

ACCURATUS

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Sintered Reaction Bonded Silicon Nitride Material Properties

| Mechanical | SI/Metric (Imperial) | SI/Metric | (Imperial) |
|------------------------------------|---|-----------|------------|
| Density | gm/cc (lb/ft ³) | 3.27 | (204) |
| Porosity | % (%) | 0 | (0) |
| Color | — | black | — |
| Flexural Strength | MPa (lb/in ² x10 ³) | 689 | (100) |
| Elastic Modulus | GPa (lb/in ² x10 ⁶) | 310 | (45) |
| Shear Modulus | GPa (lb/in ² x10 ⁶) | — | — |
| Bulk Modulus | GPa (lb/in ² x10 ⁶) | — | — |
| Poisson's Ratio | — | 0.24 | (0.24) |
| Compressive Strength | MPa (lb/in ² x10 ³) | — | — |
| Hardness | Kg/mm ² | 1450 | — |
| Fracture Toughness K _{IC} | MPa•m ^{1/2} | 5.7 | — |
| Maximum Use Temperature (no load) | °C (°F) | 1000 | (1830) |
| Thermal | | | |
| Thermal Conductivity | W/m•°K (BTU•in/ft ² •hr•°F) | 29 | (201) |
| Coefficient of Thermal Expansion | 10 ⁻⁶ /°C (10 ⁻⁶ /°F) | 3.3 | (1.8) |
| Specific Heat | J/Kg•°K (Btu/lb•°F) | — | — |
| Electrical | | | |
| Dielectric Strength | ac-kv/mm (volts/mil) | — | — |
| Dielectric Constant | — | — | — |
| Dissipation Factor | — | — | — |
| Loss Tangent | — | — | — |
| Volume Resistivity | ohm•cm | — | — |

*All properties are room temperature values except as noted.

The data presented is typical of commercially available material and is offered for comparative purposes only. The information is not to be interpreted as absolute material properties nor does it constitute a representation or warranty for which we assume legal liability. User shall determine suitability of the material for the intended use and assumes all risk and liability whatsoever in connection therewith.

ACCURATUS: *Latin* – careful, precise, accurate