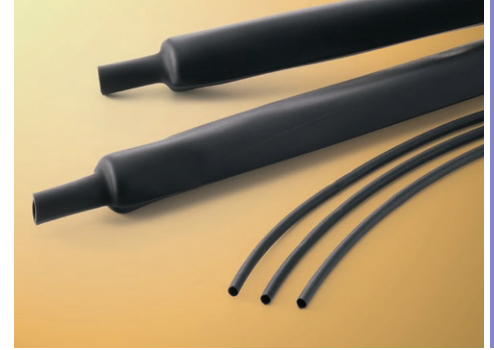


SUMITUBE™ NHR2

[125°C rating, halogen-free, flame-retarded, heat-resistant tubing] UL/cULus recognized

Catalog No. 717 RoHS directive 10 substances



Basic Properties

- **Material** : Irradiated cross-linked flexible flame-retarded polyolefin
- **Shrink temperature** : min. 100°C
- **Shrink ratio** : Radial change: min. 50%
: Longitudinal change: -5 ± 5%
- **Continuous operating temperature** : -55 to 125°C

Features

- UL recognized Flexible
- Flame-retarded (halogen-based flame-retardant-free)

Specifications/Approvals

UL224
File No. E48762 Rating temperature: 125°C
Rating voltage: 600V Flammability: VW-1

Marking on Surface

125°C VW-1 SUMITUBE NHR2 -F- XXX
(XXX indicates size)

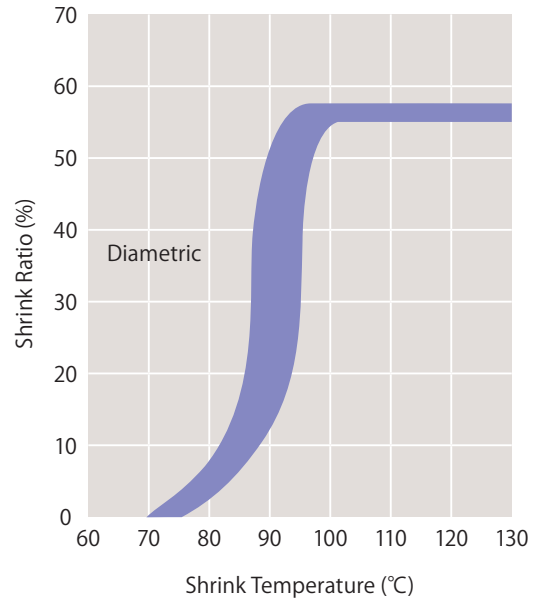
Applications

- Insulation, protection and reinforcement for termination and joints of electric wire
- Color identification and bundling for electric wires

Colors

- Black

Shrink Properties



Properties [UL224]

Properties	Items	Requirements	Typical values*1
Mechanical	Tensile strength (before aging)	min. 10.4MPa	11.9MPa
	Tensile strength (after aging)	158°C x 7 days, min. 7.3MPa	11.5MPa
	Elongation (before aging)	min. 200%	510%
	Elongation (after aging)	158°C x 7 days, min. 100%	460%
	Heat shock	250°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)	158°C x 7 days, AC2.5kV x 60 sec., no breakdown	Pass
	Dielectric breakdown (before aging)	min. AC2.5kV	16.0kV
	Dielectric breakdown (after aging)	158°C x 7 days, min. 50% of original and min. AC2.5kV	Pass
Chemical	Volume resistivity	min. 1.0 x 10 ¹⁴ Ω·cm	4.0 x 10 ¹⁵ Ω·cm
	Corrosion against bare copper	158°C x 7 days, no corrosion after leaving under 95% humidity, 23°C x 24 hours	Pass
	Flammability	Flame-retarded, pass VW-1	Pass

*1: For reference use only

Sizes

Trade size (mm)	As supplied (mm)			After recovered (mm)		Unit length (min.) (m)	Nominal size (mm)	As supplied (mm)			After recovered (mm)		Unit length (min.) (m)
	Inside diameter	Wall thickness (nom.)	Inside diameter (max.)	Wall thickness (min.)	Inside diameter			Wall thickness (nom.)	Inside diameter (max.)	Wall thickness (min.)			
1 × 0.2	1.40 ± 0.20	0.20	0.50	0.33	200	11 × 0.25	11.4 ± 0.4	0.25	5.50	0.56	50		
1.5 × 0.2	2.00 ± 0.20	0.20	0.75	0.36	200	12 × 0.25	12.4 ± 0.4	0.25	6.00	0.56	50		
2 × 0.2	2.50 ± 0.20	0.20	1.00	0.44	200	13 × 0.3	13.4 ± 0.4	0.30	6.5	0.69	50		
2.5 × 0.25	3.00 ± 0.20	0.25	1.25	0.44	200	14 × 0.3	14.5 ± 0.4	0.30	7.0	0.69	50		
3 × 0.25	3.50 ± 0.30	0.25	1.50	0.44	200	15 × 0.3	15.5 ± 0.5	0.30	7.5	0.69	50		
3.5 × 0.25	4.00 ± 0.30	0.25	1.75	0.44	200	16 × 0.3	16.8 ± 0.5	0.30	8.0	0.69	50		
4 × 0.25	4.50 ± 0.30	0.25	2.00	0.44	200	18 × 0.35	18.7 ± 0.5	0.35	9.0	0.77	50		
5 × 0.25	5.40 ± 0.30	0.25	2.50	0.56	100	20 × 0.35	21.2 ± 0.6	0.35	10.0	0.77	50		
6 × 0.25	6.4 ± 0.4	0.25	3.00	0.56	100	22 × 0.4	23.2 ± 0.6	0.40	11.0	0.77	50		
7 × 0.25	7.4 ± 0.4	0.25	3.50	0.56	50	25 × 0.4	26.1 ± 0.8	0.40	12.5	0.87	50		
8 × 0.25	8.4 ± 0.4	0.25	4.00	0.56	50	28 × 0.5	29.0 ± 1.0	0.50	14.0	0.87	50		
9 × 0.25	9.4 ± 0.4	0.25	4.50	0.56	50	30 × 0.5	32.0 ± 1.0	0.50	15.0	0.87	50		
10 × 0.25	10.4 ± 0.4	0.25	5.00	0.56	50								