

SECTION 15250 - MECHANICAL INSULATION

PART I - GENERAL

1.01 DESCRIPTION

- A. Section 01010 Summary of Work and Section 15050, Basic Mechanical Materials and Methods, shall be considered a part of these specifications.
- B. Piping insulation, jackets, and accessories.
- C. Ductwork insulation, jackets, and accessories.

PART II - PRODUCTS

2.01 PIPE INSULATION

- A. Domestic water, interior storm lines, interior condensate drain piping from HVAC rooftop units and waste water pump discharge.
 - 1. All piping (above finished floor) shall be covered with Armacell AP/Armaflex pipe insulation ½" thick in accordance with ASTM C-534, grade I, type I for tubular materials and grade I, type II for sheet material.
 - 2. All joints shall be sealed with approved manufacturers' adhesive.
 - 3. All lines running outdoors shall have insulation protected from weather by two (2) coats of manufacturers' approved finish.
 - 4. Acceptable Alternate Manufacturer: Koolphen K. CFC Free Phenolic foam, or Aerocel (by Aeroflex International Company) closed cell Elastomeric thermal insulation.
 - 5. Fiberglass pipe insulation, rigid (not wrap type), one inch thick with built-in vapor barrier may be used in lieu of Armacell product specified on interior storm lines, interior domestic water lines, interior condensate drain piping from HVAC units and interior water waste pump discharge lines. Acceptable manufacturers are Armstrong, Certainteed, Johns-Mansville, Knauf, and Owens-Corning.
- B. Refrigerant Suction Lines and Cooler/Freezer Condensate Drains:
 - 1. Similar to "A" except 1" thick inside building and 2" thick on outside of building with manufacturers weather-resistant protective finish. (2" thickness shall be achieved by 2 layers of 1" insulation applied per manufacturers' recommendations).
 - 2. Inside the walk-in freezer, insulate the entire condensate drain line around the wrap around type drain line heater. Inside the walk-in cooler it is not necessary to insulate the condensate line and trap. Outside the walk-in, insulate all the condensate drain line.

2.02 DUCTWORK INSULATION

- A. All ductwork shall be insulated, including but not limited to supply, return, exhaust, relief transfer duct, etc.
- B. Ductwork Below Roof: The insulation shall consist of one layer 2" thick of Owens-Corning Type 75, .75 lbs./cu. Ft. density, with an installed R-value of 5.6 and vapor jacket. Acceptable Alternate Manufacturer: Armstrong, Certainteed, Johns-Manville and Knauf.
- C. Ductwork Above Roof Line: Similar to "B" except 3" thick insulation with an installed R-value of 8.3 and waterproof jacket.
- D. Internally lined ductwork is "not acceptable" in any ductwork including main drops from the rooftop units.

2.03 INSULATION RATINGS

- A. Flame spread shall be 25 or less.
- B. Smoke developed shall be 50 or less.

PART III - EXECUTION

3.01 INSTALLATION

- A. Install materials in accordance with the manufacturer's instructions.

END OF SECTION