

LTI™ METALCERAMIC PROTECTION TUBES



The UCAR® Refractory Systems' *LTI™ MetalCeramic Thermocouple Protection Tube* is a combination of a chromium metal matrix and a pure alumina ceramic phase. The material is slip cast, sintered and then oxidized. A physical-chemical bond is formed through the sharing of oxygen by the chromium and the alumina. By the very nature of its constituents, the *LTI™ MetalCeramic Thermocouple Protection Tube* exhibits unique properties that are not found in either metal or pure ceramic alone.

- ✓ *Excellent oxidation resistance*
- ✓ *High thermal conductivity – comparable to stainless steel*
- ✓ *Can withstand very high temperatures, up to 1,650 °C*
- ✓ *Non-wetted by most molten metals and basic slags*
- ✓ *Good erosion resistance*
- ✓ *Good abrasion resistance*
- ✓ *Very low porosity – no passage of gases at high temperature*
- ✓ *High strength above the temperature at which most material melt or otherwise fail*
- ✓ *Dimensions and fittings can be customized to fit your needs*
- ✓ *Available for immediate shipment in standard sizes*

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Typical Physical Properties @ Room Temperature

	<u>Value</u>	<u>Units</u>
Thermal Conductivity	0.294	W-cm/cm²-°K
CTE (to 1000 °C)	9 x 10⁻⁶	cm/cm/°C
Density	5.8	g/cc
Flexural Strength	310	Mpa
Compressive Strength	760	Mpa
Hardness	34	Rc
Chemical Composition	Cr -77 Al₂O₃ - 23	Weight %

Available in lengths 230 – 1220mm

Additional product information available on www.graftech.com