

SECTION 072100
THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A Board insulation at cavity wall construction.
- B Batt insulation in exterior wall construction.

1.02 REFERENCE STANDARDS

- A ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation 2022.
- B ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing 2017.
- C ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2023.

1.03 SUBMITTALS

- A Product Data: Provide data on product characteristics, performance criteria, and product limitations.
- B Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- C Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

1.04 FIELD CONDITIONS

- A Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.01 FOAM BOARD INSULATION MATERIALS

- A Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell surfaces.
 - 1. Type and Compressive Resistance: Type IV, 25 psi (173 kPa), minimum.
 - 2. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
 - 3. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
 - 4. Type and Thermal Resistance, R-value: Type IV, 5.0 (0.88), minimum, per 1 inch thickness at 75 degrees F mean temperature.
 - 5. Board Edges: Square.
 - 6. Products:
 - a. Owens Corning Corporation; FOAMULAR Type IV Extruded Polystyrene (XPS) Insulation: www.ocbuildingspec.com/#sle.
 - b. Or Approved Equal.

2.02 MINERAL FIBER BLANKET INSULATION MATERIALS

- A Flexible Glass Fiber Blanket Thermal Insulation: Preformed insulation, complying with ASTM C665; friction fit.

1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
2. Smoke Developed Index: 50 or less, when tested in accordance with ASTM E84.
3. Facing: Unfaced.
4. Products:
 - a. CertainTeed Corporation: www.certainteed.com/#sle.
 - b. Johns Manville: www.jm.com/#sle.
 - c. Owens Corning Corporation: www.ocbuildingspec.com/#sle.
 - d. Or Approved Equal.

2.03 ACCESSORIES

- A Insulation Baffle Vent: Provide Owens Corning Raft-R-Mate Attic Rafter Vent or Approved Equal.
- B Adhesive: Type recommended by insulation manufacturer for application.

PART 3 EXECUTION

3.01 EXAMINATION

- A Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
- B Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BOARD INSTALLATION AT CAVITY WALLS

- A Apply adhesive to back of boards:
- B Install boards to fit snugly between wall ties.
- C Install boards horizontally on walls.
 1. Place boards to maximize adhesive contact.
 2. Install in running bond pattern.
 3. Butt edges and ends tightly to adjacent boards and protrusions.
- D Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.03 BATT INSTALLATION

- A Install insulation in accordance with manufacturer's instructions.
- B Install in exterior wall and ceiling spaces without gaps or voids. Do not compress insulation.
- C Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

3.04 PROTECTION

- A Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION