

PINNACLE THERMOCOUPLE PROTECTION TUBES

O'-SIALON (BONDED SILICON CARBIDE) TCPT



APPLICATIONS

- Crucible furnaces
- Degassing crucibles
- Holding furnaces
- Casting areas

ADVANTAGES

- Non-wetting to aluminium and its alloys
- Less dross buildup at metal line
- Superior response time
- Narrow temperature control band for energy conservation
- Excellent thermal shock resistance
- Longer life

AVAILABLE SIZES

2" OD 3/4" NPT pipe in lengths of 6, 10, 12, 18, 24, 30, 36, 42, and 48 inch

Pyrotek's bonded silicon carbide Pinnacle thermocouple protection tubes are made from O'-Sialon, a long-life, non-wetting, temperature sensitive material. This thermocouple protection tube is used for foundry and other temperature sensitive applications.

The robust properties of the Pinnacle thermocouple protection tubes make it a superior alternative to competitive tubes in temperature measurement, maintenance and product life areas.

Thermocouples are closed at one end with threaded pipe on other end.

PINNACLE THERMOCOUPLE PROTECTION TUBES

PHYSICAL PROPERTIES

Apparent Porosity (%)
16–18%

BULK DENSITY

2.6 g/cm³
167.19 lbs/ft³

MODULUS OF RUPTURE

34 MPa

COEFFICIENT OF THERMAL EXPANSION

4.4 x 10⁻⁶/°C
2.44 x 10⁻⁶/°F

MODULUS OF ELASTICITY (C 203)

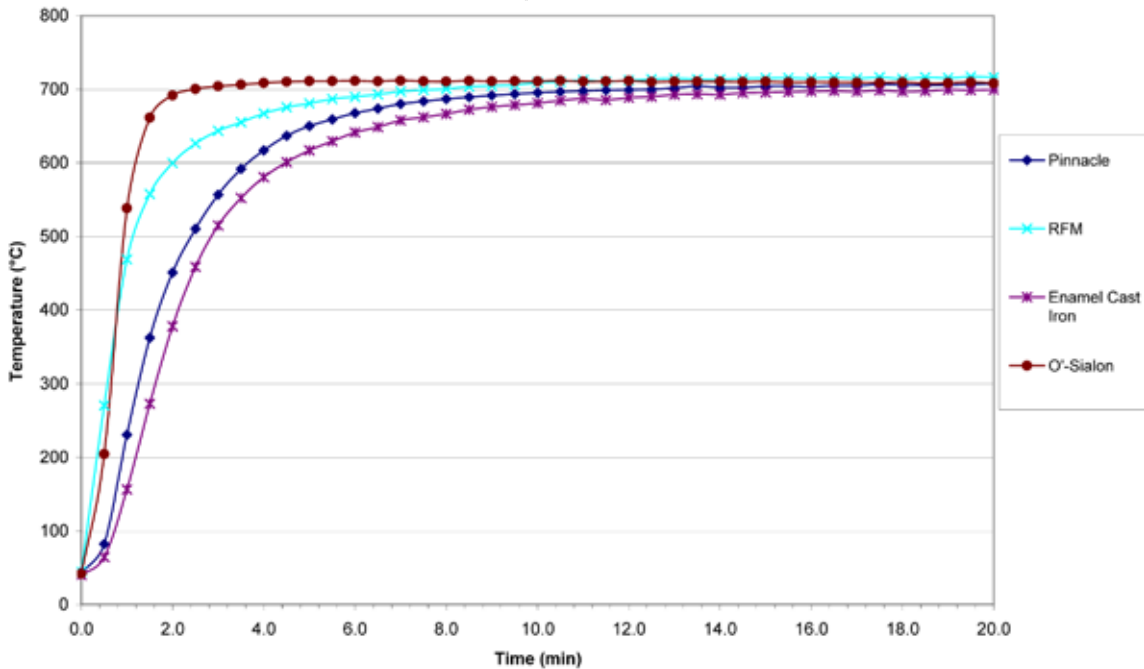
78 MPa

THERMAL CONDUCTIVITY (DIN 51046)

°C	°F	W/(m · K)	BTU-in/ft ² /hr°F
300	570	10.21	70.7
540	1004	9.05	62.7
720	1328	8.97	62.13

TEMPERATURE RESPONSE GRAPH

Time to achieve 99% of maximum temperature dipped in aluminium for 40 hours.
Aluminium bath is kept at 715°C (1315°F).



Note: The physical and chemical properties listed represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

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