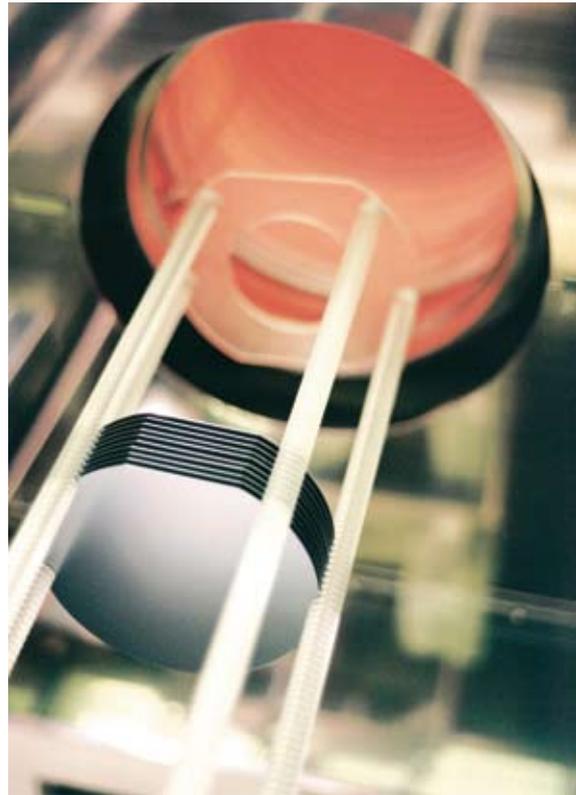


KANTHAL® Super NC

High Temperature Element for Clean Process Heating

KANTHAL Super NC is a new heating element with special features, designed to meet the demands for clean process heating in the research- and electronics industries.

Scaling of the element surface, which occurs in all heating elements, is reduced to a minimum. The metal content is also reduced which means less diffusion into the furnace atmosphere from the element. The content of Fe, Ni and Cu (and other elements on request) can be verified and confirmed in a certificate of analysis. The electrical properties are the same as for KANTHAL Super 1800.



Special Features

- Extra clean and adherent surface glaze
- Lower metal content
- Certificate of analysis
- Can be used in air/oxidizing atmospheres up to 1800°C (3270°F)
- 25 % higher bending strength at room temperature compared to KANTHAL Super 1800
- Standard and specially designed elements

Applications

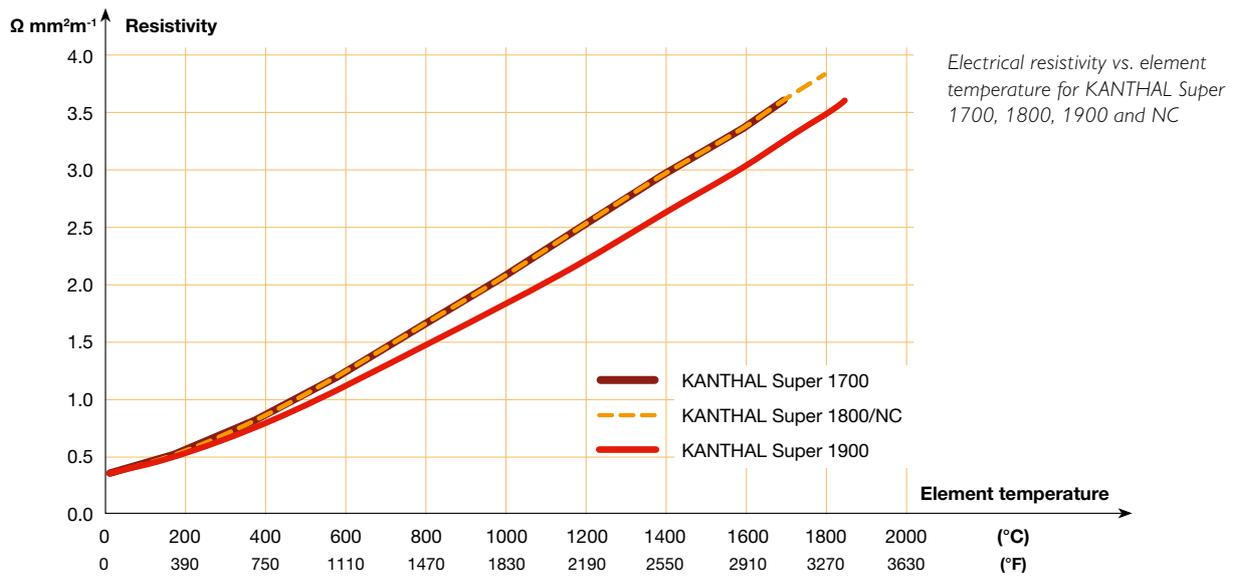
KANTHAL Super NC is used in all type of clean processes in the research- and electronics industries.

Product Range

KANTHAL Super NC is delivered as a U-type element with fixed terminals as standard for safe and reliable electrical connections. Special designs are available on request.

KANTHAL Super NC	Heating zone diam. Le, mm (in.)	Terminal diam. Lu, mm (in.)
	3 (0.12)	6 (0.24)
	4 (0.16)	9 (0.35)
	6 (0.24)	12 (0.47)

Resistivity



Properties

Maximum operating temperature	1800°C (3270°F)
Composition	Mainly MoSi ₂ + aluminosilicate
Tensile strength at 1550°C (2820°F)	100 Mpa ±25 %
Bending strength at 20°C (68°F)	450 Mpa ±10 %
Compression strength at 20°C (68°F)	1400–1500 Mpa
Density	5.6 g/cm ³ (0.2 lb/in ³)
Fracture toughness, KIC	3–4 MPa√m
Hardness, Hv	9 Gpa
Thermal conductivity	
20–600°C (68–1110°F)	30 Wm ⁻¹ K ⁻¹
600–1200°C (1110–2190°F)	15 Wm ⁻¹ K ⁻¹
Coefficient of linear expansion	7–8 · 10 ⁻⁶ K ⁻¹
Specific heat capacity at 20°C (68°F)	0.42 kJ kg ⁻¹ K ⁻¹
Emissivity	0.70–0.80

Disclaimer: The information contained in this document is for illustrative purposes only. The data and examples are only general recommendations, and not a warranty or a guarantee that such data will function in individual/specific cases. The purchaser of a Kanthal product has the responsibility to control the applicability of Kanthal's products in a specific application before using them.

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KANTHAL

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