GENERAL:

1. To provide minimum standards for design and installation of mechanical insulation products for piping that will be durable, functional and reduce failures the life of the facility.

DESIGN GUIDELINES:

1. Flame/Smoke Ratings: Provide composite mechanical insulation (insulation, jackets, coverings, sealers, mastics and adhesives) with flame-spread index of 25 or less, and smoke-developed index of 50 or less, as tested by ASTM E 84 (NFPA 255) method.
    a. Exception: Outdoor mechanical insulation may have flame spread index of 75 and smoke developed index of 150.
2. Insulation thickness shall comply with ASHRAE 90.1 or the table below whichever is greater.

PLUMBING SYSTEM INSULATION REQUIREMENTS

System Type	Insulation Material	Jacket*	Run-outs	Branches, Mains, and Loops				
				Pipe Diameter (inches)				
				<1	1-1¼	1½-3	4-6	8>
				Insulation Thickness (inches)				
Domestic Hot and Cold Water, Mains and branches	3/4" Flexible Elastomeric	Not required	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Lavatory traps and drains	3/4" Flexible Elastomeric	Not required	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Floor drains near HVAC equipment	3/4" Flexible Elastomeric	Not required	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Roof Drains	3/4" Flexible Elastomeric	Not required	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"

*Jackets are required is some locations. See notes #4 and #5 below.

PIPING INSULATION SYSTEM NOTES TO BE INCLUDED IN THE SPECIFICATION

1. 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.
2. For elastomeric insulation systems, use inserts by the same manufacturer of the

insulating system being installed (i.e. for Armaflex, use Amafix.)

3. Install insulation on pipe systems subsequent to installation of heat tracing, painting, testing, and acceptance of tests.
4. Install insulation materials with smooth and even surfaces. Insulate each continuous run of piping with full-length units of insulation, with a single cut piece to complete run. Do not use cut pieces or scraps abutting each other.
5. All new interior piping that is exposed in mechanical rooms, and is within 6'-0" of the finished floor, shall have a PVC jacket installed.
6. Any exposed piping within 6’-0” of the finished floor in an occupied space shall have a PVC jacket installed.
7. Clean and dry pipe surfaces prior to insulating. Butt insulation joints firmly together to ensure a complete and tight fit over surfaces to be covered.
8. Maintain integrity of vapor-barrier jackets on pipe insulation, and protect to prevent puncture or other damage.
9. Cover valves, fittings and similar items in each piping system with equivalent thickness and composition of insulation as applied to adjoining pipe run. Install factory molded, precut or job fabricated units (at Installer's option) except where specific form or type is indicated.
10. Extend piping insulation without interruption through walls, floors and similar piping penetrations, except where otherwise indicated.
11. Where piping passes through fire walls indicated on the contract drawings, contractor shall install firestopping per firestop manufacturers instructions.
12. Replace damaged insulation which cannot be repaired satisfactorily, including units with vapor barrier damage and moisture saturated units.
13. Insulation Installer shall advise Contractor of required protection for insulation work during remainder of construction period, to avoid damage and deterioration.
14. Repair damaged sections of existing mechanical insulation, damaged during this construction period. Use insulation of same thickness as existing insulation, install new jacket lapping and sealed over existing.
15. Replace damaged insulation which cannot be repaired satisfactorily, including units with vapor barrier damage and moisture saturated units.
16. Wood blocking shall not be used.