
SPECIFICATION CRITERIA FOR HITLIN PIPE & BOARD INSULATION

Following technical information is specific to HITLIN Pipe & Board products and may be used for purposes of developing an insulation specification that requires these qualities as a minimum.

1. SCOPE

- 1.1 This standard covers the general requirements for external thermal insulation for piping, vessels, tanks and equipment operating at temperatures at ambient through 760°C (1400°F).
- 1.2 This standard sets forth specifications and acceptable products for preformed pipe insulation from 0.5" to 44" in diameter.

2. INSULATION MATERIALS

- 2.1 Insulation shall be manufactured from E-Glass Fibers and mandrel-wound into a high-density pipe cover product.
- 2.2 Insulation shall contain no organic binder materials. Binders that off-gas formaldehyde and/or ammonia when heated shall not be used.

3. DENSITY (ASTM C 302)

- 3.1 Density shall be a nominal 200 kg/m³ (12.5 lb/ft³) +/- 10%

4. MAXIMUM THERMAL CONDUCTIVITY

- 4.1 Thermal conductivity of insulation material shall be less than:
 - 0.044 W/m°C (0.302 Btu in/h/ft²/°F) at 93°C (200°F)
 - 0.055 W/m°C (0.381 Btu in/h/ft²/°F) at 204°C (400°F)
 - 0.071 W/m°C (0.490 Btu in/h/ft²/°F) at 316°C (600°F)

5. LINEAR SHRINKAGE (ASTM C 356)

- 5.1 Linear Shrinkage shall be less than 0.5% when tested at 650°C (1200°F)

6. COMPRESSIVE RESISTANCE (ASTM C 165)

- 6.1 Compressive Resistance shall be greater than 180 kPa (26 psi) @ 5% deformation

7. MOISTURE SORPTION (ASTM C 1104)

- 7.1 Moisture Sorption shall be less than 0.5 % vol

8. SURFACE BURNING CHARACTERISTICS (ASTM E84) (Shall not exceed)

- 8.1 Flame Spread Index (FSI) = 0
- 8.2 Smoke Developed Index (SDI) = 0

9. STRESS CORROSION

- 9.1 Materials must not promote or contribute to the corrosion of austenitic stainless steel