

Kanthal® Super NC

High-temperature element for clean process heating



Kanthal® Super NC is a molybdenum disilicide (MoSi_2) 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.

Applications

Kanthal Super NC is used in all types of clean processes in the research- and electronics industries. Kanthal Super NC is also used in diffusion furnaces for the semiconductor industry, where high purity is a demand.

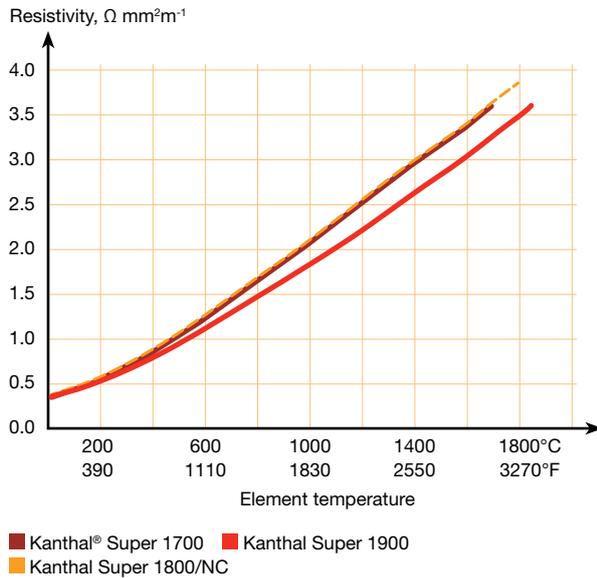
SPECIAL FEATURES

- 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



Technical information

Resistivity



Kanthal® Super HT	Heating zone diam. Le		Terminal diam. Lu	
	mm	in	mm	in
	3	0.12	6	0.24
	4	0.16	9	0.35
	6	0.24	12	0.47

Standard 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.

PROPERTIES

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

Sandvik Group

The Sandvik Group is a global high technology enterprise with 47,000 employees in 130 countries. Sandvik's operations are concentrated on three core businesses: Sandvik Tooling, Sandvik Mining and Construction and Sandvik Materials Technology – areas in which the group holds leading global positions in selected niches.

Sandvik Materials Technology

Sandvik Materials Technology is a world-leading manufacturer of high value-added products in advanced stainless steels and special alloys, and of medical implants, steel belt-based systems and industrial heating solutions.

Kanthal is a Sandvik owned brand, under which world class heating technology products and solutions are offered. Sandvik and Kanthal are trademarks owned by Sandvik Intellectual Property AB.

Quality management

Sandvik Materials Technology has quality management systems approved by internationally recognized organizations. We hold, for example, the ASME Quality Systems Certificate as a materials organization, approval to ISO 9001, ISO/TS 16949, ISO 17025, and PED 97/23/EC, as well as product approvals from TÜV, JIS and Lloyd's Register.

Environment, health and safety

Environmental awareness, health and safety are integral parts of our business and are at the forefront of all activities within our operation. We hold ISO 14001 and OHSAS 18001 approvals.

Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes in technical data without notice.

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