



Metallized and Brazed

Metallization of ceramics with the most suitable and economic matrix system, for specific customers' application. Hermetic assemblies for electrical, mechanical and vacuum applications.



- Active Metal Braze
- Hydrogen and Inert Atmosphere
- Vacuum Brazing
- High Quantity Production
- Dock to Stock Delivery
- High Temperature
- Low Temperature
- Dielectric Materials
- Biocompatible Materials

Typical Property Values, Selected Ceramic Materials

Property	Thermal Conductivity	Electrical Resistivity	Dielectric Constant	Coefficient of Thermal Expansion	Density	General Characteristics
Units	W/m ⁰ K	Ohm-cm	RT-1 MHz	10 ⁻⁶ °C	Grams/cm ³	
AlN Aluminum Nitride	170-190	>10 ¹⁴	8.9	4.6	3.30	High thermal conductivity. No toxic. Readily available.
Al₂O₃ 99.5% Aluminum Oxide (94%-98% also available)	36	>10 ¹⁴	9.8	8.2	3.89	Good electrical properties. Corrosive resistance. Strong metallization.
BeO 99% Beryllium Oxide	260	>10 ¹⁴	6.7	8.5	2.85	High thermal conductivity. Good electrical properties. Strong Metallization.
Si₃N₄ Silicon Nitride	42	>10 ¹⁴	9.0	3.0	3.29	Thermal shock resistance. High strength.
Sapphire	40	>10 ¹⁶	9.4	8.4	3.98	Chemically inert. Hermetic brazing. High light transmission.
SiC Silicon Carbide	120	>10 ¹⁴	9.0	4.5	3.21	Chemically inert. Thermal shock resistance. High thermal conductivity.
ZrO₂ Zirconia	2.2	>10 ¹³	9.0	10.3	6.04	Impact and wear resistant. High strength. Corrosive resistance.

NOTE: The information set forth herein is offered for comparison only.



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