



OMEGATITE™ 650 Protection Tubes

**Uniquely qualified
for nonferrous
molten metal
applications and
high wear or impact
environments up to
1250°C (2280°F)**



PTRS Series
£111
Basic Unit

- ✓ **High Temperature**
- ✓ **Thermal Shock Resistance**
- ✓ **Corrosion Resistance**

OMEGATITE™ 650 is an alloy of silicon nitride and aluminium oxide. This superior refractory material has the combined properties of silicon nitride (high strength, hardness, fracture toughness, and low thermal expansion) and aluminium oxide (corrosion

resistance, chemically inert, high temperature capabilities, and oxidation resistance).

Most refractory products can be used only in high temperature applications where one or two of the following properties are required: thermal shock resistance, mechanical strength, corrosion resistance, abrasion resistance or electrical insulation. OMEGATITE™ 650 combines all these properties in one refractory material.

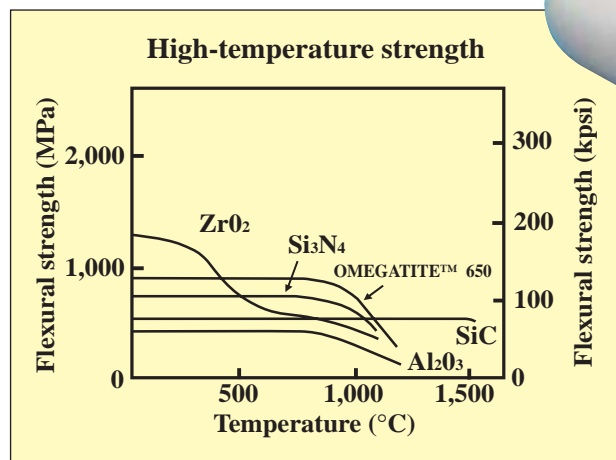
OMEGATITE™ 650 is uniquely qualified for nonferrous molten metal applications and high wear or high impact environments up to 1250°C. OMEGATITE™ 650 is non-wetting for most nonferrous metals. It is gas tight, chemically inert, resistant to corrosion and metal attack, and features high strength, hardness, and thermal shock resistance.

OMEGATITE™ 650 thermocouple sheaths are used extensively for continuous measurements in nonferrous metals. In molten aluminium, OMEGATITE® 650 is thermal shock resistant, non-wetting, does not contaminate the melt, provides continuous, reliable temperature measurement, and is resistant to degradation even in aggressive aluminium lithium alloys. The excellent corrosion resistance of OMEGATITE™ 650 allows the use of thinner walls, thereby providing faster response time and improved accuracy.



OMEGATITE™ 650

Protection Tubes



PROPERTY	OMEGATITE™ 650
Bulk Density	3.24 g/cm ³
App. Specific Gravity	3.26 g/cm ³
Porosity	<1 %
Cold Bend Strength (25°C)	758 MPa, 110 kpsi
Hot Bend Strength (1200°C)	400 MPa, 58 kpsi
Elastic Modulus	288 GPa, 42 x 10 ⁶ psi
Therm. Exp. Coeff (20-1000°C)	3.0 x 10 ⁻⁶ C ⁻¹
Thermal Conduct. (400°C)	21 W/mK
Critical ΔT	950 °C
Hardness	1650 VHN, 1 kg Load

To Order (Specify Model Number)				
Inside Diameter	Outside Diameter	Tube Length	Model Number	Price
16mm	28mm	150mm	PTRS-1628-150	£258
		300mm	PTRS-1628-300	266
		600mm	PTRS-1628-600	391
12mm	22mm	150mm	PTRS-1222-150	155
		300mm	PTRS-1222-300	177
		600mm	PTRS-1222-600	295
9mm	16mm	150mm	PTRS-916-150	111
		300mm	PTRS-916-300	144
		600mm	PTRS-916-600	209
6.5mm	12.5mm	305mm	PTRS-612-305	162
		450mm	PTRS-612-450	152
		600mm	PTRS-612-600	180

*For BSPT fitting add **-BSPT** suffix and **£24.50** to price. A ½ x ½" BSPT fits 12.5 mm O.D. tube, ¾ x ¾" for 16 mm, 1 x 1" for 22 mm, 1 ¼ x 1 ¼" for 28 mm tube. For special lengths consult sales.

Ordering Example: PTRS-1628-300, is a tube with 16mm inside dia, 28mm outside dia, and 300 mm long. £266