Dryvit

DSC131

EPS and GPS Insulation Board

SPECIFICATIONS
for Canada

TREMCO
Construction Products Group

Tremco CPG Inc.
3735 Green Road
Beachwood, OH 44122

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PART 1 SCOPE

1.1 SUMMARY

A. This specification covers the type, physical properties and dimensions of Expanded Polystyrene Insulation Board intended for use in Dryvit Exterior Insulation and Finish Systems (EIFS) in Canada.

B. The use of the Expanded Polystyrene Insulation Board covered by the specification is regulated by building codes.

PART 2 APPLICABLE DOCUMENTS

2.1 STANDARDS

A. ASTM C165 – Standard Test Method for Measuring Compressive Properties of Thermal Insulations

B. ASTM C177 – Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus

C. ASTM C203 – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation

D. ASTM C303 – Standard Test Method for Dimensions and Density of Preformed Block and Board Type Thermal Insulation

E. ASTM C518 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

F. ASTM C550 – Standard Test Method for Measuring Trueness and Squareness of Rigid Block and Board Thermal Insulation

G. ASTM D618 – Standard Practice for Conditioning Plastics for Testing

H. ASTM D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics

I. ASTM D1623 – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastic

J. ASTM D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging

K. ASTM D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics

L. ASTM D2863 – Standard Test Method for Measuring the Minimum Oxygen Concentration of Support Candle-Like Combustion of Plastics (Oxygen Index)

M. ASTM E29 – Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

N. ASTM E96/E96M – Standard Test Methods for Water Vapor Transmission of Materials

O. CAN/ULC-S102.2 – Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies

P. CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene Boards

Q. CAN/ULC-S773 –Standard for Thermal Insulation Terminology

2.2 TREMCO CPG, INC

A. Tremco CPG Inc. Requirements for Insulation Board Suppliers as per letter of approval provided to each individual supplier.

B. Hold Harmless and Indemnification Agreement for Insulation Board Suppliers.

2.3 QUALITY CONTROL STANDARDS REQUIREMENTS

A. Quality Control Manual and Inspection Procedures for Molders Supplying Tremco CPG Inc.

B. CAN/ULC-S701 Annex B – Standard for Thermal Insulation, Polystyrene Requirements for Use in Exterior Insulation and Finish Systems.

PART 3 TERMINOLOGY

3.1 DESCRIPTION OF TERMS SPECIFIC TO THIS SPECIFICATION

A. Dryvit Exterior Insulation and Finish System (EIFS) - Non-load bearing, exterior wall cladding system that consists of a liquid-applied water-resistive barrier, an insulation board attached either adhesively or mechanically, or both, to the substrate; an integrally reinforced base coat; and a textured protective finish coat.

B. EPS - Expanded Polystyrene Insulation Board, as per Canadian Standard CAN/ULC-S701 including Annex B.

C. GPS - Graphite Enhanced Expanded Polystyrene Insulation Board, as per Canadian Standard CAN/ULC-S701 including Annex B.

PART 4 CLASSIFICATION

4.1 TYPE 1

A. This specification covers Type 1 EPS and GPS insulation board (as per Canadian Standard CAN/ULC-S701) intended for use in Dryvit Exterior Insulation Finish System (EIFS).

PART 5 MATERIALS AND MANUFACTURE

5.1 INSULATION BOARD

A. Insulation board shall be molded closed cell in compliance with CAN/ULC-S701 Type I, including Annex B. The boards shall be covered by Quality Control Manual and Inspection Procedures for Molders Supplying Tremco CPG Inc.

B. Insulation Board shall meet the oxygen index, flammability and smoke development requirements of this specification. See Table 1. The boards shall be covered by third party certification of flame spread and smoke development.

PART 6 PHYSICAL REQUIREMENTS

6.1 INSPECTION REQUIREMENTS

A. In accordance with the Third Party Certification and Quality Assurance Program. Third Party certification shall include CAN/ULC-S701 including Annex B, and flame spread/smoke development.

B. As otherwise deemed necessary by Tremco CPG, Inc.

C. Physical properties shall be in accordance with Table 1. Tensile strength values are only required to be evaluated at the beginning of the program.

6.2 QUALIFICATION REQUIREMENTS

A. All dimensional requirements are described in Section 7.

B. All workmanship, finish and appearance requirements are described in Section 8.

C. Combustibility Characteristics - Insulation board is an organic material and is, therefore, combustible. It should not be exposed to flames or other ignition sources. The values obtained by CAN/ULC-S102.2 do not necessarily indicate or describe the fire risk of the materials in end use configuration and are used in this specification primarily to distinguish between insulation formulated with flame retardants and those not so formulated.

D. Molded billets shall be dimensionally stable prior to being cut into boards or special shapes.

1. Molded billets shall be conditioned in accordance with Section 6.2.D.1.a, 6.2.D.1.b, 6.2.D.1.c or 6.2.D.1.d.
    a. Molded billets shall be aged (air dried) in ambient conditions for a minimum of six (6) weeks.
    b. Molded billets shall be heat dried for a minimum of five (5) days at a constant temperature of 60°C (140°F).
    c. Molded billets shall be air dried at ambient conditions for a minimum of 12 days when the billets are manufactured using low pentane EPS resin (<4.5% pentane) and vacuum molding technology.
    d. Molded billets shall be air dried at ambient conditions for a minimum of 18 days when the billets are manufactured using full pentane resin (nominal 6% pentane) and using vacuum molding technology.

NOTE: Suppliers furnishing insulation board or shapes conditioned under CAN/ULC-S701 Annex B shall advise Tremco CPG, Inc. and the Third-Party Certification and Quality Assurance Agency in writing. The Block Molders plant shall be inspected by the Third-Party Certification and Quality Assurance Agency and approved by Tremco CPG, Inc. prior to the use of this conditioning method.

PART 7 DIMENSIONS AND PERMISSIBLE VARIATIONS

7.1 DIMENSIONS

A. Insulation board covered by this specification shall conform to the nominal dimensions in Table 1.

7.2 DIMENSIONAL TOLERANCES:

A. Length: +/- 1.6 mm (+/- 1/16 in)

B. Width: +/- 1.6 mm (+/- 1/16 in)

C. Thickness: +/- +/- 1.6 mm (1/16 in)

7.3 EDGE TRUENESS

A. Unless otherwise specified and approved by Tremco CPG, Inc. insulation board shall be furnished with true edges. Edges shall not deviate more than 0.8 mm (1/32 in) in 305 mm (12 in).

7.4 FACE FLATNESS

A. Insulation board shall be furnished flat and shall not exhibit any bowing of more than 0.8 mm (1/32 in) in the length.

7.5 SQUARENESS

A. Insulation board shall not deviate from squareness by more than 0.8 mm (1/32 in) in 305 mm (12 in) of total length or width.

PART 8 WORKMANSHIP, FINISH, AND APPEARANCE AT TIME OF DELIVERY

8.1 DEFECTS

A. Insulation board shall have no defects that will adversely affect its service qualities. It shall be of uniform texture and free from foreign inclusions, broken edges or corners, slits or objectionable odors.

8.2 CRUSHING AND DEPRESSION

A. Insulation board shall have no crushed or depressed areas on any surface exceeding 1.6 mm (1/16 in) in depth on more than 5% of the total surface area.

8.3 VOIDS

A. Insulation board shall have no more than 8 voids having dimensions larger than 3.2 mm (1/8 in) x 3.2 mm (1/8 in) per 0.74 m^2(8 ft^2) of surface area.

8.4 PROJECTIONS

A. Insulation board shall be free of surface projections or wire marks in excess of 1.6 mm (1/16 in).

PART 9 SAMPLING AND INSPECTION

9.1 INSPECTION

A. Sampling shall be in accordance with the Third-Party Certification and Quality Assurance Program. or

B. As otherwise deemed necessary by Tremco CPG, Inc.

PART 10 REJECTION

10.1 MATERIAL THAT FAILS TO CONFORM

A. Material that fails to conform to the requirements of this specification shall be rejected.

B. Rejection shall be reported in writing within five (5) days to the producer or supplier and Tremco CPG, Inc.

C. The insulation board supplier may resubmit rejected materials after removal of that portion not conforming to this specification.

D. The reinspection and resubmittal shall be completed withing three (3) days of notification by telephone or written communication.

PART 11 CERTIFICATION

11.1 UPON REQUEST

A. Upon request, certification of compliance with this specification shall promptly be forwarded to Tremco CPG, Inc. (Dryvit) or their designee.

PART 12 PRODUCT PACKAGING AND MARKING

12.1 PACKAGING

A. All insulation boards shall be packaged in polyethylene bags as required by Tremco CPG, Inc.

B. Alternate methods of packaging shall be submitted to Tremco CPG, Inc. and approved in writing prior to use.

12.2 MARKING

A. All packaging shall be clearly marked with the manufacturer’s name, the certifier’s name, the ULC Standard number, it’s type number, thermal resistance per unit of thickness, the lot number, the product name and size, and certification markings.

B. All packaging shall be clearly marked with the artwork provided by Tremco CPG, Inc.

PART 13 INSTALLATION

13.1 GPS INSULATION

A. GPS insulation boards must be both adhesively fastened and mechanically fastened as per Technical Bulletin D.26.07 Rev. 05/11/26 and the appropriate Outsulation System Application Instructions.

PART 14 INDEMNIFICATION

14.1 AGREEMENT

A. Insulation board supplier shall agree to indemnify and hold harmless Tremco CPG, Inc. for any loss, cost, or damage incurred by Tremco CPG, Inc. as a result of the Insulation Board Supplier's and/or the insulation board's failure to meet these specifications.

Table 1 Properties and Requirements of EPS and GPS for Use in Dryvit EIFS

Classification (CAN/ULC-S701)	Type 1
Density, kg/m³ (lb/ft³)	15.2 (0.95) min.
	20.0 (1.25) max.
Thermal Resistance (R-value) of 25 mm (1.00 in) thickness, min. K*m²/W (F*ft²*h/Btu) 4.4 °C (40 °F) 23.9 °C (75 °F)	 EPS: 0.70 (4.00); GPS: 0.86 (4.90) EPS: 0.63 (3.60); GPS: 0.83 (4.70)
Thermal Conductance (U-value) of 25 mm (1.00 in) thickness, max. K*m²/W (F*ft²*h/Btu) 4.4 °C (40 °F) 23.9 °C (75 °F)	 EPS: 1.43 (0.25); GPS: 1.16 (0.20) EPS: 1.59 (0.28); GPS: 1.20 (0.21)
Compressive Strength, min., kPa (psi)	70 (10.0)
Tensile Strength, min., kPa (psi)	103 (15.0)
Flexural Strength, min., kPa (psi)	170 (25.0)
Water Vapor Permanence of 25 mm (1.00 in) thickness, max., ng/Pa*s*m² (perm)	300 (5.0)
Water Absorption by total immersion, max., volume %	6.0
Dimensional stability (change in dimensions), max. %	1.5
Oxygen index min., volume %	24.0
Flame spread, max.	500
Board Thickness Maximum mm (in) Minimum mm (in)	 152 (6) when specified in non-combustible construction requiring S134 compliance 50.8 (2)
Board width, max., mm (in)	610 (24)
Board length, max. , mm (in)	1219 (48)

APPENDIX A – CERTIFICATION

(To be typed on supplier's letterhead)

Tremco CPG, Inc.
3735 Green Road,
Beachwood, OH 44122

Attention: _____

Re: Insulation Board Certification

Project Name:_____

Address:_____

City, Province, Postal Code:_____

Type of Expanded Polystyrene: ☐ EPS ☐ GPS

To Whom It May Concern:_____

This letter is to certify that the Expanded Polystyrene Insulation Board Supplied to the above-referenced project meets the requirements of the current edition of the "Dryvit Specification for Expanded Polystyrene EPS and GPS Insulation Board" published by Tremco CPG, Inc.

Company Name: _____

Owner, Principal, or Corporate Officer: _____

Authorized Signature:_____

Title: _____

Date: _____

cc: Distributor, Contractor