



NITRASIL

NITRASIL engineering ceramics have been specially developed for use in industries requiring a strong and durable material that can be used at high temperatures, while remaining chemically inert.

Product Description

NITRASIL ceramic material consists of a high strength, durable silicon nitride which yields superior thermal insulation and electrical insulation properties. Moreover, the NITRASIL material grade is not affected by induction currents.

NITRASIL engineering ceramic products find application in extreme conditions. NITRASIL is commonly used as a high temperature insulation material and can be used in applications up to 1,400 degrees C. Applications examples include:

Product Advantages

- Excellent resistance to oxidation is achieved up to 1150°C.
- Resistant to almost all chemicals and non-ferrous molten metals.
- Excellent Thermal Insulation
- Excellent Electrical Insulation
- High Strength
- High Durability
- Suitable for Applications up to 1400°C.
- Minimal Molten Metal Wetting
- Lightweight
- Resistant to Thermal Shock
- Resistant to Thermal Cycling
- Resistant to Industrial Chemicals

Approved Applications

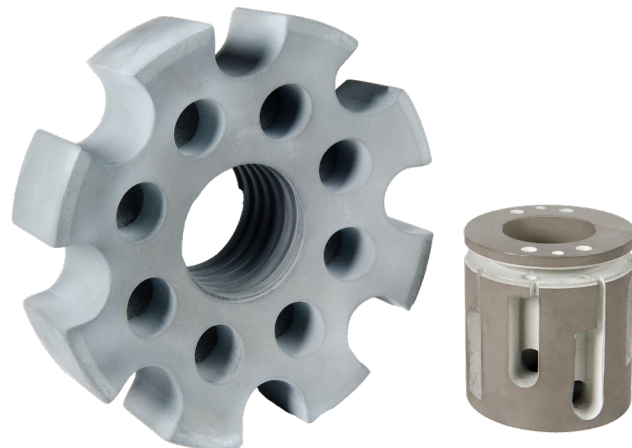
- Thermocouple sheaths
- Molten aluminium handling
- Molten steel handling

Physical Properties

| Property | Unit | Value |
|--|-----------------------|-------|
| Compressive strength | MPa @ 20°C | 550 |
| Fracture toughness | MPa. m ^{1/2} | 3 |
| Hardness Hv | - | 1100 |
| Flexural strength at ambient | Mpa @ 20°C | 190 |
| Density | g / cm ³ | 2.4 |
| Poissons ratio | - | 0.27 |
| Electrical resistivity | Ωcm | >1010 |
| Thermal expansion | 10 ⁻⁶ / °C | 3 |
| Thermal conductivity | W/mK | 16 |
| Maximum intermittent operating temperature | °C | 1400 |
| Maximum continuous operating temperature | °C | 1150 |

Storage

- Store in a cool dry place
- Take care not to exceed safe working loads and heights for storage shelves and racks



NITRASIL

ARCLEX

FEROFORM

FIREFLY

NITRASIL

REFEL

**REFRACTORY
PRODUCTS**

REFRAVER

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Advanced materials.
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The information contained in Tenmat data sheets is presented in good faith. The values are "typical only" and are based on test results generally in accordance with BS2782, ASTM, a variety of other main test bodies along with Tenmat internal test methods. These values should not be relied upon for specification purposes or the primary selection of materials. As the data sheet values are typical only, Tenmat does not warrant the conformity of its materials to these properties or the suitability of its materials for any particular purpose. It is the responsibility of the customer to do the necessary testing and satisfy themselves the product is suitable for the intended application.