

Aluminum Nitride

Property Comparison*

Property	Ceralloy® 1370DP	Ceralloy® 1370CS	Ceralloy® 1370-1E
Process	Sinter	Hot Press	Hot Press
Purity	98.0%	99.0%	99.8%
Color	Tan	Black	Black
Density (g/cc)	3.30	3.26	3.26
Grain Size μm	10	10	4
Mechanical			
Flexural Strength (MPa) @ RT	260	200	330
Weibull Modulus	10	37	10
Elastic Modulus (GPa)	320	320	320
Poisson's Ratio	0.22	0.24	0.22
Hardness (Kg/mm ²)	1110	1000	1100
Fracture Toughness (MPam ^{1/2})	3.1	3.1	2.5
Thermal			
Thermal Expansion Coeff. 10 ⁻⁶ /°C; (RT – 1000 °C)	6.2	5.6	4.9
Thermal Conductivity (W/mK) @ 25 °C	180-200	170	80
Electrical			
Electrical Resistivity (ohm-cm)	10 ¹⁵	10 ¹⁵	10 ¹⁴
Dielectric Constant	8.7	8.9	8.9
Applications	Semiconductor Components; Windows, Heaters, Chucks Microwave Components; Collector Rods, Helix Support Rods, Windows	Semiconductor Components; Windows, Heaters, Chucks	Semiconductor Components; Windows, Heaters, Chucks, Clamp Rings, Rings, Gas Distribution Plates
Key Features	High Thermal Conductivity	High Thermal Conductivity	

* Property values are typical and should not be considered specifications.

