

SECTION 23 07 00 - HVAC INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Ductwork and equipment insulation materials

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control reports.

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Insulation and related materials shall have fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, tapes, and cement material containers, with appropriate markings of applicable testing and inspecting agency.
1. Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers:
1. CertainTeed Corp.
 2. Knauf Fiberglass
 3. Owens-Corning Fiberglass Corp.

2.2 DUCTWORK INSULATION MATERIALS

- A. Flexible Fiberglass Ductwork Insulation: ASTM C 553, Type II, Class B-6, 1 lb./cu.ft. with integral foil vapor barrier.
1. R-Value (Installed): 3.0 per inch.

2.3 JACKETING MATERIAL OVER INSULATION

- A. PVC Fitting Covers: Factory-fabricated fitting covers manufactured from 20-mil-thick, high-impact, ultra-violet-resistant PVC. Adhesive shall be as recommended by insulation manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
- B. Coordinate insulation installation with the trade installing heat tracing. Comply with requirements for heat tracing that apply to insulation.
- C. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.

3.2 APPLICATION REQUIREMENTS:

- A. Insulate all metal ductwork with the following exceptions:
 - 1. Return and supply ductwork exposed in air-conditioned spaces without ceilings.
 - 2. HVAC plenums and unit housings pre-insulated at factory.
 - 3. 100 percent exhaust ductwork from space terminal inlet to 5 feet (1.5 m) from building exhaust exit point, or 5 feet (1.5 m) from entrance to unheated space.
 - 4. Exposed HVAC supply and return ductwork extending through air-conditioned spaces.
- B. Insulate each ductwork system with flexible fiberglass insulation in thickness and R-value as indicated on Drawings.
- C. Insulate exhaust hood duct with fire resistive grease ductwork material. Provide material and installation to meet local and state requirements. Provide clearances as required per manufacturers requirements and local and state requirements.
 - 1. Install a minimum of 2 layers.

3.3 INSTALLATION

- A. General: Install insulation products in accordance with manufacturer's written instructions, and in accordance with recognized industry practices to ensure that insulation serves its intended purpose.
- B. Extend ductwork insulation without interruption through walls, floors and similar ductwork penetrations, except where otherwise indicated.

3.4 PROTECTION AND REPLACEMENT

- A. Replace damaged insulation that cannot be repaired satisfactorily, including units with vapor barrier damage and moisture saturated units.
- B. Protection: Insulation Installer shall advise Contractor of required protection for insulation work during remainder of construction period, to avoid damage and deterioration.

END OF SECTION 23 07 00