DATA SHEET

Hilox™ 880

Alumina

Description

An alumina ceramic of 86% Al2O3 content that combines mechanical strength with excellent electrical properties.

Prime Features

- Good abrasion resistance.
- Non-porous and vacuum tight.
- Corrosion resistant.

Typical Applications

- Components in domestic appliances, especially where parts handling and assembly operations are automated.
- Thermostat assembles for electric irons, kettles and fires.
- Immersion heaters.
- End bushes for sheathed heating elements.
- Thermocouples.
- Cartridge heaters.

MTC Production Capabilities

- Complex components custom-manufactured to close tolerances.
- Prototype, batch and volume production.
- Comprehensive range of bushes, rings, rods and tubes for high temperature electrical insulators.

Specifications

Quality Assurance to ISO 9002

Physical Properties

Colour	White
Bulk density (fired), Mg/m^3	3.54
Porosity (apparent), % nominal	0 (fully dense)
Rockwell hardness (R45N)	77.1
Compressive strength, MPa @ 20°C	1800
Flexural strength (3-point), MPa @ 20°C	315
Young's modulus, GPa @ 20°C	250

Thermal Properties

Thermal conductivity, W/m.K @ 20C	15
Thermal expansion coefficient 10^{-6} (20-1000°C)	8.2
Specific heat, J/kg.K	920

Electrical Properties

Permittivity , 20°C, 1 MHz		8.5
Dielectric loss @ 1MHz, tan δ 10.4		20
Dielectric strength, kV/mm		28
Volume resistivity, ohm.cm @	100C	$>10^{14}$
	300C	$>10^{8}$
	600C	$>10^{6}$

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. 12.12.2012

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