



## Non-Halogen Free Flame-retardant Heat Shrinkable Tube

Safety Standard: US224 VW-1 C-UL CSA C 22.2 OFT RoHS

### Features and application

1. The (non-halogen flame-retardant environment-friendly) thermal shrinkable bushing uses excellent polymers to mix into the alloy in scientific composition and mechanical mixing. After being shaped the products continue to undergo the radiation cross-link and continuous expansion with electronic accelerator. The products are characterized by softness flame retardation fast shrinkage and stable performance which are widely used in wire connection welding protection. wire end wiring and electronic components protection and insulation treatment; the surface protection of spare parts of body-building equipments and steel structure rust resistance and treatment of related products and the marking of electrical wires and other products.

### Features

- (1) Eight heavy metal and the halogen passes the SGS inspection.
- (2) Not contain organic tin compound [Fentin(Triphenyltin-)-chloride] asbestos Azo compounds and the material restricted for release: formaldehyde.
- (3) Application:-40°C~50°C.
- (4) Initial shrinkage temperature:70°C; super-thin fully shrinkage temperature: 105°C; and ordinary fully shrinkage temperature:125°C.
- (5) Softness, flame retardation and good luster.
- (6) Complete specifications:  $\Phi 0.8 - \Phi 180$  and special specifications are subject to the orders.
- (7) Timely and large quantity of delivery.
- (8) Convenient use, it can be shrunk after being heated with oven and hot air gun.
- (9) The product complies with SonySS-00259, EU RoHs and other environmental standards.

**Standard color:** black, red, yellow, green, blue and white and special colors are upon the customer' needs.



## Performance characteristics

Performance		Testing method	Indexes	Typical	
Physical characteristics	Mpa Tensile strength Mpa	GB/T1040	≥10.4	12.6	
	Elongation at break%	GB/T1040	≥200	300	
	Mpa Tensile strength after thermal ageing Mpa	UL224 158°C x 168hr	≥7.3	9.8	
	Elongation at break after thermal ageing%	UL224 158°C x 168hr	≥100	300	
	Thermal shock resistance	UL224 158°C x 1 hr	Non-sticking	PASS	
	Cold bending resistance	UL224 -30°C x 1 hr	Non-crack	PASS	
Electrical characteristics	kv/mm Breakdown strength kv/mm	GB1418	≥1.5	1.8	
	Pressure resistance	150V	U L224	1500V non-breakdown	PASS
		600V	U L224	2500V non-breakdown	PASS
	Volume resistivity Ω.cm	GB1410	1x10 <sup>14</sup>	1x10 <sup>15</sup>	
Chemical Characteristics	Corrosion resistance	UL224 158°C x 168hr		PASS	
	Copper invariability	UL224 158°C x 168hr		PASS	
	Flame retardation	U L224	VW-1	PASS	

## Environmental protection Characteristics

Hazardous substance	Test standard	Test result
(Cd)	EN1122: 2001 METHOD B	< 5ppm
(Pb)	EPA: METHOD 3050B	< 2ppm
(Sb)	EPA: METHOD 3052	< 2ppm
(Ba)	EPA: METHOD 3052	< 2ppm
(Cr)	EPA: METHOD 3052	< 2ppm
(Hg)	EPA: METHOD 3052	< 2ppm
(As)	EPA: METHOD 3052	< 2ppm
(Se)	EPA: METHOD 3052	< 2ppm
(Fi)	EN 14582 METHOD B	N.D.
(Cl)	EN 14582 METHOD B	N.D.
(Br)	EN 14582 METHOD B	N.D.
(I)	EN 14582 METHOD B	N.D.



**Non-halogen flame-retardant (environment-friendly) thermal shrinkable bushing**

Specification	Dimension before shrinking(mm)		Dimension after shrinking (mm)		Standard packaging (m/disc)	Application (mm)
	Internal diameter	Wall thickness	Internal diameter	Wall thickness		
Φ0.8	0.9±0.2	0.20±0.05	0.40±0.1	0.32±0.05	200	0.6~0.8
Φ1.0	1.2±0.3	0.20±0.05	0.48±0.1	0.32±0.05	200	0.75~0.9
Φ1.5	1.7±0.3	0.20±0.05	0.73±0.1	0.32±0.05	200	0.95~1.4
Φ2.0	2.2±0.3	0.25±0.05	0.98±0.1	0.32±0.05	200	1.1~1.8
Φ2.5	2.6±0.3	0.25±0.05	1.23±0.2	0.35±0.05	200	1.35~2.3
Φ3.0	3.2±0.4	0.25±0.05	1.45±0.2	0.35±0.05	200	1.6~2.7
Φ3.5	3.6±0.4	0.25±0.05	1.72±0.2	0.35±0.05	200	1.85~3.2
Φ4.0	4.2±0.4	0.25±0.05	1.96±0.2	0.35±0.05	200	2.1~3.6
Φ4.5	4.6±0.4	0.25±0.05	2.20±0.2	0.35±0.05	200	2.35~4.0
Φ5.0	5.2±0.4	0.25±0.05	2.48±0.2	0.35±0.05	200	2.6~4.5
Φ6.0	6.2±0.4	0.28±0.15	2.96±0.3	0.45±0.15	200	3.1~5.4
Φ7.0	7.2±0.4	0.28±0.15	3.48±0.3	0.45±0.15	100	3.7~3
Φ8.0	8.2±0.5	0.28±0.15	3.95±0.3	0.45±0.15	100	4.2~7.2
Φ9.0	9.2±0.5	0.30±0.15	4.40±0.3	0.50±0.15	100	4.7~8.0
Φ10	10.2±0.5	0.30±0.15	4.90±0.3	0.50±0.15	100	5.2~9.0
Φ11	11.2±0.5	0.30±0.15	5.40±0.3	0.50±0.15	100	5.7~10
Φ12	12.2±0.5	0.30±0.15	5.90±0.5	0.50±0.15	100	6.2~11
Φ13	13.2±0.5	0.33±0.15	6.40±0.5	0.50±0.15	100	6.7~12
Φ14	14.2±0.5	0.35±0.15	6.90±0.5	0.50±0.15	100	7.3~13
Φ15	15.2±0.6	0.38±0.15	7.40±0.5	0.60±0.15	100	7.8~14
Φ16	16.2±0.6	0.38±0.15	7.90±0.5	0.60±0.15	100	8.3~15
Φ17	17.2±0.6	0.38±0.15	8.40±0.5	0.60±0.15	100	8.8~16
Φ18	18.2±0.6	0.40±0.15	8.90±0.5	0.60±0.15	100	9.3~17
Φ20	20.2±0.8	0.40±0.20	9.90±0.5	0.70±0.20	100	11.4~19
Φ22	22.2±0.8	0.42±0.20	10.80±1.0	0.70±0.20	100	12.4~21
Φ25	25.3±0.8	0.45±0.20	12.30±1.0	0.70±0.20	50	12.8~24
Φ28	28.3±0.8	0.45±0.20	13.50±1.0	0.70±0.20	50	14.4~29
Φ30	30.2±0.8	0.45±0.20	14.70±1.0	0.70±0.20	50	16~29
Φ35	35.2±0.8	0.50±0.20	17.30±1.0	0.80±0.20	50	18~34
Φ40	40.0±1.0	0.50±0.20	19.80±1.0	0.80±0.20	50	21~39
Φ50	50.0±1.0	0.50±0.20	24.80±1.0	0.80±0.20	50	26~49
Φ60	60.0±1.0	0.60±0.20	29.80±1.0	0.80±0.20	25	35~55
Φ70	70.0±1.0	0.65±0.20	34.00±2.0	1.00±0.20	25	40~65
Φ80	80.0±1.0	0.65±0.20	39.00±2.0	1.00±0.20	25	45~75
Φ90	90.0±1.0	0.65±0.20	44.00±2.0	1.00±0.20	25	50~88
Φ100	100.0±2.0	0.65±0.20	49.00±2.0	1.00±0.20	25	55~95
Φ120	120.0±2.0	0.70±0.20	59.00±2.0	1.20±0.20	25	65~115
Φ150	150.0±2.0	0.70±0.20	74.00±2.0	1.20±0.20	25	80~145
Φ180	180.0±2.0	0.70±0.20	88.00±2.0	1.20±0.20	25	95~175

**IMPORTADOR E DISTRIBUIDOR:** Breda Comércio e Importação Ltda.

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