

Data Sheet

Cerasil™ Alumino Silicate (223U)

Description

Cerasil is an alumino silicate ceramic with distinct advantages over steatite and high alumina. Low C.T.E. allows excellent thermal shock resistance.

Prime Features:

- Excellent thermal shock resistance
- Good mechanical properties
- Low expansion
- Dense, non porous and vacuum tight

Specifications

- ISO 9001 Registered
- SPC Technology to assure quality levels are achieved on a consistent basis

Typical Applications:

- Bushings
- Resistors
- Spacers
- Coil forms
- General electronics
- General industrial duties requiring good mechanical, electrical, and thermal shock resistance properties

Physical Properties

Colour	Tan
Density	2.40 g/cm ³
Porosity (apparent)	0% (fully dense) % nominal
Tensile Strength	10,000 psi
Compressive Strength	90,000 psi
Flexural Strength	20,000 psi
Coefficient of Thermal Expansion	5.0 (10 ⁻⁶ /°C) 25-300°C
Thermal Conductivity	1.3 W/m.K @RT
Dielectric Strength	200 (dc V/mil) @ RT
Volume Resistivity	> 10 ¹⁴ (Ohm-cm) @ RT
Dielectric Constant	5.3 (1 MHz @ RT)
Dissipation Factor	0.015 (1MHz @ RT)

Production Capabilities:

- High volume production at a low cost
- Tight tolerance pressed parts
- Multi-cavity tooling
- Complex geometries and multi-level configurations
- Sub-miniature designs
- Precise material and batch control
- Design Consultation

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.

Morgan Advanced Materials is a global materials engineering company which designs and manufactures a wide range of high specification products with extraordinary properties, across multiple sectors and geographies. From an extensive range of advanced materials we produce components, assemblies and systems that deliver significantly enhanced performance for our customers' products and processes. Our engineered solutions are produced to high tolerances and many are designed for use in extreme environments.

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.