

USE OF HEAT TAPES/TRACE SYSTEMS

Most heat trace tapes designed for residential use have a maximum operating temperature of 180°F and are acceptable for use with elastomeric insulation products. Consult heat tape manufacturer to be sure the operating temperature will not exceed the maximum limit of the insulation. These products are typically not used with foam tapes.

Sizing Insulation Inside Diameter To Prevent Seam Failures

The most common thickness for heat trace tape is 1/4" and will require that the insulation inside diameter is sized properly to fit over both pipe and tape. If this is not taken into consideration, the longitudinal seam could experience excessive stress resulting in the failure of the pressure sensitive adhesive (PSA) seams.

Designing The Insulation/Heat Trace System

This step should be performed by an expert. The heat loss through the insulation wall must be balanced with the heat gain provided by the heat trace tape. This balance will prevent the system temperature from escalating beyond 210°F.

Typical heat trace tapes wattages (per lineal foot):

3 Watt

5 Watt

8 Watt

where: 1 Watt = 3.4121 Btu/hr

10 Watt

Though the heat loss/heat gain calculations seem simple, they can be complicated by the pipe and ambient temperatures. This, in turn, can affect both the selected heat trace tape wattage and the thermal conductivity of the insulation.