

Sialon

Description

A silicon nitride ceramic containing a small percentage of aluminum oxide. Unlike the relative porosity of silicon carbide, Sialon provides porosity of <1%, making it nearly gas-tight. The aluminum oxide also improves the corrosion-resistance of the silicon nitride, including resistance to oxidation.

Advantages

- ✓ Gas-tight
- ✓ Resistant to:
 - thermal shock
 - Impact and mechanical shock
 - oxidation
 - corrosion
- ✓ Non-wetting by nonferrous metals
- ✓ Mechanical strength at high temperatures

Limitations

Maximum exposure temperature

2200° F (1200°C)

Thermal Conductivity

Moderate (15-20 W/m•°K)

Typical applications

- ✓ Aluminum smelting
- ✓ Salt baths