SUMITUBE ® FE3 (AS23053/13)

FLEXIBLE FLUOROELASTOMER, 2:1 SHRINK RATIO

PRODUCT FEATURES;

- MEETS ALL MATERIAL AND FUNCTIONAL REQUIREMENTS OF MILITARY SPECIFICATION AS23053/13
- ROHS / ROHS2 / ROHS3 COMPLIANT
- RUBBER-LIKE, HIGHLY FLUID RESISTANT, FLAME RETARDED FLUOROELASTOMER HEAT-SHRINKABLE TUBING
- MEETS THE STRINGENT OUTGASSING REQUIREMENTS OF NASA SP-R-0022A
- SHRINK TEMPERATURE SIGNIFICANTLY LOWER THAN ANY OTHER FLUOROELASTOMER SHRINK TUBING ON THE MARKET
- SHRINK TEMPERATURE : 120 °C
- OPERATING TEMPERATURE RANGE: -40 °C TO +200 °C AND UP TO 300 °C FOR SHORT PERIODS.

BASIC PROPERTIES

- MATERIAL : FLEXIBLE FLUOROELASTOMER
- SHRINK RATIO : 2:1
- COLOR : BLACK, WHITE (AVAILABLE ONLY IN BLACK AND WHITE)
- APPLICATIONS : WHERE RESISTANCE TO AGGRESSIVE SOLVENTS AND HIGH TEMPERATURES IS REQUIRED, E.G. BUNDLING, HARNESSING AND ENVIRONMENTAL PROTECTION WITHIN ENGINE COMPARTMENTS

PROPERTIES :

NOMINALSIZE	As Supplied		After Recovery			
	Inside Diameter As Supplied(Minimum)		Inside Diameter After Recovery(Maximum)		Wall Thickness After Recovery(Nominal)	
	Inch	(MM)	Inch	(MM)	Inch	(MM)
1/8	.125	3.2	.062	1.6	.031	0.80
3/16	.187	4.8	.093	2.4	.035	0.90
1/4	.250	6.4	.125	3.2	.035	0.90
3/8	.375	9.5	.187	4.8	.035	0.90
1/2	.500	12.7	.250	6.4	.035	0.90
5/8	.625	15.9	.312	7.9	.042	1.10
3/4	.750	19.1	.375	9.5	.042	1.10
7/8	.875	22.2	.437	11.1	.049	1.20
1	1.000	25.4	.500	12.7	.049	1.20
1 1/4	1.250	31.8	.625	15.9	.055	1.40
1 1/2	1.500	38.1	.750	19.1	.055	1.40
2	2.000	50.8	1.000	25.4	.065	1.70

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PERFORMANCES

PROPERTIES	ITEMS	REQUIREMENTS	TEST METHOD
PHYSICAL	Tensile strength (psi)	1200 min.	ASTM D 638
	Elongation (%)	250 min.	ASTM D 638
	Tensile stress @ 200% elongation (psi)	2000 max.	ASTM D 412
	Cold impact (-40 °C)	No cracking	ASTM D 746
	Heat shock (300 °C, 4 hrs.)	No cracking	AS23053
	Heat resistance (250 °C, 168 hrs.): Elongation (%)	200 min.	ASTM D 638
	Heat resistance: Tensile strength (psi)	1200 min.	ASTM D 638
	Longitudinal change (%)	-20 max.	AS23053
ELECTRICAL	Dielectric withstand (volts/mil)	200 min.	ASTM D 876
	Volume resistivity (ohm-cm)	1.0×10^{11} min.	ASTM D 876
CHEMICAL	Copper mirror corrosion (175 °C, 16 hrs.)	No corrosion	AS23053
	Water absorption (%)	0.5 max.	ASTM D 570
	Fluid resistance (23 °C, 24 hrs.): Tensile strength (psi)	1200 min.	AS23053
	Fluid resistance (23 °C, 24 hrs.): Elongation (%)	250 min.	AS23053
	Flammability	15 sec. max.	AS23053
	Shrink temperature, nominal	120 °C	

Specification references: AS23053/13
NASA SP-R-0022A

ORDERING INFORMATION

COLOR	BLACK, WHITE (AVAILABLE ONLY IN BLACK AND WHITE)			
PACKAGING	SPOOLED (S)			
HOW TO ORDER	(Type of material)	(Size)	(Color)	(Packaging)
ORDERING EXAMPLE:	FE3	1/4	Black	S

SUMITOMO ELECTRIC INTERCONNECT PRODUCTS, INC.

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SUMITOMO ELECTRIC GROUP

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