

SECTION 07 22 00

VENTILATED NAILBASE INSULATION

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Section includes ventilated nail base insulation panel system.

1.2 RELATED SECTIONS

- A. Section 05 30 00 - Metal Deck.
- B. Section 06 11 00 - Wood Framing.
- C. Section 06 15 00 - Wood Decking.
- D. Section 07 26 00 - Vapor Retarders.
- E. Section 07 31 00 - Roof Shingles.
- F. Section 07 32 00 - Roof Tiles.

1.3 REFERENCES

- A. ASTM E 84 - Surface Burning Characteristics of Building Materials.
- B. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- C. DOC PS2 – Performance Standard for Wood-based Structural-Use Panels
- D. UL 1256 - Fire Test of Roof Deck Constructions.

1.4 SYSTEM DESCRIPTION

- A. Physical properties (EPS Core):
 1. ASTM C 578, Type I, with a maximum recycled content of 25%.
 2. Flame Spread (foam core): ASTM E 84, < 75.
 3. Smoke Developed (foam core): ASTM E 84, < 450.
 4. Service Temperature: -100 degrees to 185 degrees F (-73 degrees C to 85 degrees C).
 5. Ventilated Core Dimensions: Vent dimensions 1" tall x 12" wide with 4" of solid EPS between vents. Vents shall run the 4' dimension of the material. Start vent 2" from the edge of each 4' edge so a layout of 2" EPS, 12" vent, 4" EPS, 12" vent, 4" EPS, 12" vent, 4" EPS, 12" vent, 4" EPS, 12" vent, 2" EPS is achieved.
- B. EPS Core R Values: Based on typical tested values for Type I at 75 degrees F (24 degrees C), minimum R-Value = 3.85/inch.
- C. OSB/Plywood: 7/16", 5/8", 23/32" or 3/4" OSB, or 15/32", 1/2", 3/4" plywood, span rated 24/16, conforming to DOC PS2 – Performance Standard for Wood-based Structural-Use Panels.
- D. Material Sizes:

1. Nominal sheet size is 4'x8'.
 2. One part system :
 - a. Nominal overall thickness 2", 4", 6", 8", 10", or 12".
 3. Two part system:
 - a. Top layer with wood based sheathing nominal overall thickness 4".
 - b. Bottom layer of EPS 2", 4", 6", 8".
- E. Fasteners: Use a minimum of 8 PBS Panel fasteners per 4'x8' sheet with a minimum penetration of 1 inch (25.4 mm) into structural decking.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on InsulVent and fasteners to be used, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation instructions.
- C. Underwriters Laboratories certificate.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall be a company that regularly manufactures and assembles ventilated nailbase insulation in-house with no outside fabrication operations.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. InsulVent panels shall be fully supported in storage and prevented from contact with the ground. Stack on pallets or on supports at a maximum of four feet on center.
- B. InsulVent panels shall be fully protected from weather. Protect against exposure to rain, water, dirt, mud, and other residue that may affect InsulVent performance. Cover stored material with a breathable protective wrap. InsulVent shall be stored in a protected area.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Premier Building Systems, located at: 4609 70th Avenue East, Fife, WA 98424; Toll Free Telephone: 800-275-7086; Email: Technical Center; Web: <http://www.pbssips.com>
- B. Premier Building Systems, located at: 3434 West Papago Street, Phoenix, AZ 85009; Toll Free Telephone: 800-240-6691; Email: Technical Center; Web: <http://www.pbssips.com>
- C. Insulfoam LLC, located at: 1019 Pacific Street, Suite 1501, Tacoma, WA 98402; Toll Free Telephone: 800-248-5995; Email: Technical Center; Web: <http://www.insulfoam.com>
- D. Insulfoam MEAD, located at: 1057 Sunburst Lane, Mead, NE 68041-4033; Toll Free Telephone: (800) 228-4412; Email: Technical Center; Web: <http://www.insulfoam.com>
- E. Insulfoam AURORA, located at: 12601 East 33rd Ave., Unit 114, Aurora, CO 80011; Toll Free Telephone: (800)735-4621; Email: Technical Center; Web: <http://www.insulfoam.com>
- F. Insulfoam UTAH, located at 1414 South Gladiola St., Ste 400, Salt Lake City, UT 84101; Toll Free Telephone: (801) 401-0081; Email: Technical Center; Web: <http://www.insulfoam.com>

- G. Insulfoam MARLIN, located at 210 Industrial Park, Marlin, TX 76661; Toll Free Telephone: (888) 877-4002; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- H. Insulfoam LAKELAND. Located at 4500 South Frontage Road, Lakeland, FL 33815; Toll Free Telephone: (800) 242-8879; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- I. Insulfoam ANDERSON, Located at 109 Service Road, Anderson, SC 29625; Telephone: (864) 224-0900; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- J. Insulfoam KENT, Located at 1904180th Avenue South, Kent, WA 98032; Toll Free Telephone: (800) 775-9424; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- K. Insulfoam ANCHORAGE, Located at 628 Western Drive, Anchorage, AK 99501; Telephone:(907) 279-9407; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- L. Insulfoam DIXON, Located at 1155 Business Park Drive, Bldg. "A", Dixon, CA 95620-4303; Telephone: (707) 678-6900; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- M. Insulfoam CHINO, Located at 5635 Schaefer Avenue, Chino, CA 91710-9041; Toll Free Telephone: (800) 472-4291; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- N. Insulfoam PHOENIX, Located at 3401 W. Cocopah Street, Phoenix, AZ 85009; Toll Free Telephone: (800) 437-4437; Email: [Technical Center](#); Web: <http://www.insulfoam.com>
- O. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PANEL CONSTRUCTION

- A. Panels shall consist of a top layer of APA rated Oriented Strand Board (OSB) or Plywood, a vented air space of 1 inch (25.4 mm) x 12 inch with 4 inches of solid EPS between vents.
 - 1. Top layer substrate shall conform to DOC PS2 and shall be as follows:
 - a. OSB:
 - 1) Minimum span rating:
 - a) 24/16
 - 2) With a thickness of:
 - a) 7/16 inch (11.1 mm)
 - b) 5/8 inch (15.9 mm)
 - c) 23/32" (18.26 mm)
 - d) 3/4 inch (19.05)
 - b. Plywood:
 - 1) Minimum span rating:
 - a) 24/16
 - 2) With a thickness of:
 - a) 15/32 inch (11.9 mm)
 - b) 1/2 inch (12.7 mm)
 - c) 5/8 inch (15.9 mm)
 - d) 3/4 inch (19.05)
- B. Expanded polystyrene foam insulation shall conform to ASTM C 578, Type I, with a modified bead.

2.3 PANEL TYPES

- A. InsulVent panels shall be 4 feet by 8 feet (1220 mm by 2440 mm) with an air space consisting of a minimum 1 inch (25.4 mm) and an overall thickness of:
 - 1. 2" (50.8mm), 4" (101.6 mm), 6" (152.4 mm), 8" (203.2 mm), 10" (254.0 mm), 12" (304.8 mm)

2. Dimension as required for project use.

2.4 PANEL FASTENERS

- A. Fasteners shall be PBS Panel Fasteners. Fasteners are a corrosion resistant type with oversized heads. Minimum fasteners length shall be equal to the panel depth plus a minimum of 1 inches (25.4 mm) penetration into the structural substrate.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until structural deck has been properly prepared.
- B. Verify deck, adjacent materials, and structural backing is dry and ready to receive insulation.
- C. Verify deck surface is flat, free of fins or protrusions and irregularities.
- D. If deck preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Apply vapor retarder, as specified by the Architect or required by the local building code, to decking prior to the installation of InsulLam.
- B. Apply proper ridge and soffit vents to create an effective eave to ridge venting system in conjunction with ventilated InsulVent.

3.3 INSTALLATION

- A. Install panels with the wood (OSB/Plywood) side face up. Place panels in the manufacturer's recommended pattern. Fasten InsulVent panels through the portion of the panel that does not have the vented space using Premier Building Systems approved threaded fasteners. Only factory assembled panels will be accepted.
- B. For application into steel deck the minimum number of fasteners shall be 8 per 4 foot by 8 foot (1220 mm by 2440 mm) panel. Fasteners in metal deck shall penetrate the top flute of the steel to a depth of 1 inch (25.4 mm).
- C. For application into wood deck the minimum number of fasteners shall be 8 per 4 foot by 8 foot (1220 mm by 2440 mm) panel. Fasteners into a wood deck shall penetrate the wood to a depth of 1 inch (25.4 mm).
- D. Install InsulVent with venting channels parallel to roof slope.
- E. InsulVent sheet joints should be staggered while ensuring venting channels remain aligned.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Cover the top and edges of unfinished roof panel work to protect it from the weather and to prevent accumulation of water in the cores of the panels.
- C. Do not leave panels exposed to moisture. Wet panels shall be removed or allowed to completely dry prior to application of vapor barrier and/or roof covering.
- D. Apply only enough InsulLam per day that can be covered by a required and approved

synthetic underlayment and approved shingles, slate, tile or standing seam.

END OF SECTION