



STYROFOAM™ BRAND CLADMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

1. PRODUCT NAME

STYROFOAM™ Brand
CLADMATE™ Extruded Polystyrene
Foam Insulation

2. MANUFACTURER

Dow Chemical Canada ULC
Dow Building Solutions
450 – 1st St. SW, Suite 2100
Calgary, AB T2P 5H1
1-866-583-BLUE (2583) (English)
1-800-363-6210 (French)
www.dowbuildingsolutions.com

3. PRODUCT DESCRIPTION

BASIC USE

STYROFOAM™ Brand
CLADMATE™ is an extruded
polystyrene foam rigid board
insulation with shiplap edges. It is
designed for use in walls and attics
of new and retrofit applications.

SIZES

Product thicknesses and R-values
are shown in Table 1. Not all
products are available in all areas.
Consult your Dow representative
about other sizes and lead-time
requirements.

4. TECHNICAL DATA

APPLICABLE STANDARDS

STYROFOAM™ Brand
CLADMATE™ Insulation meets
ASTM C578 Type X – Standard
Specification for Rigid Cellular
Polystyrene Insulation. Applicable
standards include:

- C518 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics

- C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- E96 – Standard Test Methods for Water Vapor Transmission of Materials
- D696 – Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C With a Vitreous Silica Dilatometer
- D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics

CODE COMPLIANCE

STYROFOAM™ Brand
CLADMATE™ Insulation complies
with the following codes:

- CAN/ULC S701-97 Type 2
- CCMC 12084-L

PHYSICAL PROPERTIES

STYROFOAM™ Brand
CLADMATE™ Insulation exhibits
the properties and characteristics
indicated in Table 2 when tested as
represented.

Prolonged exposure to
ultraviolet radiation may cause
the surface of STYROFOAM™
Brand CLADMATE™ Insulation to
become faded and dusty. A light-
colored, opaque protective covering
should be used if excessive solar
exposure is expected. The surface
degradation will have no measurable
effect on the insulating value of the
plastic foam unless the deterioration
is allowed to continue until actual
foam thickness is lost. Since dust
would impair the performance of
adhesives and finishes, a dusty
surface should be brushed off
before these products are applied.

ENVIRONMENTAL DATA

STYROFOAM™ Brand
CLADMATE™ Insulation is
hydrochlorofluorocarbon (HCFC)
free with zero ozone-depletion
potential. STYROFOAM™ Brand
CLADMATE™ Extruded Polystyrene
Foam Insulation is reusable in many
applications.

**TABLE 1: SIZES, R-VALUES AND EDGE TREATMENTS FOR
STYROFOAM™ BRAND CLADMATE™ EXTRUDED POLYSTYRENE
FOAM INSULATION**

NOMINAL BOARD THICKNESS ⁽¹⁾	R-VALUE ⁽²⁾⁽³⁾	BOARD SIZE	EDGE TREATMENT
0.5"	2.5	2' x 8'	Shiplap
0.75"	3.75	2' x 8'	Shiplap
1.0"	5.0	2' x 8'	Shiplap
1.4"	7.0	2' x 8'	Shiplap
1.5"	7.5	2' x 8'	Shiplap
2.0"	10.0	2' x 8'	Shiplap
3.0"	15.0	2' x 8'	Shiplap
STYROFOAM™ Brand CLADMATE™ XL			
0.8"	4.0	4' x 8' / 4' x 9'	Shiplap
1.0"	5.0	4' x 8' / 4' x 9'	Shiplap
1.5"	7.5	4' x 8' / 4' x 9'	Shiplap
2.0"	10.0	4' x 8'	Shiplap
1.0"	5.0	4' x 10'	Shiplap

(1) Not all product sizes are available in all regions.
(2) As per CAN/ULC S701-97 (supersedes CAN/CGSB 51.20-M87)
(3) R-values expressed in ft²•h•°F/Btu.

TABLE 2: PHYSICAL PROPERTIES OF STYROFOAM™ BRAND CLADMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

PROPERTY AND TEST METHOD	VALUE
Thermal Resistance per in. (25 mm), ASTM C518 @ 75°F (24°C) mean temp., ft ² •h•°F/Btu (m ² •°C/W), R-value (RSI) ⁽¹⁾ , min.	5.0 (0.88)
Compressive Strength ⁽²⁾ , ASTM D1621, psi (kPa), min.	16 (110)
Water Absorption, ASTM D2842, % by volume, max.	0.9
Water Vapour Permeance ⁽³⁾ , ASTM E96, perm (ng/Pa•s•m ²), max.	3.5 (201)
Maximum Use Temperature, °F (°C)	165 (74)
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F (mm/m•°C)	3.5 x 10 ⁻⁵ (6.3 x 10 ⁻²)

(1) Values are consistent with the criteria of ASTM C578.

(2) Vertical compressive strength is measured at 10 percent deformation or yield, whichever occurs first. Since STYROFOAM™ Brand Extruded Polystyrene Foam Insulations are visco-elastic materials, adequate design safety factors should be used to prevent long-term creep and fatigue deformation. For static loads, 3:1 is suggested. For dynamic loads, 5:1 is suggested. Contact Dow for design recommendations.

(3) Based on 1" (25 mm) thickness.

FIRE PROTECTION

STYROFOAM™ Brand CLADMATE™ Insulation is combustible; protect from high heat sources. Local building codes may require a protective or thermal barrier. For more information, consult MSDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-519-339-3711.

5. INSTALLATION

Boards of STYROFOAM™ Brand CLADMATE™ Insulation are easy to handle, cut and install. Contact a local Dow representative or visit www.dowbuildingsolutions.com for more specific instructions.

6. AVAILABILITY

STYROFOAM™ Brand CLADMATE™ Insulation is distributed through an extensive network.

For more information, call:
1-800-232-2436 (English)
1-800-565-1255 (French)

7. WARRANTY

Not applicable.

8. MAINTENANCE

Not applicable.

9. TECHNICAL SERVICES

Dow can provide technical information to help address questions when using STYROFOAM™ Brand CLADMATE™ Insulation. Technical personnel are available to assist with any insulation project. For technical assistance, call:
1-866-583-BLUE (2583) (English)
1-800-363-6210 (French)

10. FILING SYSTEMS

- www.dowbuildingsolutions.com
- www.sweets.com

www.dowbuildingsolutions.com

Technical Information
1-866-583-BLUE (2583) (English)
1-800-363-6210 (French)

Sales Information
1-800-232-2436 (English)
1-800-565-1255 (French)

IN CANADA
DOW CHEMICAL CANADA ULC
450 – 1st St. SW . Suite 2100
Calgary, AB T2P 5H1

Dow has manufactured STYROFOAM™ Brand Extruded Polystyrene Foam Insulation for use in construction and specialty applications for more than 60 years. Its dense closed-cell structure gives STYROFOAM™ Brand Extruded Polystyrene Foam Insulation excellent moisture resistance, long-term thermal performance and compressive strength. STYROFOAM™ Brand Extruded Polystyrene Foam Insulation is reusable in many applications.

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CAUTION: This product is combustible. Protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the appropriate building code. For more information, consult MSDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-519-339-3711.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mould formation. No material supplier including Dow can give assurance that mould will not develop in any specific system.

