



Bus Bar Insulation Heat Shrinkable Tubing

S1 Bus Bar Insulation Heat Shrinkable Tubing

Voltage Class 1kV~36kV Ideal for high and low voltage bus bar insulation

Medium and heavy wall heat shrinkable tubing for protection and insulation of bus bar against accidents caused by electrified bare bus bar.

Applications

- Bus bar insulation and protection
- In switchgear cabinets where space is limited and air spacing between bus bars need to be kept at minimal

Features/Benefits

- Reduces bus bar clearance requirements .
- Give designers more freedom in designing switchgear cabinets when space is premium
- Protects against accidental flashover up to 36kV
- Protects against short circuit and electrical leakage caused small animals
- Protects against corrosion, dirt and other contaminants that may cause accidental flashover
- Halogen Free (optional)
- Flame resistant with oxygen index higher than 27 (optional)
- Available in continuous length roll form for convenient and economical installation



Temperature Range

Operating Temperature :
-40 °C ~ 105 °C

Shrink Temperature :
125 °C

Colour

Red, Yellow
Black, Green

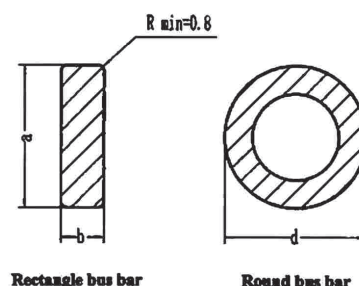
Product Code Cross References

Raychem :BBIT / BPTM
DSG Canusa :CBTM / CBTH
3M : BBI

Clearance Reduction Guide

Bus bar Type	Applicable Product	Min. Clearance Required(mm)			
		Test Value		Advice Value	
		Electrode to electrode	Electrode to ground	Electrode to electrode	Electrode to ground
Round sectional Up to 10 kV	S1-10	75	85	85	95
Rectangle sectional Up to 10 kV	S1-10	85	95	90	100
Round sectional Up to 35 kV	S1-35	160	220	200	270
Rectangle sectional Up to 35 kV	S1-35	180	260	220	285

* The table above indicates the possible clearance reductions made by using S1 tubing. These clearances should not be adopted without testing. Sharp electrodes and usual geometries may require more clearance.



Technical Details

Test item	Test Standard	Typical Performance
Tensile strength	ASTM D2671	≥10 Mpa
Break down elongation	ASTM D2671	≥400 %
Tensile strength after aging	ASTM D2671	≥10 Mpa
Break down elongation after aging(136°C for 168h)	ASTM D2671	≥400 %
Flame retardant	ASTM D2863	Oxygen Index≥27
Dielectric strength	ASTM D2671	≥15 kV/mm
Heat shock (200°C for 4h)	ASTM D2671	no drop, no flow
Low temperature flexibility(-40°C for 4h)	ASTM D2671	no cracking
Water absorption	ASTM D570A	≤0.5%
Copper corrosion(158°C for 168h)	ASTM 2671	pass
Long term ageing/ elongation at break	IEC 60684-2	>175%
Resistance to selected fluids: Tensile strength Elongation at break	IEC 60684-2	8mpa >250%

Product Selection

a + b min. ~ max.		d min. ~ max		S1-10	min. thickness for 10kV-24kV shrink on the bus bar	S1-35	min. thickness for 24kV-36kV shrink on the bus bar
15	25	10	18	Φ25/10	1.6	Φ25/10	2.5
22	35	15	25	Φ30/12	1.6	Φ30/12	2.5
28	45	20	30	Φ40/16	1.6	Φ40/16	2.5
38	55	25	40	Φ50/20	1.6	Φ50/20	2.5
45	65	35	50	Φ65/25 (Φ75/30)	1.6	Φ65/25 (Φ75/30)	2.5
55	90	40	60	Φ85/35 (80/32)	1.6	Φ85/35 (80/32)	2.5
70	110	50	80	Φ100/40	1.6	Φ100/40	2.5
90	140	60	95	Φ120/50	1.6	Φ120/50	2.5
105	180	70	120	Φ150/60	1.6	Φ150/60	2.5
130	210	85	140	Φ175/75	1.6	Φ175/75	2.5
140	260	95	170	Φ210/85	1.6	Φ210/85	2.5