

Data Sheet

Hilox™ 882 (Mac-A840S)

Description

An alumina ceramic of 84% Al₂O₃ content that combines excellent wear and chemical resistance with good electrical and thermal properties.

Prime Features:

- Good electrical insulator
- Good thermal shock resistance
- Good dimensional stability
- Good abrasion resistance
- Non-porous and vacuum tight
- Corrosion resistant

Typical Applications:

- Hard wearing, chemically resistant counterface seats for automotive water pumps
- Electrical stress relieving equipment for welding operations
- Electrically insulative components for domestic and industrial equipment

Specifications

- Quality Assurance to ISO 9002

Physical Properties

Colour	Pink
Bulk Density (fired)	3.53 Mg/m ³
Porosity (apparent)	0% (fully dense) % nominal
Compressive Strength	1800 MPa
Flexural Strength (3-point)	271 MPa @20C
Young's modulus	250 GPa @20C
Rockwell Hardness (R45N)	76.4
Thermal Conductivity	15 W/m.K @20C
Thermal Expansion Coefficient (20-1000C)	8.2 10 ⁻⁶ /C
Dielectric Strength	28 kV/mm
Volume Resistivity @20C	> 10 ¹⁴ ohm.cm 50Hz

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.

Production Capabilities:

- Complex components custom-manufactured to close 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.