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

Resistivity, Ω mm²m⁻¹

Electrical resistivity vs. element temperature for Kanthal Super 1700, 1800, 1900 and NC

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.

<table>
<thead>
<tr>
<th>Properties</th>
<th>Values</th>
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<tbody>
<tr>
<td>Thermal conductivity</td>
<td>30 Wm⁻¹ K⁻¹</td>
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<tr>
<td>20–600°C (68–1110°F)</td>
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<tr>
<td>600–1200°C (1110–2190°F)</td>
<td>15 Wm⁻¹ K⁻¹</td>
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<tr>
<td>Coefficient of linear expansion</td>
<td>7 – 8 10⁻⁶ K⁻¹</td>
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<tr>
<td>Specific heat capacity at 20°C (68°F)</td>
<td>0.42 kJ kg⁻¹ K⁻¹</td>
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<tr>
<td>Emissivity</td>
<td>0.70–0.80</td>
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</table>

Recommended 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.

This printed matter is only valid for Sandvik material. Other material, covering the same international specifications, does not necessarily comply with the mechanical and corrosion properties presented in this printed matter.