



1 PRODUCT NAME

DOW™ Protection Board III

2 Manufacturer

The Dow Chemical Company
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www.dowstyrofoam.ca/4architects

3 Product Description

BASIC USE

DOW™ Protection Board III is an extruded polystyrene foam insulation with plastic film on one side. Designed for use in commercial foundation waterproofing applications, DOW Protection Board III helps protect the waterproofing membrane from damage during backfill. It is recommended for perimeter concrete and masonry walls where waterproofing protection is the primary requirement.

SIZES

Thickness: 1/4" Nominal
Length: 50' Nominal
Width: 4' Nominal
Standard Fan-folded Bundle:
2' x 4' x 10"

4 Technical Data

APPLICABLE STANDARDS

- ASTM International
- ASTM C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
 - 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 E96 – Standard Test Methods for Water Vapor Transmission of Materials

CODE COMPLIANCE

DOW™ Protection Board III complies with the following codes:

- Meets IBC/IRC requirements for foam plastic insulation; see ICC-ES NER-699
- BOCA-ES RR 21-02
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate U589; UL Fire Resistance Directory; UL Fire Classified Construction No. 260; UL Fire Classified No. 440; meets UL 1256

Contact your Dow sales representative or local authorities for state/provincial and local building code requirements and related acceptances.

PHYSICAL/CHEMICAL PROPERTIES

DOW™ Protection Board III exhibits the properties and characteristics indicated in Tables 1 and 2 when tested as represented.

U.S. PROPERTY CHART TABLE 1

Physical Properties of DOW™ Protection Board III	
Property and Test Method	Value
Thermal Resistance at nominal 1/4" thickness, ASTM C518 @ 75°F mean temp., ft ² •h•°F/Btu, R-value ⁽¹⁾ , min.	1.0
Compressive Strength ⁽²⁾ , ASTM D1621, psi, min.	8
Water Absorption, ASTM C272, % by volume, max.	0.2
Water Vapor Permeance ⁽³⁾ , ASTM E96, perm, max.	0.8
Maximum Use Temperature, °F	165

(1) Values are consistent with the criteria of ASTM C578 and the FTC R-value rule (16 CFR Part 460). R means resistance to heat flow. The higher the R-value, the greater the insulating power.
(2) Vertical compressive strength is measured at 10 percent deformation or yield, whichever occurs first.
(3) For 1/4" thickness; perm-inches.

CANADA PROPERTY CHART TABLE 2

Physical Properties of DOW™ Protection Board III	
Property and Test Method	Value
Thermal Resistance at nominal 1/4" (6 mm) thickness, ASTM C518 @ 75°F (24°C) mean temp., ft ² •h•°F/Btu (m ² •°C/W), R-value ⁽¹⁾ (RSI), min.	1.0 (0.17)
Compressive Strength ⁽²⁾ , ASTM D1621, psi (kPa), min.	8 (55)
Water Absorption, ASTM D2842, % by volume, max.	0.8
Maximum Use Temperature, °F (°C)	165 (74)

(1) Values are consistent with the criteria of ASTM C578. R means resistance to heat flow. The higher the R-value or RSI, the greater the insulating power.
(2) Vertical compressive strength is measured at 10 percent deformation or yield, whichever occurs first.

Exposure to ultraviolet radiation in sunlight for several weeks will cause the surface of DOW™ Protection Board III to become yellow 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 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 DOW Protection Board III, see Table 3.

ENVIRONMENTAL DATA

DOW™ Protection Board III is manufactured with HCFC blowing agents, which have 94 percent less ozone depletion potential than standard CFC blowing agents.

DOW Protection Board III is reusable in many applications.

5 Installation

Boards of DOW™ Protection Board III are easy to handle, cut and install.

Prior to installing DOW Protection Board III, verify that the substrate is free of sharp projections and that the waterproofing or damp-proofing is properly cured. To install

DOW Protection Board III:

- Begin by unfolding bundles and apply by hanging or adhering to the structure; butt edges tightly.
- Adhere to structure by pressing into “tacky” cured waterproof or damp-proof coating or by using a compatible adhesive on fully cured coating.
- Place folds at corners or transition points to provide continuous board installation and protection.
- Trim board and fit tightly around protrusions.
- Carefully place backfill or other covering to avoid dragging or moving the installed protection board.

6 Availability

DOW™ Protection Board III 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 DOW™ Protection Board III. 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.dowstyrofoam.com/architect
- www.dowstyrofoam.ca/4architects
- www.sweets.com

TABLE 3

Chemical Resistance ⁽¹⁾ of DOW™ Protection Board III			
Acid, inorganic, weak	Excellent	Hydrocarbons	Not recommended
Acid, inorganic, strong	Excellent	Salts	Excellent
Acid, organic, weak	Excellent	Insecticides	Not recommended
Acid, organic, strong	Good	Kerosene	Poor
Bases	Excellent	Mineral oil USP	Excellent
Alcohols, including isopropyl alcohol	Excellent	Naphtha (VMP)	Not recommended
Methyl ethyl ketone	Not recommended	Turpentine	Not recommended
Polyglycols, including propylene glycol	Excellent	Beer	Good
		Gasoline	Not recommended
		Fruit juices	Good

(1) Explanation of ratings:

Excellent = The plastic was unaffected for the duration of the test.

Good = A very slight clouding or discoloration of the plastic.

Poor = Considerable changes in plastic during exposure.

Not recommended = Severe attack of the plastic. Became soft and unusable after a few hours of exposure.

NOTE: This table should be used as a guide only. For design purposes, specific test data on the intended application may be needed.

IN THE U.S.:

- For Technical Information: **1-866-583-BLUE (2583)**
- For Sales Information: **1-800-232-2436**

THE DOW CHEMICAL COMPANY

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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 1-989-636-4400.

Building and/or construction practices unrelated to building materials 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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