

Data Sheet

GBC – 85% Alumina (85-AS)

Description

Highly versatile alumina ceramic with great mechanical, electrical, thermal, and chemical properties.

Prime Features:

- Low thermal expansion
- Good mechanical strength and hardness
- Chemical and corrosion resistance
- Consistent electrical and mechanical properties
- Thermal stability
- Dense, non porous and vacuum tight

Typical Applications:

- Mechanical standoffs
- Spacers
- Resistor forms
- Surge arrestors
- Coil forms
- General industrial duties requiring good mechanical, electrical, and thermal properties

Specifications

- ISO 9001 Registered

Physical Properties

Colour	White
Density	3.40 g/cm ³
Porosity (apparent)	0% (fully dense) % nominal
Tensile Strength	18,000 psi
Compressive Strength	250,000 psi
Flexural Strength	45,000 psi
Coefficient of Thermal Expansion	6.7 10 ⁻⁶ /°C
Hardness (Mohs Scale)	9
Thermal Conductivity	17.6 W/m.K @RT
Dielectric Strength	190 (dc V/mil) @ RT
Volume Resistivity	2x10 ¹⁰ (Ohm-cm) @ RT
Dielectric Constant	7.6 (1 MHz @ RT)
Dissipation Factor	0.0006 (1MHz @ RT)

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:

- High volume production
- Tight tolerance pressed alumina parts
- Multi-cavity tooling
- Complex geometries and multi-level configurations
- Sub-miniature designs
- Design consultation

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.