## Typical Physical Properties

<table>
<thead>
<tr>
<th>Properties</th>
<th>OMEGATITE™ 450</th>
<th>OMEGATITE™ 300</th>
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<tbody>
<tr>
<td>Composition</td>
<td>99.8% Al₂O₃</td>
<td>85% Mullite</td>
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<tr>
<td>Water Absorption</td>
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<td>0.00</td>
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<tr>
<td>Specific Gravity KP/CM³</td>
<td>3.85</td>
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</tr>
<tr>
<td>Gas Permeability</td>
<td>Gas Tight</td>
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<tr>
<td>Compressive Strength (MPa)</td>
<td>&gt;2,000</td>
<td>&gt;1,300</td>
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<td>Tensile Strength (MPa)</td>
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<td>Transverse Strength (MPa)</td>
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<td>186</td>
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<tr>
<td>Coefficient of Linear Thermal Expansion</td>
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<tr>
<td>24 to 250°C (75 to 480°F)</td>
<td>6.2 x 10⁻⁶</td>
<td>3.3 x 10⁻⁶</td>
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<tr>
<td>24 to 500°C (75 to 930°F)</td>
<td>7.4 x 10⁻⁶</td>
<td>4.0 x 10⁻⁶</td>
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<tr>
<td>24 to 1000°C (75 to 1830°F)</td>
<td>8.5 x 10⁻⁶</td>
<td>5.0 x 10⁻⁶</td>
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<td>24 to 1500°C (75 to 2730°F)</td>
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<tr>
<td>Approximate Thermal Conductivity W/(m², K/m)</td>
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<tr>
<td>24°C (75°F)</td>
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<td>5.8</td>
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<tr>
<td>800°C (1470°F)</td>
<td>8.6</td>
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<td>Maximum Service Temperature</td>
<td>1950°C (3540°F)</td>
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<td>Dielectric Constant (1MC)</td>
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<td>Dielectric Strength (volts/mil)</td>
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<td>Volume Resistivity (ohm cm)</td>
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<td>Te Value (Volume Resistivity of 1 mega Ω cm)</td>
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<td>Hardness (Mohs Scale)</td>
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<td>Fabrication Methods</td>
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**Tolerance: ±5%**

## Typical Chemical Analyses

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<tr>
<th></th>
<th>Al₂O₃</th>
<th>SiO₂</th>
<th>MgO</th>
<th>Na₂O</th>
<th>CaO</th>
<th>Fe₂O₃</th>
<th>Cr₂O₃</th>
<th>TiO₂</th>
<th>MnO</th>
<th>ZrO₂</th>
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**Note:** All properties are average for test specimens. Tests were performed according to ASTM Specifications.
**Ceramic Thermocouple Protection Tubes**

### To Order (Specify Model No.)

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<th>Inside Dia. (mm (in.))</th>
<th>Outside Dia. (mm (in.))</th>
<th>Tube Length*</th>
<th>Model Number</th>
<th>Price</th>
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<th>Price</th>
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*Length: The tube lengths shown are standard lengths for a tube without any fittings. Special lengths are also available. Consult Sales.

### Discount Schedule

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<td>11-24 units</td>
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<td>25-100 units</td>
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<tr>
<td>101-500 units</td>
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### Important Ordering Notes

Fittings: When ordering tube with fitting specify the fitting number (1, 2, 3, 4 or 5) after the model number.

1. 1/2” x 1/2” NPT: Fits tubes from 6.0 to 12.7mm O.D.
2. 3/4” x 3/4” NPT: Fits tubes from 9.5 to 19mm O.D.
3. 7/8” x 27NS Brass Ferrule 50 mm long: Fits tubes from 17.5 mm O.D. ONLY.
4. 1/2” x 1/2” BSPT: Fits tubes from 6 to 12.7mm O.D.
5. 1/2” x 3/4” BSPT: Fits tubes from 9.5 to 19mm O.D.

For tube with any of the above fittings add £24.50 to the price of the tube. Example: PTRA-31614-M300-4 price £46.75

### Ordering Example:

PTRA-11618-M300, standard tube with no fitting, £22.25
PTRA-11618-M300-4, standard tube, 1/2 x 1/2 BSPT fitting, £22.25 + £24.50 = £46.75

sales@omega.co.uk +44 (0)161 777 6622