

**SECTION 07210
BUILDING INSULATION**

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Blanket batt insulation.
2. Safing insulation.
3. Rigid board insulation.

B. Related Sections:

1. Section 04200 - Unit Masonry: Rigid and masonry fill insulation.
2. Section 07230 - Perimeter and Underslab Insulation.
3. Section 07270 - Firestopping.
4. Section 07510 - Built-up Bituminous Roofing: Roof insulation.
5. Section 07530 - Single Ply Membrane Roofing: Roof insulation.
6. Section 09260 - Gypsum Board Systems: Sound attenuation batts.
7. Section 15010 - Basic Mechanical Requirements: Energy conservation standards.
8. Section 15250 - Mechanical Insulation: Pipe and duct insulation.

1.2 SUBMITTALS:

- A.** Provide manufacturer's written certification that insulation products meet specified requirements for the use intended.

1.3 QUALITY ASSURANCE:

A. Performance Limitations:

1. Certain cellular plastics used in building construction, though tested in conformance under ASTM and NFPA criteria, have been considered by the Federal Trade Commission as performing differently under actual fire conditions than under test conditions. Such products, if allowed to remain exposed or unprotected, may produce rapid flame spread, quick flashover, toxic or flammable gases, dense smoke and intense and immediate heat and may present a serious fire hazard. Architects are cautioned to thoroughly investigate these materials and their installation prior to specifying insulation products.
2. Materials used to insulate and fireproof buildings shall contain no asbestos.

B. Thermal Conductivity:

1. Insulation values are for a thermal conductivity (k-value) measured at 75° F.
2. Adjust thicknesses as required when using material having a different thermal conductivity or tested at a different temperature.
3. Where insulation is specified to have a specific "R" value, furnish manufacturer's standard thickness required to equal or exceed the specified value.
4. Insulation "R" Values:

- a. Walls:
 - 1) R = 19 minimum above grade.
 - 2) R = 10 minimum below grade.
- b. Roofs: R = 30 average.
- c. Soffits: R = 19 minimum.
- d. Above-Grade Slabs over Unheated Spaces: R = 19 minimum.

1.4 DELIVERY, STORAGE AND HANDLING:

- A. Do not deliver plastic insulation materials to the project site prior to time of installation. Protect at all times against ignition. Complete the installation and concealment of plastic materials as rapidly as possible.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

A. Batt Insulation:

- 1. Owens-Corning Fiberglass.
- 2. U.S. Gypsum.
- 3. Schuller International, Inc.
- 4. Certain Teed Corp.

B. Rigid Insulation:

- 1. Dow Chemical Co.
- 2. Amoco.
- 3. Celotex Corp.
- 4. Schuller International, Inc.
- 5. U.C. Industries.

2.2 MATERIALS:

A. Foil Faced Batt Insulation:

**UNFACED OR KRAFT-PAPER FACED
BATT INSULATION IS NOT ACCEPTABLE.**

- 1. Resilient glass fibers bonded with thermosetting resin to foil facing.
- 2. Batts shall have minimum R-Value of 3.0 per inch of insulation thickness.
- 3. Vapor Transmission: Not more than 0.1 perms.
- 4. Comply with ASTM C665, Type III.
- 5. Install foil faced insulation in such a way to ensure integrity of vapor barrier. Tape all joints, penetrations, and at top and bottom of walls.
- 6. Where not covered with a 15 minute thermal barrier, provide batts, including vapor barrier, not exceeding a flame spread of 25 or smoke developed of 50 per ASTM E84; and rated noncombustible per ASTM E136.

B. Rigid Insulation for Above-Grade Walls and Miscellaneous Locations:

1. Polyisocyanurate, Foil-Faced, Reinforced with Chopped Fiberglass: FS HH-I-1972, Class 2, with an aged R-Value of 6.38 per inch.

CLOSED CELL EXTRUDED
POLYSTYRENE: NOT ACCEPTABLE
BECAUSE OF OUTGASING OF ACRID
ODOR.

C. Safing Insulation:

1. Conform to ASTM C612, Class 1 and 2, (melt point of over 2,000° F.). Provide USG "Thermafiber Safing Insulation", or approved substitute, thickness as required.
2. Contract Documents must clearly show locations and detail.

D. Spandrel Glass Safing Insulation:

1. Comply with requirements specified above for safing insulation. Provide USG "Thermafiber" curtain wall insulation with melt point of over 2,000° F. per ASTM C24.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. All exposed exterior building columns and beams shall be insulated from the interior at the same R = 19 rating as for walls.
- B. Insulate above-grade floor slabs where underside is exposed to the weather or unheated space to achieve an R = 19 rating minimum.
- C. Insulate around support and support cross-beams.

END OF SECTION 07210