

# Stabaloy

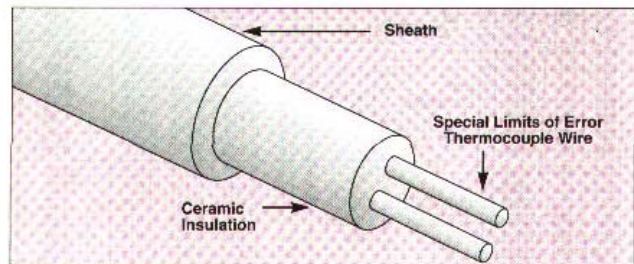
Ultra-High Temperature  
Mineral Insulated Cable  
Made with Special Limits  
Of Error Thermocouple Wire



New Stabaloy sheathed mineral-insulated thermocouple wire can be used at ultra-high temperatures for prolonged periods with little degradation of the base metal. The sheath material uses Nickel-Chrome based Stabaloy sheathing, which provides excellent oxidation resistance. The sheath can withstand long-term exposure to combustion gases or air at temperatures up to 1205°C (2220°F). Short-term exposures to higher temperatures are also possible. Superior resistance to oxidation attack results from a tenacious and protective high temperature film that does not affect the stability of the thermocouple alloys. This film permits the sensor to be used at ultra-high temperatures for prolonged periods with improved accuracy over other available sheath materials. Super Stabaloy sheathing also provides excellent resistance to corrosion in high temperature chlorine-contaminated oxidizing environments and ammonia/nitride-rich environments at temperatures above 930°C (1800°F), the temperature at which the protective film forms.

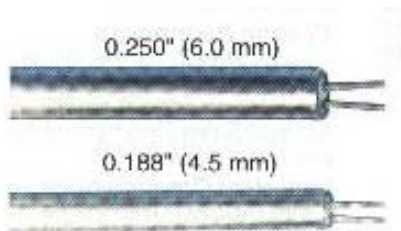
- 1205°C (2220°F) Maximum Temperature
- Low Thermal Drift
- Nickel-Chrome Based Sheathing Provides Excellent High Temperature Performance
- Excellent Oxidation, Carburization and Chlorination Resistance
- Special limits of Error
- Available with Type “K” Calibration Wire (Special Requests Can be Taken for Other Calibrations)
- Long Continuous Lengths Available!

Call Sales for Pricing and Delivery



## APPLICATIONS

- |                              |   |
|------------------------------|---|
| ✓ Heat Treating Metal Parts  | ✓ Vacuum/Atmosphere Melting & Annealing |
| ✓ Gas or Oil Fired Furnaces  | ✓ Solid Waste Incinerators              |
| ✓ Fuel Fired Heat Exchangers | ✓ Heat Process Fluidized Beds           |
| ✓ Ceramic Materials Firing   | ✓ R&D Tube or Box Furnaces              |
| ✓ Powder Metal Sintering     |   |
| ✓ Steel Carburizing Furnaces |   |



# Stabaloy

## Specifications

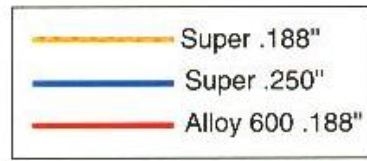
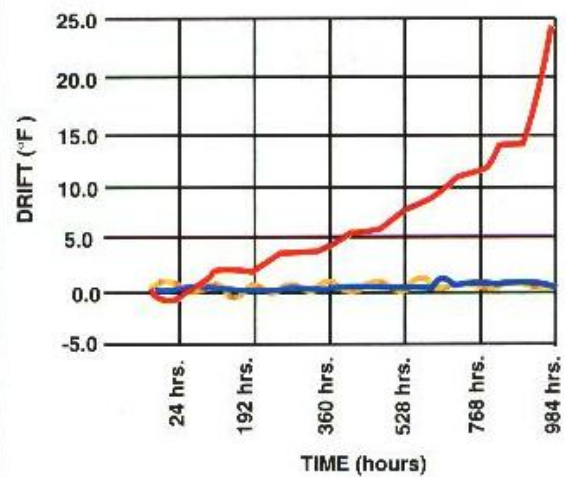
Property	Value	Ref. Temp. °C (°F)
Density	8.05 g/cu. cm	21 (70)
Melting Temperature	1400°C	N/A
Electrical Resistivity	122.9 micohm-cm	1200 (2200)
Thermal Conductivity	36.7 W/m-K	1200 (2200)
Modulus of Elasticity	137 GPa	1000 (1850)
Tensile Strength	30 MPa	1100 (2000)
Elongation	75%	1100 (2000)

## Limits of Error for Thermocouple Wire

T/C Type	Temperature Range °C (°F)	Limit of Error*	
		Standard	Special
K	0 to 1250 (32 to 2282)	2.2°C (4°F) or .75%	±1.1°C (2°F) or 0.4%
N	0 to 1250 (32 to 2282)	2.2°C (4°F) or .75%	±1.1°C (2°F) or 0.4%

\*Whichever is greater

## Type K Calibration Cable 1000 Hours @ 1100°C (2000°F)



## Nominal Chemical Composition

Ni	Cr	Co	Mo	Fe	Ti
53.5	20.9	12.5	10.8	1.7	.42