Designation: E 2568 – 07

Standard Specification for PB Exterior Insulation and Finish Systems [1]

This standard is issued under the fixed designation E 2568; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers PB Exterior Insulation and Finish Systems (EIFS) defined as an exterior, non-bearing wall covering providing a weather-resistant exterior wall envelope on walls required to be combustible or noncombustible, fire-resistance-rated or nonfire-resistance-rated. Further, PB EIFS is a system described as being applied over insulation board, an adhesive or mechanical attachment of the insulation board to a substrate, or both, glass fiber reinforcing mesh, a base coat on the face of the insulation board, and a textured protective finish coat.

1.2 specification does not cover Class PB EIFS with drainage.

1.3 This specification qualifies EIFS products for use in normal service conditions and is not for evaluating in service EIFS installations.

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:* [2]

B 117 Practice for Operating Salt Spray (Fog) Apparatus

C 297/C 297M Test Method for Flatwise Tensile Strength of Sandwich Constructions

C 578 Specification for Rigid, Cellular Polystyrene Thermal Insulation

D 2247 Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity

E 84 Test Method for Surface Burning Characteristics of Building Materials

E 119 Test Methods for Fire Tests of Building Construction and Materials

E 330 Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

E 331 Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference

E 631 Terminology of Building Constructions

E 2098 Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for Use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to a Sodium Hydroxide Solution

E 2110 Terminology for Exterior Insulation and Finish Systems (EIFS)

E 2134 Test Method for Evaluating the Tensile-Adhesion Performance of an Exterior Insulation and Finish System (EIFS)

E 2485 Test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water Resistive Barrier Coatings

E 2486 Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)

G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials (Discontinued 2001)[3]

G 26 Practice for Operating Light-Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials (Discontinued 2001)[3]

G 153 Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials

G 155 Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials

2.2 *NFPA Standards:*[4]

ANSI/NFPA 268 Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source

ANSI/NFPA 285 Standard Fire Test Method for the Evaluation of Fire Propagation Characteristics of Exterior, Nonload-bearing Wall Assemblies Containing Combustible Components

[1] This test method is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.58 on Exterior Insulation and Finish Systems (EIFS).

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Withdrawn.

[4] Available from National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-7471, http://www.nfpa.org.

3. Terminology

3.1 Definitions are in accordance with Terminology E 2110 unless otherwise specified.

3.2 *Definitions of Terms Specific to This Standard:*

3.3 *EIFS-related construction*, *n*—construction that works in conjunction with the EIFS, but is not part of the EIFS.

3.4 *class PB EIFS*, *n*—EIFS where the base coat varies in thickness depending upon the number of layers, or thickness of reinforcing mesh. The reinforcing mesh is glass fiber mesh that is encapsulated by the base coat per EIFS manufacturer recommendations. Protective finish coats, of various thicknesses in a variety of textures and colors, are applied over the base coat.

4. Materials and Manufacture

4.1 *Product Description*—The material and specifications shall be as specified by the selected EIFS manufacturer and shall be defined as in Terminology E 2110 except as modified herein.

5. Performance Requirements

5.1 The system and its components shall meet or exceed the performance standards described in 5.2-5.7 of this specification.

5.2 *Performance*:

5.2.1 System performance shall be in conformance with the minimum properties listed in Table 1.

5.3 Component performance shall be in conformance with Table 2.

5.4 *Fire Performance*:

5.4.1 System fire performance shall be in conformance with Table 3 as required.

5.5 Component fire performance shall be in accordance with Table 4.

5.6 Structural performance shall be in conformance with Table 5.

5.7 Impact shall be in conformance with Table 6.

6. Inspection

6.1 Materials supplied by the manufacturer shall be supplied to the site location in original unopened containers with labels intact. Upon arrival, the materials shall be inspected for damage, and the manufacturer notified of any discrepancies. Unsatisfactory materials shall not be used.

7. Packaging and Package Marking

7.1 A description of the method of packaging and field identification of the material shall include the following:

7.1.1 Name and address of the manufacturer.

7.1.1.1 Identification of components,

7.1.1.2 Lot or batch number,

7.1.1.3 Quantity of material in the packaged mix,

7.1.1.4 Storage instructions,

7.1.1.5 Pot life,

7.1.1.6 Expiration date (when applicable), and

7.1.1.7 The name of the accredited inspection agency (when applicable).

8. Keywords

8.1 adhesive; basecoat; Class PB; EIFS; Exterior Insulation and Finish System; system; textured finish; thermal insulation board

TABLE 1 System Performance Tests

Characteristic	Test Method	Minimum Properties
Accelerated weathering	G 153[A] or G 155[BC]	No deleterious effects[D]) after 2000 hours when viewed under 5× magnification.
Freeze/thaw	E 2485 (Formerly EIMA Std. 101.01)	No deleterious effects[D]) when viewed under 5× magnification
Salt spray resistance	B 117	No deleterious effects[D]) at 300-hour exposure period
Tensile bond adhesion	E 2134 or C 297/C 297M	No failure in the adhesive coat, base coat or finish coat. The insulation board shall fail cohesively except that 25 % adhesive failure is acceptable. For tested values of 103 kPa (15 psi) or greater, adhesive failure up to 100 % is acceptable.
Water penetration	E 331	The exterior wall envelope design shall be considered to resist wind-driven rain where the results of testing indicate that water did not penetrate control joints in the exterior wall envelope, joints at the perimeter of openings or intersections of terminations with dissimilar materials after 2 hours of water application at a pressure differential of 299 Pa (6.24 psf).
Water resistance	D 2247	No deleterious effects[D]) at 14- day exposure

[A] formerly specified in Test Method G 23

[B] Formerly specified in Test Method G 26

[C] Due to differences in spectral power distribution, results form G 155, Cycle 1 and G 153, Cycle 1 cannot be directly compared.

[D] No deleterious effects; no cracking, checking, crazing, erosion, rusting, blistering, peeling, or delamination.