

Hexoloy® SE SiC Sensor & Thermocouple Protection Tubes

PRODUCT INFORMATION

Hexoloy® sintered alpha silicon carbide from Saint-Gobain is an ideal material for thermowell / thermocouple protection tubes under harsh operating conditions.

PROPERTIES

- High temperature strength – won't slump at 3000 °F even under load
- Excellent thermal shock resistance
- Universal corrosion resistance
- Superior oxidation resistance
- High thermal conductivity equal to stainless steel and 5 times alumina
- Exceptional wear resistance – 50% harder than tungsten carbide



TYPICAL APPLICATIONS

- Furnaces/Kilns
- Waste incinerators at high temperature
- Oxygen sensors at high temperature
- Non-ferrous molten metals – Al, Zn, Brass
- Gas, oil, coal, biomass fired chamber to 1650 °C
- Sparger tubes in chemical industry
- Process chamber in chemical industry at high temperature
- Hot gas with abrasive particles
- High temperature acids and bases
- Molten salts (test first) sodium, potassium, calcium etc.

Hexoloy thermocouple protection tubes are produced in standard lengths and diameters as shown in the chart.

Custom Length-L (± 1/8")	OD	ID	Tolerance
6" - 27"	3/8"	1/4"	± 0.015
	5/8"	3/8"	± 0.025
	3/4"	1/2"	± 0.025
	1"	1/2"	± 0.03
	1-1/4"	3/4"	± 0.04
	1-1/4"	0.922"	± 0.04
	1-1/2"	1"	± 0.04
>27" - 54"	3/8"	1/4"	± 0.015
	5/8"	3/8"	± 0.025
	3/4"	1/2"	± 0.025
	1"	1/2"	± 0.03
	1-1/4"	3/4"	± 0.04
	1-1/4"	0.922"	± 0.04
	1-1/2"	1"	0.04
Not recommended	Molten ferrous & nickel based metals		

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MATERIAL PROPERTIES: Hexoloy® SE SiC

Properties		Unit	Value
Maximum Use Temperature		°C	1900
Flexural Strength	@ Room Temp @ 1450 °C @ 1600 °C	MPa	280 270 300
Density		g/cc	3.05
Apparent porosity		%	5-10
Modulus of Elasticity	@ 20 °C @ 1300 °C	GPa	420 363
Coefficient of Thermal Expansion		10 ⁻⁶ /°C	4.02
Thermal conductivity	@ 1200 °C	W/(mK)	34.8

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PERFORMANCE CERAMICS & REFRACTORIES

