Thermocouple and Extension Wire

High-Temperature Ceramic Fiber Thermocouple Wire SERIES 350 and 355

The SERIES 350 uses the ultimate high-temperature flexible insulating system. The ceramic fiber yarn's upper temperature limit often exceeds the melting point of the material it insulates.

When an application requires flexible insulation, while pushing Type K or Type N to extreme limits, ceramic fiber insulation is the only choice.

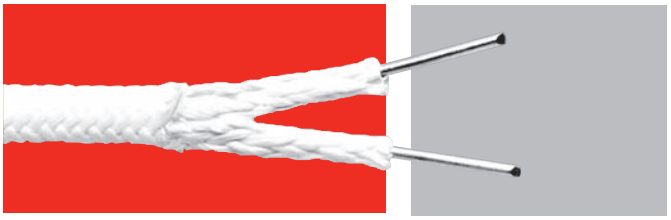
Watlow supplies standard SERIES 350 without color coding or impregnations to minimize contaminating the pure ceramic fiber yarn. Because this insulation has no binders or impregnations, it may "flower" when stripped. Laboratory testing indicates impregnation can decrease the upper use temperature by as much as 1000°F (540°C).

The SERIES 355 construction is a cost-effective, medium insulation build of the popular SERIES 350 heavy-duty construction.

If application temperatures exceed SERIES 350 construction, specify XACTPAK® mineral-insulated, metal-sheathed cable.

Performance Capabilities

- Continuous temperature rating: 1205°C (2200°F)
- Ceramic fiber braided yarn insulation
- Available with an optional metallic overbraid for additional abrasion resistance



Applications

- Heat treating
- Oven and furnace survey
- Load thermocouple

Specifications

Continuous use temperature
- 2200°F (1205°C)

Single use temperature
- 2600°F (1430°C)

Resistance properties
- Moisture: Fair
- Chemical: Good
- Abrasion: Good

Popular Constructions

Grade	AWG	Wire Type	Insulation	Limits of Error	Type K
Thermocouple	20	Solid	Heavy	Standard	**K20-1-350**
		Solid	Heavy	Special	**K20-2-350**
		Solid	Heavy	Standard	**N20-1-350**
		Solid	Heavy	Special	**N20-2-350**
		Solid	Heavy	Special	**K20-2-350-CAL***
		Solid	Medium	Standard	**K20-1-355**
		Solid	Medium	Special	**K20-2-355**
		Solid	Medium	Standard	**N20-1-355**
		Solid	Medium	Special	**N20-2-355**

***** Calibrated from 200 to 2200°F (93 to 1204°C), every 200°F (93°C). Only available in this construction.
Bolded products are stocked.

Wire Specifications

AWG	Nominal Conductor Size		Nominal Insulation Thickness: Conductor		Nominal Insulation Thickness: Overall		Nominal Overall Size		Approximate Shipping Weight	
	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)	lbs/1000 ft	(kg/km)
24①	0.020	(0.508)	0.016	(0.406)	0.016	(0.406)	0.088 x 0.132	(2.24 x 3.35)	13	(19.4)
20①	0.032	(0.965)	0.016	(0.406)	0.016	(0.406)	0.100 x 0.154	(2.54 x 3.91)	16	(23.8)
16①	0.051	(1.29)	0.016	(0.406)	0.016	(0.406)	0.119 x 0.192	(3.02 x 4.88)	32	(47.7)
14①	0.064	(1.63)	0.016	(0.406)	0.016	(0.406)	0.132 x 0.218	(3.35 x 5.54)	44	(65.6)
24②	0.020	(0.508)	0.012	(0.305)	0.016	(0.406)	0.078 x 0.116	(1.98 x 2.95)	13	(19.4)
20②	0.032	(0.813)	0.012	(0.305)	0.016	(0.406)	0.090 x 0.138	(2.29 x 3.50)	16	(23.8)
16②	0.051	(1.29)	0.012	(0.305)	0.016	(0.406)	0.111 x 0.176	(2.82 x 4.47)	32	(47.7)

①SERIES 350, ②SERIES 355

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High-Temperature Ceramic Fiber Thermocouple Wire SERIES 350 and 355 (Continued)

Ordering Information

Part Number

① ASTM E 230 Calibration	② ③ AWG	④ Conductor Type/ Tolerance	⑤ ⑥ ⑦ Insulation Type

①	ASTM E 230 Calibration
K =	Type K
N =	Type N

② ③	AWG
24 =	20 gauge solid
20 =	20 gauge solid
16 =	16 gauge solid
14 =	14 gauge solid

④	Conductor/Type Tolerance
1 =	Thermocouple grade, solid wire, standard tolerance
2 =	Thermocouple grade, solid wire, special tolerance

⑤ ⑥ ⑦	Insulation Type
350=	Heavy build
355=	Medium build

Note: Minimum order sizes apply for non-stock constructions.