

SECTION 15250 - MECHANICAL INSULATION

PART 1 - GENERAL

1.1 SCOPE OF SECTION:

This section contains requirements relating to insulation of piping specified in Divisions 2 and 15.

(Division 2 items are generally considered to be located outside of buildings starting at a maximum distance of 5' outside of the building.)

1.2 PIPING INSULATION:

The following are the minimum insulation requirements for piping.

A. CHILLED WATER PIPING:

1. Provision Requirement: All chilled water piping shall be insulated so as to prevent moisture condensation on exterior surfaces. If condensation occurs at any time during the warranty period, the constructor shall be required to re-work the insulation until satisfactory, at no additional expense to owner. In exposed locations where insulation may be subject to damage, specify a protective aluminum jacket cover.
2. Above Ground: Use foam glass pipe insulation.
 - a) Pipe size smaller than 6": 1-1/2" thick minimum;
 - b) Pipe size 6" and larger: 2" thick minimum.
3. Underground: Minimum 2" thick foam glass, with Pittwrap, or equal, for water barrier.
4. All piping runouts for gauges, thermometers, auto air vents, drains, etc. shall be insulated and sealed with rubber insulating material.

B. DOMESTIC WATER PIPING: All domestic water piping and equipment shall be labeled as "Domestic Water" and insulated so as to prevent moisture condensation on exterior surfaces. If condensation occurs at any time during the warranty period, the constructor shall be required to re-work the insulation until satisfactory, at no additional expense to owner. In exposed locations where insulation may be subject to damage, specify a protective aluminum jacket cover.

C. PROCESS WATER PIPING: All process water piping and equipment shall be insulated so as to prevent moisture condensation on exterior surfaces. If condensation occurs at any time during the warranty period, the constructor shall be required to re-work the insulation until satisfactory, at no additional expense to owner. In exposed locations where insulation may be subject to damage, specify a protective aluminum jacket cover.

D. STEAM AND CONDENSATE PIPING: The minimum insulation requirements for steam and condensate piping are as follows:

1. Underground: Pre-insulated piping and conduit shall have either calcium silicate insulation, minimum 3" thick for steam piping and minimum 2" thick for condensate

pipng or foam glass insulation wrapped with glass fabric cloth and with proper mastics.

2. Above Ground: Use calcium silicate piping insulation, minimum 3" thick for steam, 2" for condensate.
 3. Runouts: Piping runouts through 12 feet in length and 2" in diameter may have insulation thickness 1/2" less than indicated above.
 4. Attachments for the insulation below grade: stainless steel wiring, bands, or 16 gauge copper wire, on 9" centers.
- E. HEATING HOT WATER SYSTEMS: Use fiberglass pipe insulation for hot water supply and return.
- F. PROHIBITED MATERIALS: Do not use "MARATHAN INDUSTRIES" "VI-AC PRODUCT NO. 550" or any other products with similar composition and nature.

1.3 EQUIPMENT INSULATION:

- A. AIR HANDLING EQUIPMENT: Refer to Section 15850 for the insulation requirements relating to air handling equipment (equipment used to move air through air distribution systems).
- B. CHILLED WATER EQUIPMENT: All chilled water equipment shall be insulated so as to prevent moisture condensation on exterior surfaces. If condensation occurs at any time during the warranty period, the constructor shall be required to re-work the insulation until satisfactory, at no additional expense to owner. In exposed locations where insulation may be subject to damage, specify a protective aluminum jacket cover.
- C. RESTRICTION: Do not use any rubber insulation on any piping above 1/4" in diameter unless specifically approved by the Physical Plant Division.

1.4 DUCTWORK INSULATION:

Refer to Section 15850 for the insulation requirements relating to air distribution systems.

END OF SECTION