

■ Basic Properties

- (1) Materials : Irradiated cross-linked flexible flame-retardant polyolefin
- (2) Shrink temperature : min. 90°C
- (3) Shrink Ratio : Radial change: min. 50%
: Longitudinal change: -5 ± 5%
- (4) Continuous Operating Temperature : -55 to 125°C

■ Features

- (1) UL/CSA approved
- (2) Flame Retardant
- (3) Flexible

■ Specification/Approvals

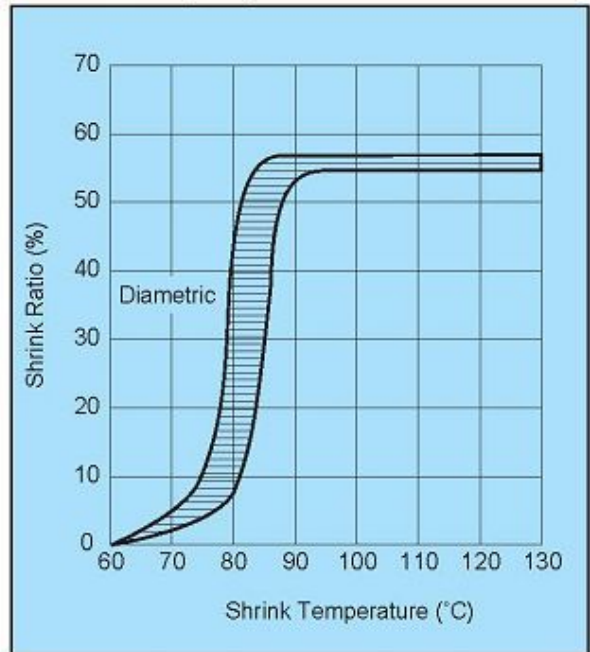
UL224

File No. E48762
Catalog No. Sumitube F32
Rating temperature: 125°C
Rating voltage: 600V
Flammability: VW-1

CSA C22.2

File No. LR33298
Rating temperature: 125°C
Rating voltage: 600V
Flammability: VW-1

■ Shrink Property



Flammability rating (-F-) test registration No.: F-SPE3-001~F-SPE3-004

■ Marking on the surface

☒ SUMI - PAC SUMITUBE F32 CSA 125°C VW-1-F-(Sixe) Ⓢ

■ Application

- (1) Insulation, protection and reinforcement for termination and joints of electric wire
- (2) Colour identification and bundling for electric wires
- (3) Insulation and protection for resistor and condenser

■ Colours

Black, Brown, Red, Orange, Yellow, Green, Blue, Purple, Grey, White

■ Properties [UL224]

Properties	Items	Requirements	Typical values*1
Mechanical	Tensile strength (before aging)	min. 10.4MPa	13.2MPa
	Tensile strength (after aging)	158°Cx 7 days, min. 7.3MPa	13.4MPa
	Elongation (before aging)	min. 200%	325%
	Elongation (after aging)	158°Cx 7 days, min. 100%	350%
	Heat shock	250°Cx 4 hours, no crack	pass
	Cold bend	-30°Cx 1 hour, no crack	pass
Electrical	Voltage resistance(before aging)	AC2.5kV x 60 sec. no breakdown	pass
	Voltage resistance(after aging)	158°C x 7 days, AC2.5kV x 60 sec., no breakdown	pass
	Dielectric breakdown (before aging)	min. AC2.5kV	19.1kV
	Dielectric breakdown (after aging)	158°C x 7 days, min. 50% of original and min. AC2.5kV	pass
	Volume resistivity	min. 1.0 x 10 ¹⁴ Ω·cm	1.6 x 10 ¹⁵ Ω·cm
Chemical	Corrosion against bare copper	158°C x 7 days, no corrosion after leaving under humidity 95%, 23°C x 24 hours	pass
	Stability against copper	158°C x 7 days, elongation min. 100% after leaving under humidity 95%, 23°C x 24 hours	325%
	Flammability	Flame-retardant, pass VW-1	pass

*1: For reference use only

Sizes

(Inch Sizes)	Supplied ID(mm)		Recovered ID(mm)		Unit Length(m)
	Inside diameter	Well thickness(nom)	Inside diameter(max)	Wall thickness(min.)	
3/64	1.6 ± 0.2	0.20	0.60	0.33	200
1/16	2.1 ± 0.2	0.20	0.80	0.36	200
3/32	2.7 ± 0.2	0.25	1.20	0.44	200
1/8	3.6 ± 0.2	0.25	1.60	0.44	100
3/16	5.2 ± 0.3	0.25	2.40	0.44	100
1/4	6.8 ± 0.4	0.30	3.20	0.56	50
3/8	10.0 ± 0.4	0.30	4.80	0.56	50
1/2	13.2 ± 0.5	0.30	6.40	0.56	50
3/4	20.0 ± 0.6	0.35	9.50	0.69	50
1	26.6 ± 0.8	0.40	12.70	0.77	50

(METRIC SIZE)

1 x 0.20	1.4 ± 0.2	0.20	0.50	0.33	200
1.5 x 0.20	2.0 ± 0.2	0.20	0.75	0.36	200
2 x 0.20	2.5 ± 0.2	0.20	1.00	0.44	200
2.5 x 0.25	3.0 ± 0.2	0.25	1.25	0.44	200
3 x 0.25	3.5 ± 0.3	0.25	1.50	0.44	200
3.5 x 0.25	4.0 ± 0.3	0.25	1.75	0.44	200
4 x 0.25	4.5 ± 0.3	0.25	2.00	0.44	200
5 x 0.25	5.4 ± 0.3	0.25	2.50	0.56	100
6 x 0.25	6.4 ± 0.4	0.25	3.00	0.56	100
7 x 0.25	7.4 ± 0.4	0.25	3.50	0.56	50
8 x 0.25	8.4 ± 0.4	0.25	4.00	0.56	50
9 x 0.25	9.4 ± 0.4	0.25	4.50	0.56	50
10 x 0.25	10.4 ± 0.4	0.25	5.00	0.56	50
11 x 0.25	11.4 ± 0.4	0.25	5.50	0.56	50
12 x 0.25	12.4 ± 0.4	0.25	6.00	0.56	50
13 x 0.30	13.5 ± 0.4	0.30	6.50	0.69	50
14 x 0.30	14.5 ± 0.4	0.30	7.00	0.69	50
15 x 0.30	15.5 ± 0.5	0.30	7.50	0.69	50
16 x 0.30	16.8 ± 0.5	0.30	8.00	0.69	50
18 x 0.35	18.7 ± 0.5	0.35	9.00	0.77	50
20 x 0.35	21.2 ± 0.6	0.35	10.00	0.77	50
22 x 0.40	23.2 ± 0.6	0.40	11.00	0.77	50
25 x 0.40	26.1 ± 0.8	0.40	12.50	0.87	50
28 x 0.50	29.0 ± 1.0	0.50	14.00	0.87	50
30 x 0.50	32.0 ± 1.0	0.50	15.00	0.87	50