

High Performance Engineering Ceramic



TENMAT NITRASIL engineering ceramics have been specially developed for structural applications within high-temperature equipment and for non-ferrous molten metal handling applications.

High-performance NITRASIL exhibits minimal oxidation, distortion or creep even at temperatures above a 1000 °C. Nitrasil also has no tendency to be wetted by non-ferrous molten metals.

Nitrasil Silicon Nitride is lightweight but strong and durable even at high temperatures and also has an excellent resistance to thermal shock and thermal cycling.

NITRASIL is not affected by induction currents

TENMAT NITRASIL engineering ceramic components are resistant to all common industrial chemicals and non-ferrous metals.

Nitrasil is available as fully machined components.

| PROPERTY | UNITS | NITRASIL |
|--|-----------------------|------------------|
| Density | g / cm ³ | 2.4 |
| Maximum Operating Temperature (intermittent) | °C | 1,400 |
| Maximum Operating Temperature (continuous) | °C | 1,150 |
| Thermal Conductivity | W / mK | 16 |
| Electric Resistivity | Ωm | 10 ¹⁰ |
| Hardness Hv | kg / mm ² | 1,100 |
| Compressive Strength | MPa (ambient) | 550 |
| Thermal Expansion | 10 ⁻⁶ / °C | 3 |
| Flexural Strength | MPa (ambient) | 190 |
| Fracture Toughness | Mpam ^{1/2} | 3 |
| Poissons Ratio | - | 0.27 |

The information contained in this data sheet is presented in good faith. They are typical test results tested generally in accordance with BS, ISO and ASTM test methods and should not be used for specifications. **TENMAT** does not warrant the conformity of its materials to the listed properties or their suitability for any particular purpose.

For further information please contact our Technical Sales Department on +44 161 872 2181.