SPECIFICATIONS

EPS and GPS Insulation Board

DS131

1. SCOPE

1.1 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).

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

2. APPLICABLE DOCUMENTS

2.1 ASTM Standards:

- C578 - Standards Specification for Rigid, Cellular Polystyrene Thermal Insulation
- D1623 - Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastic
- D2863 - Standard Test Method for Measuring the Minimum Oxygen Concentration of Support Candle-Like Combustion of Plastics (Oxygen Index)
- E84 - Standard Test Method for Surface Burning Characteristics of Building Materials
- E2430 - Standard Specification for Expanded Polystyrene (EPS) Thermal Insulation Boards for use in Exterior Insulation and Finish Systems (EIFS)

2.2 Tremco CPG Inc. Requirements for Insulation Board Suppliers

2.3 Quality Control Standards Requirements

A. Quality Control Manual and Inspection Procedures for Molders Supplying Tremco CPG Inc.
B. ICC-ES AC12 - Acceptance Criteria for Foam Plastic Insulation

2.4 Hold Harmless and Indemnification Agreement for Insulation Board Suppliers

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 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, which is affixed to the substrate and creates a layer of continuous insulation.
C. GPS - Graphite Expanded Polystyrene Insulation Board, which is affixed to the substrate and creates a layer of continuous insulation.

4. CLASSIFICATION

4.1 This specification covers Type 1 Expanded Polystyrene Insulation Board (as defined by ASTM C578) intended for use in Dryvit Exterior Insulation Finish System (EIFS).

5. ORDERING INFORMATION

5.1 Standard board sizes. The following are nominal dimensions. See Section 8 for dimensions and permissible variations. Specify:

A. Thickness: 1 in (25.4 mm) minimum

B. Width: 24 in (610 mm)
C. Length: 48 in (1219 mm)

5.2 Number of pieces and thickness required

5.3 Job name

5.4 Job address

5.5 Shipping address

5.6 Required delivery date

5.7 Contractor name

5.8 Contractor address

5.9 Billing information

5.10 Certificate of Compliance

5.11 Special shapes

5.1.A In addition to the ordering information required in Sections 5.1 through 5.10 above, dimensioned drawings or sketches shall be furnished for all special shapes.

5.1.B All requests for insulation boards larger than the standard size or thicker than 4 in (102 mm) listed in Sections 5.1.2 and 5.1.3 above must be approved in writing by Dryvit Engineering Services Department.

5.1.C EIF System to be used.

6. MATERIALS AND MANUFACTURE

6.1 Insulation board shall be molded closed cell in compliance with ASTM E2430 and ASTM C578 Type I. The boards shall be covered by Quality Control Manual and Inspection Procedures for Molders Supplying Tremco CPG Inc. or an ICC-ES report demonstrating compliance to the requirements of ICC-ES AC10.

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

7. PHYSICAL REQUIREMENTS

7.1 Inspection Requirements

A. In accordance with the Third Party Certification and Quality Assurance Program. Third Party certification shall include ASTM C578, ASTM E 2430, and flame spread/smoke development.
B. As otherwise deemed necessary by Tremco CPG, Inc.
C. Physical properties shall be in accordance with Table I. Tensile strength values are only required to be evaluated at the beginning of the program.

7.2 Qualification Requirements

A. All dimensional requirements are described in Section 8.
B. All workmanship, finish and appearance requirements are described in Section 9.
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 ASTM D2863 and ASTM E84/UL723 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. Molded billet conditioning shall comply with ASTM E2430.

7.3 **NOTE: Suppliers furnishing insulation board or shapes conditioned under ASTM E2430 Section 4.1.9.2 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.**

8. DIMENSIONS AND PERMISSIBLE VARIATIONS

8.1 Insulation board covered by this specification shall conform to the nominal dimensions in Section 5.1.

8.2 Dimensional Tolerances:

A. Length: +/- 1/16 in (+/- 1.6 mm)
B. Width: +/- 1/16 in (+/- 1.6 mm)
C. Thickness: ¾ in (19 mm) to 1 in (25.4 mm) + 1/16 in (+/- 1.6 mm); greater than 1 in (25.4 mm) +/- 1/16 in (+/- 1.6 mm)

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

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

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

9. WORKMANSHIP, FINISH, AND APPEARANCE AT TIME OF DELIVERY

9.1 Defects - 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.

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

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

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

10. SAMPLING AND INSPECTION

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

10.2 As otherwise deemed necessary by Tremco CPG, Inc.

11. REJECTION

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

A. Rejection shall be reported in writing within five (5) days to the producer or supplier and Tremco CPG, Inc.
B. The insulation board supplier may resubmit rejected materials after removal of that portion not conforming to this specification.
C. The reinspection and resubmittal shall be completed withing three (3) days of notification by telephone or written communication.

12. CERTIFICATION

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

NOTE: See Appendix A for sample certification format.

13. PRODUCT MARKING

13.1 Insulation boards shall be marked (stamped) in accordance with the requirements of this section.

A. Each board shall be marked on one edge.
B. In addition, one board in each package shall be marked on both faces.
C. Stamp design and layout shall be in accordance with the requirements of the applicable building code.

NOTE: Suppliers may add their company name if they so desire.

14. PACKAGING

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

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

14.3 The supplier shall mark the lot number on each package as required.

15. INDEMNIFICATION

15.1 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.

16. TABLE I

16.1 Properties and Requirements of EPS and GPS for Use in Dryvit EIFS

Properties and Requirements of EPS and GPS for Use in Dryvit EIFS	
Classification (ASTM C578)	Type 1
Density, lb/ft³ (kg/m³)	0.95 (15.2) min.
	1.25 (20.0) max.
Thermal Resistance (R-value) of 1.00 in (25 mm) thickness, min. F*ft²*h/Btu (K*m²/W) 40 °F (4.4 °C) 75 °F (23.9 °C)	 EPS: 4.00 (0.70); GPS: 4.90 (0.86) EPS: 3.60 (0.63); GPS: 4.70 (0.83) See Note **
Thermal Conductance (U-value) of 1.00 in (25 mm) thickness, max. Btu/F*ft²*h (W/ K*m²) 40 °F (4.4 °C) 75 °F (23.9 °C)	 EPS: 0.25 (1.43); GPS: 0.20 (1.16) EPS: 0.28 (1.59); GPS: 0.21 (1.20) See Note **
Compressive Strength, min., psi (kPa)	10.0 (69)
Tensile Strength, min., psi, (kPa)	15.0 (103)
Flexural Strength, min., psi, (kPa)	25.0 (172)
Water Vapor Permanence of 1.00 in (25 mm) thickness, max., perm (ng/Pa*s*m²)	5.0 (287)
Water Absorption by total immersion, max., volume %	4.0
Dimensional stability (change in dimensions), max. %	2.0
Oxygen index min., volume %	24.0
Flame spread, max.	25.0
Smoke Development, max.	450
Board Thickness Maximum Minimum	 See Note* ¾ in (19 mm)
Board width, max.	24 in (610 mm)

Properties and Requirements of EPS and GPS for Use in Dryvit EIFS	
Board length, max.	48 in (1219 mm)

***NOTE: Contact Tremco Dryvit Department for thicknesses exceeding 4 inches.**

****NOTE: For insulation thicker than 1" (25mm),**

- **Multiply the R-value by board thickness (inches) for imperial; multiply the R-value by (thickness (mm) divided by 25mm) for metric**
- **Divide the U-value by the board thickness (inches) for imperial, and divide the U-value by (thickness (mm) divided by 25mm) for metric**

17. APPENDIX A

(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, State, Zip:_____
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

The information contained in this specification conforms to Tremco CPG, Inc.'s requirements as of the date of publication of this document. To ensure that you are using the latest, most complete information, contact Tremco CPG, Inc.
Tremco CPG, Inc.
3735 Green Road,
Beachwood, OH 44122
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