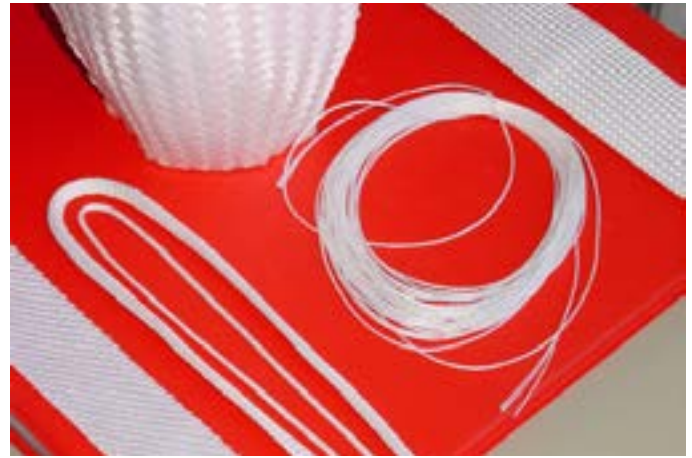




Alumina Textiles Type AS-7M

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 common (50/50) Al_2O_3 - SiO_2 textiles, Type AS-7M retains 100% of its tensile strength up to continuous temperatures as high as 1200°C (2192°F). AS-7M is free of boron oxide, making insulating components made from it suitable for semiconductor processing. AS-7M is also used as reinforcement of ceramic matrix composites and for strengthening low-density ceramic fiber and microporous silica insulation structures. AS-7M cloth is useful as a separator in vacuum brazing applications.



Characteristics & Properties

Composition, wt%	
Al_2O_3	72
SiO_2	28
Fiber diameter, micron	7
Crystal Type	Gamma Al_2O_3
Tensile Strength, kgf/mm ²	200
Tensile Modulus, kgf/mm ²	17,000
Density, g/cc	2.9

Availability

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

Availability - All Forms of AS-7M.

In addition to standard textile forms such as yarn, woven tape and cloth, braided sleeve and chord that are shown below, custom crafted fabrications are also offered. Pictured on the right are insulation pillows for use on Hi Temp mechanical testing apparatus. Please send us your drawing for quotation.



In the tables below, * denotes stocked cloth styles available from inventory.

Standard Sewing Thread Products

Type	Note	Yield, g/1000m	F.D., $\mu m\phi$	Twist, T/m	Quantity, kg/bobbin	Length, m/bobbin	O.D., mm ϕ
T-5760D	Hand sewing	620	7	170	ab. 0.40	ab. 645	1
CT-2560D	Machine sewing	330	7	180	ab. 0.35	ab. 1060	0.5
CT-5120D	Machine sewing	660	7	180	ab. 0.35	ab. 530	0.8

ZIRCAR Ceramics, Inc.

PO Box 519
100 N. Main St., Florida, NY 10921-0519
Telephone: (845) 651-6600
E-mail: sales@zircarceramics.com

Technical Data Bulletin
Alumina Textiles Type AS-7M
www.zircarceramics.com
Page 1 of 2

Alumina Textiles Type AS-7M

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 Tape Products			Yarn Count (per inch)		Thickness, mm		Width, mm	
Type	Weave	Yield of Yarn, tex	Warp	Fill	Weight, g/m ³	JIS		ASTM
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 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 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	ab. 25
SV-95*	95		390	96	ab. 25	

The data presented herein is intended to help the user to determine the appropriateness of this material for their application. This data is a nominal representation of this product's properties and characteristics and therefore should not be used in preparing specifications.

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



ZIRCAR Ceramics, Inc.

PO Box 519

100 N. Main St., Florida, NY 10921-0519

Telephone: (845) 651-6600

E-mail: sales@zircarceramics.com

www.zircarceramics.com

Revision Date April 13, 2023