



# 1 PRODUCT NAME

## STYROFOAM CLADMATE Insulation

### 2 Manufacturer

Dow Chemical Canada Inc.  
Dow Building & Construction  
1086 Modeland Road  
Sarnia, ON N7T 7K7  
English: 1-866-583-BLUE (2583)  
French: 1-800-363-6210  
www.dowstyrofoam.com

- ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials
- ASTM D696 – Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics
- CCMC 12084-L
- ASTM D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics
- CAN/ULC S701-97 Type 2

### PHYSICAL/CHEMICAL PROPERTIES

STYROFOAM 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 CLADMATE insulation to become yellow and dusty. A light-colored, opaque protective covering should be used

### 3 Product Description

#### BASIC USE

STYROFOAM\* CLADMATE\* is an extruded polystyrene foam rigid board insulation with shiplap edges. It is designed for use as an exterior sheathing on new and retrofit residential housing. It is also ideally suited for thermally upgrading existing structures.

#### SIZES

Product thicknesses and R-values are shown in Table 1. Not all products are available in all parts of Canada. Consult a Dow representative about sizes and lead-time requirements.

TABLE 1

Sizes of STYROFOAM CLADMATE Insulation		
Thickness, in.	Board Size	R-Value <sup>(1)(2)</sup>
0.75	2' x 8'	3.75
0.8	2' x 8'	4.0
1.0	2' x 8'	5.0
1.1	2' x 8'	5.5
1.4	2' x 8'	7.0
1.5	2' x 8'	7.5
2.0	2' x 8'	10.0
1.0	4' x 8' / 4' x 9'	5.0
1.5	4' x 8' / 4' x 9'	7.5
2.0	4' x 8'	10.0

(1) As per CAN/ULC S-701-97 (Supercedes CAN/CGSB 51.20-M87)

(2) R-values expressed in ft<sup>2</sup>•h•°F/Btu.

### 4 Technical Data

#### APPLICABLE STANDARDS

ASTM International

- ASTM C518 – Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- ASTM D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- ASTM C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions

TABLE 2

Physical Properties of STYROFOAM CLADMATE Insulation	
Property and Test Method	Value
Thermal Resistance <sup>1</sup> per in., ASTM C518 @ 75°F mean temp., ft <sup>2</sup> •h•°F/Btu (m <sup>2</sup> •°C/W) min., R-value (RSI) <sup>2</sup>	5.0 (.88) <sup>2</sup>
Compressive Strength, ASTM D1621, min., at 10% deformation or yield; whichever comes first, psi (kPa)	16 (110)
Water Absorption, ASTM D2842, % by volume, max.	0.9
Water Vapour Permeance, ASTM E96, perms, (ng/Pa•s•m <sup>2</sup> ), max.	1.5 (90)
Maximum Use Temperature, °F (°C)	165 (74)
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F (mm/m•°C)	3.5 x 10 <sup>-5</sup> (6.3 x 10 <sup>-2</sup> )

<sup>1</sup> Based on 1" (25.4 mm) thickness.

<sup>2</sup> R means resistance to heat flow. The higher the R-value or RSI, the greater the insulating power.

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STYROFOAM CLADMATE Insulation

TABLE 3

Chemical Resistance of STYROFOAM CLADMATE Insulation			
Acid, inorganic	Good	Gases, carbon hydroxide (CH <sub>4</sub> )	Good
Acid, organic	Good	Gases, chlorofluorocarbons	Good
Alcohol	Good	Gases, dioxide (O <sub>2</sub> )	Good
Asphalts, water-based	Good	Gases, nitrous hydroxide (NH <sub>3</sub> )	Good
Bases (caustics)	Good	Gases, sulfur dioxide (SO <sub>2</sub> )	Good
Bleach	Good	Mineral oil USP	Excellent
Brines and other salts	Good	Paints, alcohol-based	Good
Cements and mortar	Good	Paints, water-based	Good
Gases, carbon dioxide (CO <sub>2</sub> )	Good	Water	Good

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 the dust would impair the performance of adhesives and finishes, the dusty surface should be brushed off before these products are applied.

For chemical resistance properties of STYROFOAM CLADMATE insulation see Table 3.

**ENVIRONMENTAL DATA**  
STYROFOAM CLADMATE insulation is manufactured with HCFC blowing agents, which have 94 percent less ozone depletion potential than standard CFC blowing agents.

STYROFOAM CLADMATE insulation is reusable in many applications and can be recycled.

## 5 Installation

Boards of STYROFOAM CLADMATE insulation are easy to handle, cut and install.

Contact a local Dow representative or access the literature library at [www.dowstyrofoam.com](http://www.dowstyrofoam.com) for more specific instructions.

## 6 Availability

STYROFOAM CLADMATE insulation is distributed through an extensive network. For product availability or for the name of your local Dow sales representative, call:

English – 1-866-583-BLUE (2583)  
French – 1-800-565-1255

## 7 Warranty

Not applicable.

## 8 Maintenance

Not applicable.

## 9 Technical Services

Dow can provide technical information to help address questions about using STYROFOAM CLADMATE insulation. Technical personnel are available at Dow sales offices to assist with any insulation project. For product literature and technical information, please call our Customer Information Center.

English – 1-866-583-BLUE (2583)  
French – 1-800-565-1255

## 10 Filing Systems

- [www.sweets.com](http://www.sweets.com)
- [www.insulateyourhome.ca](http://www.insulateyourhome.ca)
- [www.dowstyrofoam.ca/4architects](http://www.dowstyrofoam.ca/4architects)

**IN CANADA:**

- For Technical Information (English): **1-866-583-BLUE (2583)**; (French): **1-800-363-6210**
- For Sales Information (English): **1-800-232-2436**; (French): **1-800-565-1255**

**DOW CHEMICAL CANADA INC.**

- Building & Construction • 1086 Modeland Rd. • Sarnia, ON N7T 7K7
- [www.dowstyrofoam.com](http://www.dowstyrofoam.com)

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COMBUSTIBLE: Protect from high heat sources. For more information, consult MSDS and/or call Dow at 1-866-583-BLUE (2583). In an emergency, call Dow (U.S.: 1-989-636-4400) (Canada: 1-519-339-3711). Local building codes may require a protective or thermal barrier. Contact your local building inspector for more information.

NOTE: Building and/or construction practices unrelated to insulation or housewrap could greatly affect moisture and the potential for mold formation. No material supplier, including Dow, can give assurance that mold will not develop in any specific system.



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