ULC-S701-11 requires a minimum value of $1.68 \text{ m}^2 \cdot ^\circ\text{C}/\text{W}$ for a 50-mm-thick product. The LTTR value must also be reported for the 25-mm- and 75-mm-thick products.
-

Labelling

A product that meets the requirements in CAN/ULC-S701-05 must be marked with the following information:

- ULC standard number;
- type; and
- name or trademark of the manufacturer.

A product that meets the requirements in CAN/ULC-S701-11 must be marked with the following information:

- ULC standard number;
- type;
- product thickness;
- thermal resistance per unit of thickness (LTTR for XPS insulation);
- production identification number; and
- name or trademark of the manufacturer.

For both standards the product must also be marked with the warning:

“Caution: This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building code.”

National Building Code (NBC) of Canada**NBC References**

CAN/ULC-S701-11 is referenced in Sentences 9.15.4.1.(1) and 9.25.2.2.(1) and Tables 5.9.1.1., 9.23.17.2.A. and A-9.36.2.4.(1)-D of Division B of the NBC 2015.

CAN/ULC-S701-11 is also referenced in Sentences 9.15.4.1.(1) and 9.25.2.2.(1) and Tables 5.10.1.1., 9.23.17.2.A. and A-9.36.2.4.(1)-D of Division B of the NBC 2010.

CAN/ULC-S701-05 is not referenced in NBC 2010.