

**Molders Association**

EPS Molders Association
1298 Cronson Blvd.
Crofton, MD 21114
Phone: (800) 607-3772
Fax: (410) 451-8343
www.epsmolders.org

This MANU-SPEC™ utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat™*, *SectionFormat™* and *PageFormat™*. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets (); delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies Expanded Polystyrene Insulation (EPS) for use in a variety of construction applications. This product is manufactured by a variety of manufacturers and is represented by the EPS Molders Association. For applications other than conventional building insulation, this document should be edited to suit project requirements. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 07210
BUILDING INSULATION
(EXPANDED POLYSTYRENE INSULATION)

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Expanded Polystyrene (EPS) Insulation used as building insulation.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard. It is a listing of all references used in this section.

1.02 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to the extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- B. American Society for Testing and Materials (ASTM):
1. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. Factory Mutual Research Corporation (FMRC):
1. Factory Mutual Research Corporation Approval Guide (current edition). Contact manufacturer for approval standard and number.

1.03 DEFINITIONS

- A. Special definitions that apply to this section include:
1. EPS Board: Expanded polystyrene board insulation product specifically manufactured and recommended by its

manufacturer for building insulation applications, based on its R-value and other physical properties when tested in accordance with ASTM C578.

Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties required to link components of a system together and to interface with other systems.

1.04 SYSTEM DESCRIPTION

- A. Design Requirements: Provide products and systems that have been manufactured, fabricated and installed to meet the following criteria:
 - 1. (Specify system design criteria.).
- B. Performance Requirements: Provide products and systems that have been manufactured, fabricated and installed to meet the following criteria:
 - 1. (Specify system performance criteria.).

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.05 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit manufacturer's product data and installation instructions.
- C. Shop Drawings: Provide drawings indicating (Specify requirements for shop drawings.).
- D. Quality Assurance/Control Submittals: Submit the following:
 - 1. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.
- E. Closeout Submittals: Submit the following:
 - 1. Warranty documents specified herein.

Specifier Note: Article below should include statements of prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 1 Quality Assurance Section.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.

- B. Regulatory Requirements and Approvals: (Specify applicable requirements of regulatory agencies.).
 - 1. (Code agency name).
 - a. (Report or approval number).
- C. Certifications:
 - 1. Provide third party certification for testing, inspection and review of product production practices for compliance with ASTM C578.

Specifier Note: Delete subparagraph below if not applicable to project.

- 2. Underwriters Laboratories, Inc. (UL):

- a. UL Building Materials Directory.
- b. UL Roofing Materials & Systems Directory.
3. Factory Mutual Research Corporation (FMRC) Approval: Comply with FMRC Approval Guide. Contact manufacturer for approval standard and number.

Specifier Note: Retain paragraph below if mock-up is required.

- D. Mock-Ups: (Specify requirements for mock-up.).
 1. Subject to acceptance by owner, mock-up may be retained as part of finish work.
 2. If mock-up is not retained, remove and properly dispose of mock-up.

Specifier Note: Retain paragraph below if preinstallation meeting is required.

- E. Preinstallation Meetings: (Specify requirements for meeting.).

Specifier Note: Article below should include specific protection and environmental conditions required during storage. Coordinate article below with Division 1 Product Requirements Section.

1.07 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Section.
- B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
 1. Prolonged exposure to sunlight will cause slight discoloration and surface dusting of EPS insulation.
 2. EPS insulation exposed to moisture should be replaced or thoroughly dried prior to application of finish or covering materials.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section. Use this article to require special or extended warranty or bond covering the work of this section.

1.08 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official, for insulation R-value when tested according to ASTM C578. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

Specifier Note: Coordinate subparagraph below with manufacturer's warranty requirements.

1. Warranty Period: (Insert years.) beginning with date of substantial completion.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 EPS INSULATION BOARD



Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain, edit or delete paragraph below to suit project requirements and specifier practice.

- A. Manufacturer: EPS Molders Association.
 - 1. Contact: 1298 Cronson Blvd., Crofton, MD 21114; Telephone: (800) 607-3772; Fax: (410) 451-8343; website: www.epsmolders.org.
- B. Proprietary Products/Systems: EPS insulation boards, including the following:
 - 1. Flat Stock Board:
 - a. Material Description: Rigid, closed cell, expanded polystyrene (EPS) board stock.
 - b. Material Standard: Comply with ASTM C578.
 - c. Thickness: (Specify thickness).
 - d. Nominal Density: (1.0 pcf (Type I)) (1.25 pcf (Type VIII)) (1.5 pcf (Type II)) (2.0 pcf (Type IX)).
 - e. Flamespread Index (ASTM E84): Contact manufacturer for test results.
 - f. Smoke Development Index (ASTM E84): Contact manufacturer for test results.
 - g. Facing: (Unfaced) (Foil faced (aluminum kraft paper laminate)) (Poly faced (polyethylene skin kraft paper laminate)).

Specifier Note: Edit Article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

Specifier Note: Specify subordinate or secondary items that aid and assist primary products specified above or are necessary for preparation or installation of those items. Retain, edit or delete to suit project and specifier practice.

2.03 ACCESSORIES

- A. Provide installation accessories as follows:
 - 1. Adhesive:
 - a. Material, Type and Manufacturer: (Compatible with EPS insulation board and acceptable to EPS insulation board manufacturer) (Specify material, type and manufacturer.).
 - 2. Wall Ties:
 - a. Material, Type and Manufacturer: (Compatible with EPS insulation board and acceptable to EPS insulation board manufacturer) (Specify material, type and manufacturer.).
 - 3. Mechanical Fasteners:
 - a. Material Type and Manufacturer: (Compatible with EPS insulation board and acceptable to EPS insulation board manufacturer) (Specify material, type and manufacturer.).
 - 4. Furring Channels:
 - a. Material, Type and Manufacturer: (Compatible with EPS insulation board and acceptable to EPS insulation board manufacturer) (Specify material, type and manufacturer.).

PART 3 EXECUTION

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS



- A. Comply with the instructions and recommendations of the EPS insulation board manufacturer.

Specifier Note: Specify actions to physically determine that conditions are acceptable to receive primary products of the section.

3.02 EXAMINATION

- A. Site Verification of Conditions:
1. Verify that site conditions are acceptable for installation of EPS insulation board.
 2. Do not proceed with installation of EPS insulation board until unacceptable conditions are corrected.

Specifier Note: Coordinate article below with manufacturer's recommended installation requirements.

3.03 INSTALLATION

- A. General:
1. Install EPS board insulation in a (Single) (Double) layer to achieve required R-value(s) as indicated in drawings. Cut and fit tightly around projections and penetrations.
 2. Secure insulation to substrate with (Mechanical fasteners) (Or) (Spot adhesive applied to back of board) using quantity and pattern recommended by manufacturer.
- B. Insulation Board Joints: Stagger EPS insulation board joints in one direction for each course. Butt edges and ends tightly to adjacent EPS boards.

Specifier Note: Retain, edit or delete articles below to suit project and specifier practice.

- C. Sheathing and Underlayment Installation: On exterior side of stud framing, install EPS insulation board (Vertically) (Horizontally). Fasten vertically 12" (300 mm) maximum on centers using fasteners recommended by manufacturer. On interior side of stud framing, install minimum 1/2" (12.7 mm) thick gypsum wallboard over EPS board.
- D. Concrete and Masonry Walls: Install EPS insulation board over furring channels attached to concrete and unit masonry substrates. Fasten vertically 12" (300 mm) maximum on centers using fasteners recommended by manufacturer.
- E. Cavity Walls: Install EPS insulation board on exterior surface of interior wythe of cavity wall, fitting board between wall ties and other projections and penetrations.
- F. Perimeter Foundation: Install EPS insulation board on exterior surface of perimeter foundation walls. Secure board with spot adhesive applied to back of board using quantity and pattern recommended by manufacturer.
- G. Slab-On-Grade: Install EPS insulation board under slab-on-grade and over properly prepared subgrade of compacted fill and vapor retarder. Place EPS board with sides and ends butted.

Specifier Note: Specify the final actions required to clean installed equipment or other completed work to properly function or perform. Coordinate article below with Division 1 Execution Requirements (Cleaning) Section.

3.04 CLEANING

- A. Remove and legally dispose of trash and debris resulting from the work.

Specifier Note: Specify provisions for protecting work after installation but prior to acceptance by the owner. Coordinate article below with Division 1 Execution Requirements Section.

3.05 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity on the site.

END OF SECTION

