

MATERIAL SPECIFICATIONS

ALUMINA										ZIRCONIA					
Properties	Units	Al ₂ O ₃ 99.7%	Al ₂ O ₃ 99.99%	Polycrystalline Ruby	Zirconia Toughened Alumina	Zirconia Toughened Alumina	Zirconia Toughened Ruby	Zirconia ZrO ₂ -3Y	Zirconia ZrO ₂ -3Y	Zirconia Alumina	Zirconia Alumina	Zirconia Alumina			
SPT Denomination		A	C	R	AZ	CT	AZR	Z	ZBL	ZF	AZO				
Density	g/cm ³	3.9	3.98	3.9	4.25	4.0	4.25	6.0	6.0	6.0	5.5				
Color		Ivory	White (Translucent available)	Red (Translucent available)	White	White	Pink	Ivory	Black	White	White				
Flexural Strength Typical (4 Points)	MPa	310	710 1)	710	930	750	930	1'350	1'350	1'400	2'000				
Hardness	HV 1	1'800	2'180	2'200	2'060	2'150	2'100	1'300	1'300	1'300	1'500				
Grain Size	µm	< 3	< 1	< 2	< 0.9	< 1.5	< 0.9	< 0.6	< 0.6	< 0.6	< 0.5				
Thermal Conductivity	W/mK	30	30	30	27	30	27	2	2	2	6				

SPT does not guarantee results or warrant that materials are suitable for any particular purpose. Material selection and testing is the responsibility of the user.

1) 3 Points : 1021 MPa

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