

Aluminum Oxide

Property Comparison*

Property	Ceralloy® 138-TPA	Ceralloy® 138-CIM	Ceralloy® 138-DM	Ceralloy® ZTA10-CIM
<i>Process</i>	Sinter	CIM / Sinter	CIM / HIP	CIM /Sinter
<i>Purity</i>	99.9%	99.8%	99.9%	97.2%
<i>Density (g/cm³)</i>	3.99	3.94	3.98	4.21
<i>Flexural Strength (MPa)</i>	300	415	520	500
<i>Fracture Toughness (MPam^{1/2})</i>	3.8		3.5	5
<i>Hardness (Kg/mm²)</i>		1826	1900	1630
<i>Elastic Modulus (GPa)</i>	395	352	410	324
<i>Thermal Expansion Coefficient 10⁻⁶/K</i>	8.3	6.8	9.2	8.0
<i>Thermal Conductivity (W/mK)</i>	35		31	
<i>Thermal Resistivity (Ohm-cm)</i>	>10 ¹⁵		10 ¹⁴	
<i>Key Features</i>	Translucent	Electrical Insulator Wear Resistance	Translucent	Combination of Toughness and Hardness

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

