

SECTION 07210

BUILDING INSULATION

1 PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract including General and Supplementary Conditions and Division 1 specification sections apply to Work of this section.

1.2 SECTION INCLUDES

- A. Board thermal insulation at foundation wall perimeter.
- B. Batt thermal insulation and vapor retarder in exterior wall and roof construction.

1.3 SYSTEM DESCRIPTION

- A. System performance to provide continuity of thermal barrier and vapor retarder at building enclosure elements.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Install insulation adhesives in accordance with manufacturer's instructions.

2 PART 2 PRODUCTS

2.1 INSULATION MATERIALS

- A. Extruded Polystyrene Insulation: ASTM C578, cellular type, conforming to the following:
 - 1. Thermal Resistance: R of 5.0 per inch.
 - 2. Thickness: Thickness and locations indicated.
 - 3. Compressive Strength: Minimum 30 psi .
 - 4. Water Absorption: In accordance with ASTM D2842 0.3 percent by volume maximum.
 - 5. Edges: Square edges.
- B. Batt Insulation: ASTM C665, preformed glass fiber batt, conforming to the following (See Schedule of Alternates – Section 01001 Basic Requirements):
 - 1. Thermal Resistance: R of 19 for walls, 10" R-38 for cathedral ceilings.
 - 2. Facing: Unfaced.
- C. Foundation/Crawl Space Wall Insulation (where indicated only): ASTM C665, preformed glass fiber batt, PSK facing, John Mansville Basement Wall Insulation, or equal:
 - 1. Thermal Resistance: R of 11 for Foundation Walls.

- D. Cellulose Insulation: 100% boron treated fungicide resistant spray-in-place recycled paper insulation, Nu-Wool, or equal:
 - 1. Thermal Resistance: R of 38 for attic ceilings.
- E. Spray Foam Insulation: spray applied high-performance foam insulation system: Icynene, Corbond, or equal (See Schedule of Alternates – Section 01001 Basic Requirements):
 - 1. Thermal Resistance: R of 19 at exterior walls, R-30 at soffits and R-38 at cathedral ceilings.
- F. Non-Expansive Spray Foam Insulation: spray applied high-performance non-expansive foam insulation system:
 - 1. Thermal Resistance: R-3 minimum per inch, provide to seal and fill gaps at all door and window jamb rough openings.
- G. Ventilation Baffles: Formed plastic used with attic insulation.

2.2 ADHESIVES

- A. Adhesive: Type recommended by insulation manufacturer for application.

2.3 ACCESSORIES

- A. Vapor Retarder: Clear polyethylene film, 6 mil thick.
- B. Tape: Polyester self-adhering type.

3 PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that substrate, adjacent materials, and insulation boards are dry and ready to receive insulation and adhesive.

3.2 INSTALLATION - FOUNDATION PERIMETER - BOARD INSULATION

- A. Apply adhesive and install boards on foundation perimeter. Stagger joints. Butt edges and ends tight to adjacent board and to protrusions.
- B. Place insulation boards under slab edge.

3.3 INSTALLATION - BATT INSULATION

- A. Install insulation, ventilation baffles and vapor retarder in accordance with insulation manufacturer's instructions.
- B. Install in exterior walls and ceiling spaces without gaps or voids.

- C. Fit insulation tight in spaces. Leave no gaps or voids.
- D. Install friction fit insulation tight to framing members, completely filling prepared spaces.
- E. Place vapor retarder on warm side of insulation by securing in place. Extend vapor retarder tight to full perimeter of adjacent window and door frames, and behind all interior partitions where they meet exterior walls and at other items interrupting the plane of membrane. Tape seal in place.

...END OF SECTION