

Data Sheet

Sintox™ FA (Mac-A950R-1)

Description

Alumina ceramic of 95% Al₂O₃ content. This refractory-quality material is extensively used for high temperature applications in welding, heat treatment, and metallurgical and chemical processing.

Prime Features:

- Mechanically stable at high temperature
- Low coefficient of thermal expansion
- Good thermal shock resistance
- Totally non-combustible and non-outgassing
- Chemically inert
- Excellent electrical insulator

Specifications

- Quality Assurance to ISO 9002

Physical Properties

Colour	Pink
Bulk Density (fired)	3.70 Mg/m ³
Grain Size	6 μm
Porosity (apparent)	0% (fully dense) % nominal
Vickers Hardness	12.5 GPa @ Hv 0.5kg
Rockwell hardness (R45N)	78
Compressive Strength	2000 MPa
Flexural Strength (ASTM C1161) (3-point)	320 MPa
Young's modulus	325 GPa
Thermal Conductivity	21 W/m.K
Thermal Expansion Coefficient (0-800C)	7.5 10 ⁻⁶ /C
Thermal Downshock	170 σC

Please note that all values quoted are based on test pieces and may vary according to component design. These values are not guaranteed in anyway whatsoever and should only be treated as indicative and for guidance only.

Typical Applications:

- Welding nozzles
- Stress relieving beads
- Thermal insulators to protect workpieces during welding and heat treatment
- Special crucibles for metallurgical and chemical processes

Production Capabilities

- Pressing of components
- Volume production to close dimensional tolerances
- Prototype, batch and volume production

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We design and manufacture products for demanding applications in a variety of markets using a comprehensive range of advanced ceramic, glass, precious metal, piezoelectric and dielectric materials. We utilise core competences of applications engineering and superior materials technology, together with state of the art fully integrated manufacturing processes to offer precision ceramic components, ceramic-to-metal assemblies and special coatings for use in a variety of applications.