

BUSBAR INSULATION AND COVERS

S1 Busbar Insulation Heat Shrink Tube 1 kV to 35 kV

The general purpose busbar insulation family covering 1 kV to 35 kV with UL 224 recognition under file E341796



Voltage Range	1 kV to 35 kV
Operating Temperature	-40 to 105 °C
Full Recovery Temperature	125 °C minimum
Shrink Ratio	2:1 2.5:1 and 3:1
Ratings Available	S1-1 S1-10 and S1-35
Approval	UL 224 file E341796

Introduction

Environmental friendly flame retardant polyolefin material, can be applied in power switchgear from 1kv to 35kv, providing insulation enhancement, protection against flashover or accidental discharge. It can be used for circular and rectangular copper or aluminum busbars.

Features

- Operating temperature: -40 to 105°C
- Minimum full recovery temperature: 125°C
- Products available for various voltage ratings (S1-1, S1-10, S1-35)
- Environmental friendly, RoHS compliant
- Shrink ratio: 2:1 & 2.5:1 & 3:1
- Standard Color: Black, other colors also available
- UL224 E341796 met
- compact profile suitable for limited space
- Equivalent to TE LVIT,BBIT,BPTM

Technical Data

Property	Test Method	Requirement
Tensile Strength	ASTM D2671	≥10.4 MPa
Ultimate Elongation	ASTM D2671	≥200%
Heat Aging (136°C/168h) Tensile Strength Ultimate Elongation	ASTM D2671	≥7.3 MPa ≥100%
Water absorption (23°C/24h)	ASTM D2671	≤1.0%
Low-temperature flexibility (-40°C/4h)	ASTM D2671	No cracking
Heat shock (200°C/4h)	ASTM D2671	No cracking, dripping or flowing
Dielectric strength Thickness less than 1.0mm Thickness 1.0mm to less than 2.0mm Thickness 2.0mm to less than 3.0mm	ASTM D2671	≥20 kV/mm ≥16 kV/mm ≥12 kV/mm
Volume resistivity	ASTM D2671	≥1.0×10 ¹³ Ω·cm
Tracking and erosion resistance	ASTM D2303	After 1hr at 2.5kV, and 1hr at 2.75kV, No burn penetration, no sustained burning
Flammability	ANSI C37.20 IEEE-27	No continuous combustion phenomenon and Self-extinguishing within 60S
Smoke index	IEC 61034	≤120

Property	Test Method	Requirement
Copper corrosion (150°C/168h)	IEC 60684-3-283	No corrosion

Dimensions

Size S1-1	As supplied(mm) Inner diameter D (min.)	After recovered (mm) Inner diameter d (max.)	Wall thickness t (nom.)	Standard length (m)	Applicable rectangular busbar(mm) L+T		Applicable round busbar(mm)) D	
2.5:1								
15/6	15	6	1.5	30	12	18	6.5	12
30/12	30	12	1.6	30	17	39	11	25
50/20	50	20	1.6	30	36	65	22	43
75/30	75	30	1.7	30	39	86	27	55
100/40	100	40	1.8	30	59	117	38	75
120/50	120	50	1.9	30	70	150	44	90
150/60	150	60	2	30	89	157	55	100
175/70	175	70	2.5	30	117	190	75	120
235/105	235	105	2.5	30	190	280	120	180
3:1								
30/10	30	10	1.8	30	17	39	11	25
75/25	75	25	2.0	30	39	86	27	55
100/35	100	35	2.3	30	59	117	38	75
120/40	120	40	2.5	30	70	150	44	90
150/50	150	50	2.5	30	89	157	55	100

Cross Reference

Tyco-Raychem: LVIT

Enquiries · enquiry@upolymer.com · WhatsApp +86 159 4096 9469 · Dalian United Polymer Material Co., Ltd., Shihe Industrial Park, Puwan New District, Dalian Liaoning 116101 China