

# Expandable Polystyrene Standards, Specifications, and Regulatory Compliance: Canada

---

## I. CAN/ULC-S102.2M

The Canadian National Building Codes provide for the use of foam plastics in both combustible and non-combustible construction with defined thermal barriers. The code requires foam plastics to have a Flame Spread of 500 maximum with defined thermal protection. The test procedure is CAN/ULC-S1.2.2M (a modification of the ASTM E-84 procedure).

Huntsman tests and maintains a listing with Underwriters' Laboratories of Canada to insure that expanded polystyrene building and construction insulation products manufactured from Huntsman's modified expandable polystyrene in accordance with manufacturers' recommendations will comply with the Canadian National Building Code. The referenced ULC File Number for these products is **R19995**, replacing CR1815.

## II. CANADIAN STANDARDS ASSOCIATION

The Canadian Standards Association (CSA) provides an approval program for polymeric raw materials used in electrical equipment in order to reduce the time and cost of testing and certifying electrical equipment of Canadian Electrical Code Part 2 Standards. Under this program, products are tested and listed with CSA in compliance with CSA Standard C22.2 No. 0.11, "Classification of Polymeric Compounds" with reference to CSA Standard C22.2 No. 0.6 "Flammability of Polymeric Materials". The modified grades of expandable polystyrene, 54 and 40, manufactured by Huntsman have been tested and are listed by CSA under CSA File No. LS79031.

## III. STANDARD ULC-S701 THERMAL INSULATION, POLYSTYRENE, BOARDS AND PIPE COVERING (Formerly CAN/CGSB-51.20)

This standard defines the physical properties of expanded polystyrene. Unlike ASTM C578 (used in the United States), this standard does not specify density requirements. In order to confirm conformance and maintain a third party compliance program, Underwriters' Laboratories of Canada provides a "Certificate Service Procedure" which allows for a listing and follow-up service program with Canadian molders and US molders who are marketing into Canada.

## ULC-S701

PROPERTY	UNITS	ASTM	REQUIREMENTS			
			Type 1	Type 2	Type 3	Type 4
Thermal Resistance	m <sup>2</sup> ·°C/W*	C518	0.65	0.70	0.74	0.86
Water Vapor Permeance, Max.	ng/Pa.s.m <sup>2</sup>	E96	300	200	130	60
Dimensional Stability, Max.	% linear change	D2126	1.5	1.5	1.5	1.5
Water Absorption, Max.	% by vol.	D2872	6	4	2	0.7
Compressive Strength, Min.	kPa	D1621	55	110	170	210
Limiting Oxygen Index, Min.	%	D2863	24	24	24	24
Flexural Strength, Min.	kPa	C203	170	240	300	350

\* Values quoted are for 25 mm thickness (0.984-inches).

The information contained herein is provided for general purposes only. By providing the information contained herein, Huntsman, L.L.C. makes no guarantee or warranty, and does not assume any liability with respect to the accuracy or completeness of such information, or the product results in any specific instance and hereby expressly disclaims any implied warranties of merchantability or fitness for a particular purpose, or any other warranties or representations whatsoever, expressed or implied. Nothing contained herein shall be construed as a license to use the products of Huntsman, L.L.C. in any manner that would infringe any patent.