

SUMITUBE™ SA3

[Dual wall, flame-retarded heat-shrinkable tubing with meltable adhesive for harness joints of motor vehicles]

✓ RoHS directive 10 substances

Waterproofing Flame-retarded UL recognized CSA recognized



Basic Properties

- Material : Outer : Irradiated cross-linked semi-rigid flame-retarded polyolefin
: Inner : Meltable adhesive
- Shrink temperature : min. 135°C
- Shrink ratio : Radial change : min. 75%
: Longitudinal change : min. -10%
- Continuous operating temperature : -40 to 130°C

Features

- High shrink ratio and effective for waterproofing of multiple harness joints and splices
- Recovered tube remains in position at elevated temperatures
- Flame-retarded (PBDE/PBB-free)
- Abrasion resistant

Specifications/Approvals

SFP standard (RE4-F307)

Marking on Surface

See size table

Applications

- Waterproof sealing, insulation and reinforcement for harness joints of motor vehicles/electronic devices
- Waterproof sealing of irregular-shaped components or devices used in automotive environments

Colors

- Black

Properties

Properties	Items	Requirements	Typical values*1
Mechanical	Tensile strength*2	min. 10.4MPa	25.8MPa
	Elongation	min. 300%	550%
	Heat shock	225°C x 4 hours, no crack	Pass
	Heat resistance	130°C x 7 days, no crack	Pass
	Secant modulus	min. 150MPa	463MPa
	Dynamic cut-through	min. 134N	529N
Electrical	Dielectric strength	min. 15kV/mm	20.6kV/mm
	Volume resistivity	min. $1.0 \times 10^{12} \Omega \cdot \text{cm}$	$9.6 \times 10^{15} \Omega \cdot \text{cm}$
Chemical	Flammability	SAE J1128, self-extinguish within 70 sec.	Pass
Splice performance (on representative splice configurations)	Testing to SFP internal standard		
	•Heat aging:	125°C x 1008 hours	Pass
	•Heat cycle:	125 cycles, 125°C (30 minutes) to -40°C (30 minutes)	Pass
	•Fluid resistance:	2-hour immersion in: brake fluid, engine coolant, ASTM Reference Oil #3, automatic transmission fluid	Pass

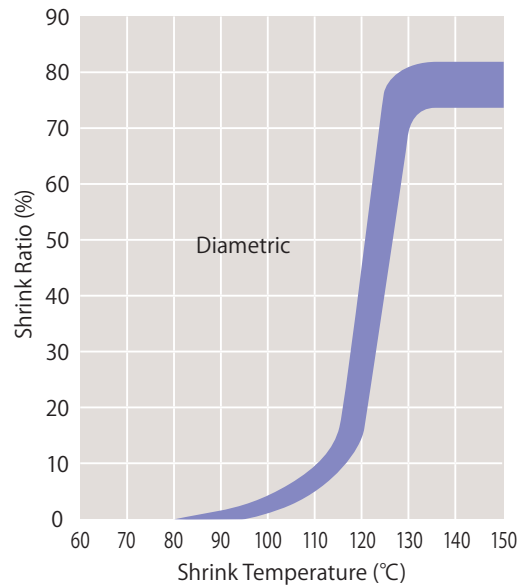
*1: For reference use only *2: Calculated by using outer cross section

Sizes

Trade size (mm)	As supplied (mm)		After recovered (mm)			Unit length (min.) (m)	Marking
	Inside diameter (min.)	Wall thickness*3 (nom.)	Inside diameter (max.)	Wall thickness*3 (min.)	Adhesive thickness (nom.)		
5.8/1.2	5.80	0.45	1.26	1.20	0.56	1.22	SA3-1
7.5/1.6	7.5	0.60	1.64	1.52	0.76	1.22	SA3-2
10.9/2.4	10.9	0.70	2.40	1.91	1.02	1.22	SA3-3
17.8/4.4	17.8	0.80	4.45	2.41	1.37	1.22	SA3-4

*3: Including inner adhesive

Shrink Properties



SUMITUBE™

A
C
A4
LA
C (UL)
D
A2

B
LB

F (Z)
F3 (Z)
NHR2
NHR4
V (300V)
V (600V)

F2 (Z)
F4 (Z)
B2
B2 (3X)
B8

K
K2

KH200 (TW)

KH230 (TW)

B6
R
AN25

W

O2C
W3C

O2B2
W3F2
W3B2
W3B2 (4X)
SA2
SA3

IRRAX™TUBE IRRAX™TAPE

A
B
F2
F2 (UL)
V2
RP3
B8
ER2
NHR
FE2
VZL

IRRAX™SLEEVE

SCM2
SBI
300/350
SNHM

Composite articles

SUMISEAL
SUMITUBE SA3 CAP

Processing equipment

SUMISHRINKER / HEATING GUN