

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
SPT Denomination		A	C	R	CT	AZ	AZR	Z	ZBL	ZF	AZO
Density	g/cm ³	3.9	3.98	3.9	4.0	4.25	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	750	930	930	1'350	1'350	1'400	2'000
Hardness	HV 1	1'800	2'180	2'200	2'150	2'060	2'100	1'300	1'300	1'300	1'500
Grain Size	µm	< 3	< 1	< 2	< 1.5	< 0.9	< 0.9	< 0.6	< 0.6	< 0.6	< 0.5
Thermal Conductivity	W/mK	30	30	30	30	27	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.

Revised : September 2016

1) 3 Points : 1021 MPa



SPT Roth Ltd.
Werkstrasse 28,
CH-3250 Lyss, Switzerland
Tel : +41 32 387 80 80
Fax : +41 32 387 80 88
E-Mail : cim-ch@spt.net

Small Precision Tools Inc.
1330 Clegg Street,
Petaluma, CA 94954, USA
Tel : +1 707 762 5880
Fax : +1 707 778 2271
E-Mail : cim-usa@spt.net

SPT Asia Pte. Ltd.
970 Toa Payoh North, #07-25/26,
Singapore 318992
Tel : +65 6253 5577
Fax : +65 6250 2725
E-Mail : cim-sg@spt.net

Small Precision Tools Co. Ltd.
A2 Building, Liyuan Economic Development Zone,
Wuxi, Jiangsu, P.R.China 214072
Tel : +86 510 8516 1968
Fax : +86 510 8516 5233
E-Mail : cim-cn@spt.net

spt.net

