

SUMITUBE™ V (600V)

[105°C rating, transparent flame-retarded heat-shrinkable tubing] UL/CSA recognized

Catalog No. 835 ✓ RoHS, EU REACH directive

Waterproofing Flame-retarded UL recognized CSA recognized



Basic Properties

- Material : Flexible flame-retarded polyvinyl chloride
- Shrink ratio : Radial change: min. 50%
: Longitudinal change: min. -30%
- Continuous operating temperature : -30 to 105°C

Features

- UL224 (cULus) recognized
- Flame-retarded
- Transparent

Specifications/Approvals

UL224

File No. E48762 Catalog No. 835 Rating temperature: 105°C
Rating voltage: 600V Flammability: VW-1

CSA C22.2 No. 198.1

File No. LR33298 Rating temperature: 105°C
Rating voltage: 600V Flammability: VW-1

Electrical Appliance and Material Safety Law (Japan)

Flammability rating (-F-) test registration No.: F-STS3-001 to F-STS3-008

Marking on Surface

105°C VW-1 SUMITOMO-K SUMITUBE V CAT 835 CSA 105°C VW-1 -F-

Applications

- Insulation, protection and reinforcement for termination and joints of electric wire
- Fixing and protection for cable markers
- Insulation and protection of resistors and capacitors

Properties [UL224]

| Properties | Items | Requirements | Typical values*1 |
|------------|-------------------------------------|---|---|
| Mechanical | Tensile strength (before aging) | min. 10.4MPa | 27.7MPa |
| | Tensile strength (after aging) | 136°C x 7 days, min. 7.3MPa | 29.0MPa |
| | Elongation (before aging) | min. 100% | 340% |
| | Elongation (after aging) | 136°C x 7 days, min. 100% | 320% |
| | Deformation | 131°C x 1 hour, max. 35% | 27% |
| | Heat shock | 180°C x 4 hours, no crack | Pass |
| Electrical | Cold bend | -30°C x 1 hour, no crack | Pass |
| | Dielectric withstand (before aging) | AC2.5kV x 60 sec., no breakdown | Pass |
| | Dielectric withstand (after aging) | 136°C x 7 days, AC2.5kV x 60 sec., no breakdown | Pass |
| | Dielectric breakdown (before aging) | min. AC2.5kV | 17.5kV |
| | Dielectric breakdown (after aging) | 136°C x 7 days, min. 50% of original and min. AC2.5kV | Pass |
| Chemical | Volume resistivity | min. $1.0 \times 10^{10} \Omega \cdot \text{cm}$ | $5.3 \times 10^{12} \Omega \cdot \text{cm}$ |
| | Corrosion against bare copper | 136°C x 7 days, no corrosion after leaving under 95% humidity, 23°C x 24 hours | Pass |
| | Stability against copper | 136°C x 7 days, elongation min. 70% after leaving under 95% humidity, 23°C x 24 hours | 300% |
| | Flammability | Flame-retarded, 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*2 (min.) | Wall thickness (nom.) | Inside diameter (max.) | Wall thickness (nom.) | |
| 3/64 | 1.20 | 0.20 | 0.60 | 0.44 | 100 |
| 1/16 | 1.60 | 0.20 | 0.80 | 0.44 | 100 |
| 3/32 | 2.40 | 0.25 | 1.20 | 0.56 | 100 |
| 1/8 | 3.20 | 0.25 | 1.60 | 0.56 | 100 |
| 3/16 | 4.80 | 0.25 | 2.40 | 0.56 | 100 |
| 1/4 | 6.4 | 0.25 | 3.20 | 0.56 | 50 |
| 3/8 | 9.5 | 0.25 | 4.80 | 0.56 | 50 |
| 1/2 | 12.7 | 0.25 | 6.4 | 0.56 | 50 |
| 3/4 | 19.1 | 0.30 | 9.5 | 0.69 | 50 |
| 1 | 25.4 | 0.35 | 12.7 | 0.77 | 50 |

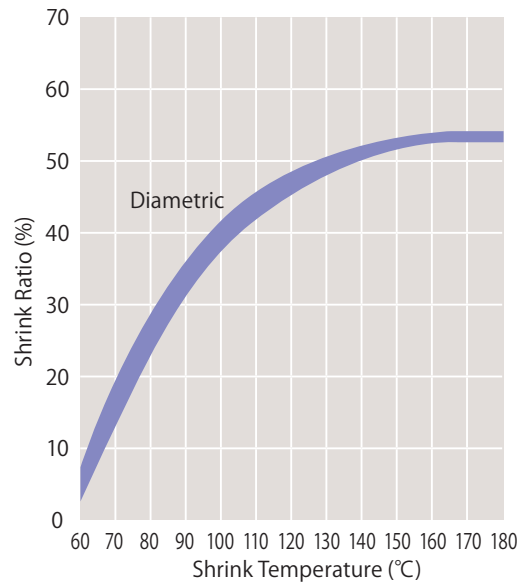
*2: Actual inside diameter is 20% larger than above

Tube storage conditions and natural shrinkage of tubes

Due to the characteristics of its raw material, polyvinyl chloride, SUMITUBE V tends to start shrinking when heated above 40°C. Store this product in a cool dark place away from direct sunlight.

Note: SUMITUBE V may crack if heated locally with high heat. Determine the optimal tube heating conditions while checking how the tube shrinks.

Shrink Properties



Colors

- Clear

SUMITUBE™

A
C
A4
SUMITUBE LA
C (UL)
D
A2

B
SUMITUBE LB

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

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

K
SUMITUBE K2

SUMITUBE KH200 (TW)

SUMITUBE KH230 (TW)

B11
SUMITUBE B6
R
AN25

SUMITUBE W

SUMITUBE O2C
W3C

O2B2
W3F2
W3B2
SUMITUBE W3B2 (4X)
W5B11
SA2
SA3

IRRAX™TUBE IRRAX™TAPE

A
B
F2
F2 (UL)
V2
IRRAXTUBE RP3
BB
ER2
NHR
NHR4
FE2
IRRAXTAPE VZL

IRRAX™SLEEVE

SCM2
IRRAXSLEEVE SBI 300/350
SNHM

Composite articles

SUMISEAL
SUMITUBE SA3 CAP

Processing equipment

SUMISHRINKER / HEATING GUN