



Thermo-Couple Products Co.

Protection Tubes

Ceramic and Silicon-Carbide Protection Tube Application Data

Material	Grade	Max. Use Air	Flexural Strength (x10 ³ psi)	Thermal Conduct. W/m.K 1475°K	Thermal Shock Resistance	Remarks	Typical Applications
Silicon Carbide	Oxide Bonded	3000°F ¹ (1650°C)		15-20	Good	Permeable	Direct flame impingement and abrasion
Alumina	99.9%	3450°F (1900°C) supported, 3200°F ¹ (1750°C) unsupported	50	6.3	Poor - must be preheated to 900°F	Gas tight creeps (sags) at 2900°F ferrous metals, dry H ₂	Iron, barium, crown glass; non-ferrous metals; gas-tight protection for noble metal thermocouples in excess of 2400°F (1316°F)
	96%	2825°F (1550°C)	49	54	Poor - must be preheated to 900°F	Creeps at 2900°F	-----
Ceramic (Mullite)	---	3100°F (1700°C) supported, 2912°F ¹ (1600°C) unsupported	12	2.1	Fair - preheating to 900°F recommended	Gas tight creeps at 2642°F, attacked by halides - contains silica	Non-ferrous metals; gas-tight protection for noble metal thermocouples to 2400°F (1316°C)

¹ Hot phase temperature. For additional application information, see tables on pages 67-69.

METAL PROTECTION TUBES

Series 7000

- Protection Tubes Help Insure Longer Life and Continued Accuracy
- Protects Against Physical Damage, Corrosion, and Contamination
- Generally Less Expensive than Thermowells



Enter a selection for each item, please fax your inquiry to TCP.

Example: 7000 - - -

7000 - - - -

CODE	PIPE SIZE	Tube Pipe O.D.	Wall Thk.
1	1/2", Sch 80	.840"	.147"
2	1/2", Sch 40	.840"	.109"
3	3/4", Sch 80	1.050"	.159"
4	3/4", Sch 40	1.050"	.113"
5	1", Sch 80	1.315"	.179"
6	1", Sch 40	1.315"	.133"

CODE	LENGTH "L"
12	12"
18	18"
24	24"
30	30"
36	36"
42	42"
48	48"

Consult factory for other sizes.

CODE	OTHER PERTINENT DATA
0	NONE
999	Special Request Consult Factory

CODE	WIRE GAUGE SIZE
A	Inconel 600 (Seamless)
C	304 Stainless Steel (Seamless)
D	446 Stainless Steel (Seamless), formerly 28% Chrome Iron

Material A and D not available in Sch 80
Consult factory for other materials

Metric Orders Welcome

Place an **mm** in the appropriate selection box: