Sumitube™ K

Highly heat/oil/chemical resistant, clear, flame-retardant heat shrinkable tubing
SAE-AMS/UL/CSA approved

Catalog No. 852

Sumitube™ K2

Highly heat/oil/chemical resistant, clear, flame-retardant heat shrinkable tubing
SAE-AMS/UL approved

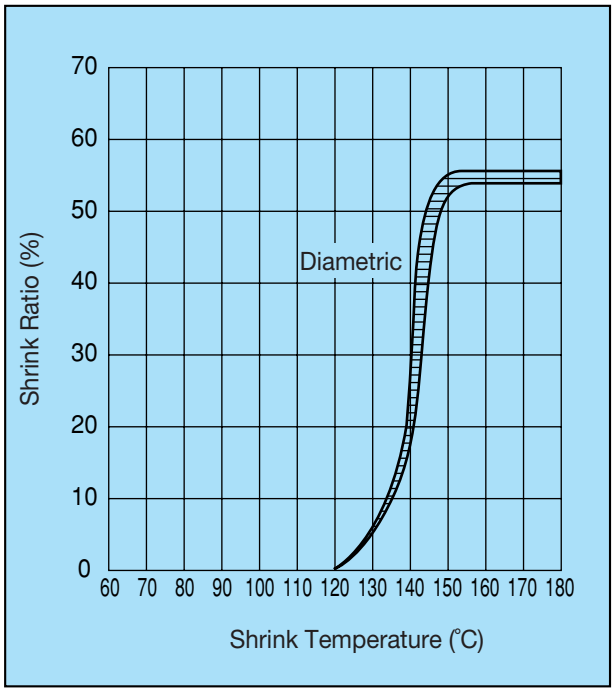
Catalog No. 875

✓RoHS directive

Basic Properties

(1) Materials : Irradiated cross-linked semi-rigid flame-retardant PVdF
(2) Shrink temperature : min. 150˚C
(3) Shrink Ratio : Radial change: min. 50%
: Longitudinal change (K): 0 +/- 10%
: Longitudinal change (K2): -10 to 5%
(4) Continuous Operating Temperature : -55 to 175˚C

Shrink Property



Features

(1) SAE-AMS/UL approved (and CSA for K)
(2) Flame-retardant
(3) Transparent colours
(4) Thin wall
(5) Semi-rigid
(6) Highly resistant against oil and chemicals

Specification/Approvals

Sumitube™ K: SAE-AMS-DTL-23053/8

UL224
File No. E75077
Catalog No. Sumitube™ K or 852
Rating temperature: 150˚C
Rating voltage: 600V
Flammability: VW-1

CSA C22.2 No. 198.1
File No. LR33298
Rating temperature: 150˚C
Rating voltage: 600V
Flammability: VW-1

Electrical Appliance and Material Safety Law (Japan)
Flammability rating (-F-) test registration No.: F-STS3-017 - F-STS3-020

Sumitube™ K2: SAE-AMS-DTL-23053/18 Class 1

UL224
File No. E70631
Catalog No. Sumitube™ K2 or 875
Flammability: VW-1

Electrical Appliance and Material Safety Law (Japan)
Flammability rating (-F-) test registration No.: F-STS3-017 - F-STS3-020

Application

(1) Insulation, protection and reinforcement for termination and joints of electric wire
(2) Protection for wire and devices which are used under high temperature, chemicals and oils.
(3) Mechanical protection for metal wire
(4) Fixing and protection for cable labels
(5) Insulation and protection for thermistor, resistor and condenser

Colours

Black, Red, Green, Blue, White, Clear

Properties

Sumitube™ K [SAE-AMS-DTL-23053/8]

Properties	Items	Requirements	Typical values*1
Mechanical	Tensile strength (before aging)	min. 34.5MPa	41.0MPa
	Elongation (before aging)	min. 150%	405%
	Elongation (after aging)	250˚C x 7 days, min. 50%	357%
	Low temperature flexibility	-55˚C x 4 hours, no crack	pass
	Heat shock	300˚C x 4 hours, no crack	pass
	Gravity	max. 1.80	1.75
Electrical	Dielectric strength	min. 31.5kV/mm (for 1/2 inch and smaller)	43.6kV/mm
		min. 23.6kV/mm (for over 1/2 inch)	31.4kV/mm
	Volume resistivity	min. 1.0 x $10^{13}\Omega$·cm	3.8 x $10^{15}\Omega$·cm
Chemical	Transparent stability	175˚C x 24 hours, no change	pass
	Fluid resistance	After immerced at 24˚C x 24 hours,	
	Tensile strength	min. 34.5MPa	38.1MPa
	Dielectric strength	min. 19.7kV/mm	28.6kV/mm
	Flammability	Flame-retardant, pass VW-1	pass

*1: For reference use only

Sumitube™ K2 [SAE-AMS-DTL-23053/18 Class 1]

Properties	Items	Requirements	Typical values*1
Mechanical	Tensile strength (before aging)	min. 24.1MPa	37.8MPa
	Elongation (before aging)	min. 200%	404%
	Elongation (after aging)	250˚C x 7 days, min. 100%	383%
	Low temperature flexibility	-55˚C x 4 hours, no crack	pass
	Heat shock	275˚C x 4 hours, no crack	pass
	Gravity	max. 1.90	1.75
Electrical	Dielectric strength	min. 15.7kV/mm	35.4kV/mm
	Volume resistivity	min. 1.0 x $10^{11}\Omega$·cm	2.8 x $10^{15}\Omega$·cm
Chemical	Transparent stability	200˚C x 24 hours, no change	pass
	Fluid resistance	After immerced at 24˚C x 24 hours,	
	Tensile strength	min. 13.9MPa	37.4MPa
	Dielectric strength	min. 15.7kV/mm	25.2kV/mm
	Elongation	min. 100%	419.00%
	Flammability	Flame-retardant, pass VW-1	pass

*1: For reference use only

Sizes

Nominal size (inch)	Supplied ID (mm)		Recovered ID (mm)		Unit length (min.) (m)	
	Inside diameter (min.)	Wall thickness (nom.)	Inside diameter (max.)	Wall thickness	K	K2
3/64	1.20	0.10	0.60	0.25 ± 0.05	1.22	305
1/16	1.60	0.10	0.80	0.25 ± 0.05	1.22	305
3/32	2.40	0.12	1.20	0.27 ± 0.04	1.22	152.5
1/8	3.20	0.12	1.60	0.27 ± 0.04	1.22	152.5
3/16	4.80	0.12	2.40	0.27 ± 0.04	1.22	61
1/4	6.4	0.14	3.20	0.33 ± 0.05	1.22	61
3/8	9.5	0.14	4.80	0.33 ± 0.05	1.22	61
1/2	12.7	0.14	6.4	0.33 ± 0.05	1.22	61
3/4	19.1	0.18	9.5	0.43 ± 0.07	1.22	61
1	25.4	0.20	12.7	0.48 ± 0.07	1.22	61