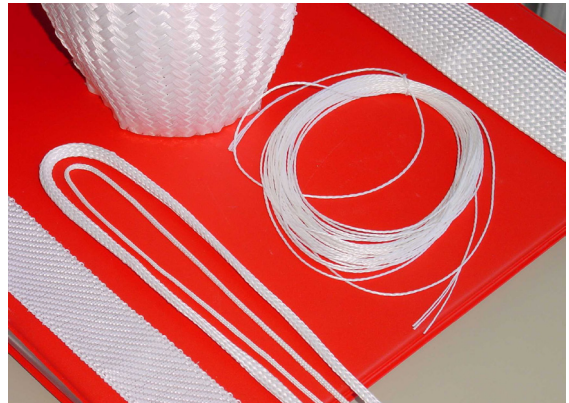




Technical Data Bulletin Alumina Textiles Type AS-7M

General Information

ZIRCAR Ceramics Alumina Textile Type AS-7M consists of very pure polycrystalline filament yarn fabricated into a useful range of conventional textile forms. Unlike conventional (50/50) Al₂O₃-SiO₂ textiles TYPE AS-7M retains 100% of its tensile strength up to continuous temperatures as high as 1200C (2192F). AS-7M is free of boron oxide making textiles made from it suitable for semiconductor processing and other demanding thermal process applications.



Characteristics & Properties

Composition, wt%	
Al ₂ O ₃	70
SiO ₂	30
Fiber diameter, micron	7
Crystal Type	Gamma Al ₂ O ₃
Tensile Strength, kgf/mm ²	200
Tensile Modulus, kgf/mm ²	17,000
Density, g/cm ³	2.9

Availability

Yarn	67 to 3700 TEX
	0.3 to 2.0 mm diameter
Cloth	145 to 940 g/m ²
	Twill or Plain Weave
Tape	25 & 50mm wide
	0.6 to 1.3mm thick
Braided Sleeve	0.5mm to 95mm ID
Sewing Thread	0.3 to 1.0mm diameter

All Forms of AS-7M

Standard Yarn Products							
Type	Form	Yield, g/1000m	F.D., µmø	Twist, T/m	Quantity, kg/ bobbin	Length, m/ bobbin	O.D., mmø
S-640D	Two ply	67	7	90	ab. 0.5	ab. 7500	0.3
S-1280D	Two ply	133	7	90	ab. 1.0	ab 7500	0.5
S-1920D	Three ply	100	7	90	ab. 1.0	ab 5000	0.6
S-3840D	Three ply	400	7	90	ab. 1.0	ab 2500	0.7

Standard Sewing Thread Products							
Type	Yield, g/1000m	F.D., µmø	Twist, T/m	Quantity, kg/ bobbin	Length, m/ bobbin	O.D., mmø	Note
T-5760D	620	7	170	400	645	1	Hand sewing
CT-2560D	330	7	180	350	1060	0.5	Machine sewing
CT-5120D	660	7	180	350	530	0.8	Machine sewing

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Standard Rope, Cord Products						
Type	Form	O.D., mmø	Twist, t/m	Weight, g/m	Length, m/bobbin	Quantity, g/bobbin
RP-18	Twisted rope	2	100	3.8	130	500
CD-2	Braided cord	2	-	3.7	50	185
CD-3	Braided cord	3	-	5.4	50	270

Standard Woven Fabric Products			Yarn Count (per inch)			Thickness, mm	
Type	Weave	Yield of Yarn, tex	Warp	Fill	Weight, g/m ³	JIS	ASTM
3025-T	Twill	200	30	25	440	0.35	0.55
1111-P	Plain (mesh)	620	11	11	550	0.68	0.87
0909-P	Plain (mesh)	200	9	9	145	0.21	0.41
2626-P	Plain	133	6	26	280	0.21	0.31
2525-P	Plain	67	25	25	135	0.12	0.21
2220-S	Satin	400	22	20	670	0.61	0.97
4018-D	Double twill	400	40	18	940	0.80	1.35

Standard Woven Tape Products			Yarn Count (per inch)			Thickness, mm		
Type	Weave	Yield of Yarn, tex	Warp	Fill	Weight, g/m ³	JIS	ASTM	Width, mm
TP-25S	Twill	200	30	22	11	0.32	0.5	25
TP-25D	Twill	600	48	11	37	1.2	1.87	25
TP-30S	Plain	200	30	22	13	0.32	0.45	30
TP-50S	Plain Twill	200	30	22	22	0.32	0.45/0.53	50

Standard Braided Sleeving Products					
Type	Yield of Yarn, tex	I.D., mm	Weight, g/m	Picks	Quantity, m/roll
SV-1-XP	33	0.3	0.7	16	50
SV-1-SP	67	0.5	1.3	16	50
SV-1	133	1	2	16	50
SV-2	200	2	7	16	50
SV-6		6	12	24	50
SV-12		12	24	48	ab. 25
SV-18		16	38	64	ab. 25
SV-20		20	44	96	ab. 25
SV-40		40	91	96	ab. 25
SV-60*		60	182	96	ab. 25
SV-85*		400	85	333	96
SV-95*	95		390	96	ab. 25

* Composition of SV-60, SV-85 & SV-97 is 60% Al₂O₃ and 40% SiO₂



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