

SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Batt Insulation.
 - 1. Board Insulation.
 - 2. Sound Attenuation Insulation (Sound Batts).
- B. Related Requirements:
 - 1. Section 07840 - Firestopping: Safing insulation used in conjunction with fire stop material.
 - 2. Section 09250 - Gypsum Board: Metal furring.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. ASTM International (ASTM):
 - 1. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials.
 - 2. ASTM C 665 - Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 - 1. ASTM C 1289 - Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
 - 2. ASTM E 136 - Behavior of Materials in a Vertical Tube Furnace at 750° C.

1.3 DEFINITIONS

- A. Concealed Insulation: Insulation concealed within framing system, both faces protected by finish material.
- B. Exposed Insulation: Insulation exposed within framing system, one or both faces unprotected.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store, and protect products in compliance with the requirements of Section 01600 and manufacturer's recommendations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Provide products from one of the following manufacturers as specified in the Materials paragraph below:
 - 1. Atlas Energy Products, Atlanta, GA (800) 933-1476.
 - 2. Celotex Corporation, Tampa, FL (813) 873-1700.
 - 3. CertainTeed Corporation, Valley Forge, PA (800) 523-7844.
 - 4. Dow Chemical Company, Midland, MI (800) 232-2436.
 - 5. Firestone Building Products Company, Carmel, IN (800) 428-4442.
 - 6. Guardian Fiberglass Incorporated, Albion, MI (800) 748-0035.
 - 7. Johns Manville Insulations, Denver, CO (800) 654-3103.
 - 8. NRG Division/Johns Manville, Portland, ME (800) 343-1285.
 - 9. Owens-Corning, Toledo, OH (800) 438-7465.
 - 10. Pactiv Building Products, Atlanta, GA (800) 241-4402.

2.2 REGULATORY REQUIREMENTS

- A. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84 for surface-burning characteristics and other methods specified. Identify materials with appropriate markings of applicable testing and inspecting agency.

2.3 MATERIALS

- A. Batt Insulation: ASTM C 665 mineral fiber blanket insulation.
 - 1. Unfaced Glass Fiber: Type I (blankets without membrane facing); with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively passing ASTM E 136 for combustion characteristics.
 - 2. Faced, Glass-Fiber: Type III (blankets with reflective membrane facing), Class A (membrane-faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier), faced with vapor-retarder membrane on 1 face.
 - 3. Sound Attenuation Insulation (Sound Batts): Unfaced glass fiber insulation as specified above.
 - 4. Provide batt insulation by one of the following manufacturers:
 - a. CertainTeed Corporation.
 - b. Guardian Fiberglass, Inc.
 - c. Johns Manville.
 - d. Owens Corning.
- A. Board Insulation:
 - 1. Polyisocyanurate: ASTM C 1289, Type I, Class 1 or 2, foil facing both sides; square edges, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, based on tests performed on unfaced core on thicknesses up to 4 inches. Provide one of the following:
 - a. Energy Shield, by Atlas.
 - b. Tuff-R Commercial, by Dow.
 - c. ENRGY 3, by Johns Manville.
- B. Substitutions: Comply with the requirements of Section 01600.

2.4 ACCESSORIES

- A. Tape: Polyethylene or polyester self-adhering type; two inches wide.
- A. Adhesive: Waterproof type, acceptable to manufacturer of insulation board. Adhesive VOC shall be within the limits of not greater than 70 g/L in accordance with the California's South Coast Air Quality Management District (SCAQMD) Rule No. 1168.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Batt Insulation:
 - 1. Verify adjacent materials are dry and ready to receive installation.
 - 2. Verify mechanical and electrical services within walls have been installed and tested.
- A. Board Insulation:
 - 1. Verify substrate and adjacent materials and insulation boards are dry and ready to receive insulation and adhesive.
 - 2. Verify insulation boards are unbroken, free of damage.

3.2 INSTALLATION - BATT INSULATION

- A. Install batt insulation in accordance with manufacturer's instructions, without gaps or voids.

- B. Trim insulation neatly to fit spaces. Use batts free of damage. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation.
- C. Install insulation with factory applied membrane facing warm side of building spaces. Lap ends and side flanges of membrane. Attach insulation in place to framing; tape seal butt ends and lapped side flanges. Tape seal tears or cuts in membrane.

3.3 INSTALLATION - INSULATION AT EXTERIOR MASONRY WALLS

- A. Install insulation as shown on the Drawings.

3.4 SCHEDULES

- A. Provide insulation types as scheduled below and as indicated on Drawings.

CONDITION	TYPE OF INSULATION	THICKNESS
Exterior Wall, Soffits, & Ceiling	Faced Batt Insulation	3-1/2 inches (R=11) or 6 inches (R=19) as shown; or as required to fill cavity.
Interior Partitions	Unfaced Batt Insulation	3-1/2 inches or 6 inches as Shown.
Sound Attenuation	Unfaced Batt Insulation	3-1/2 inches or 6 inches as Shown.
Board Insulation at Exterior Masonry Walls	Polyisocyanurate	1.5 inches (R=10.8) or as shown on Drawings.
Batt Insulation at Roof Deck	Unfaced Glass Fiber Batt (above ceilings) Foil Faced Glass Fiber Batt (where exposed to view)	6.0 inches (R=19)

END OF SECTION