

HEAT-SHRINKABLE TUBING

IRRAX™ SLEEVE

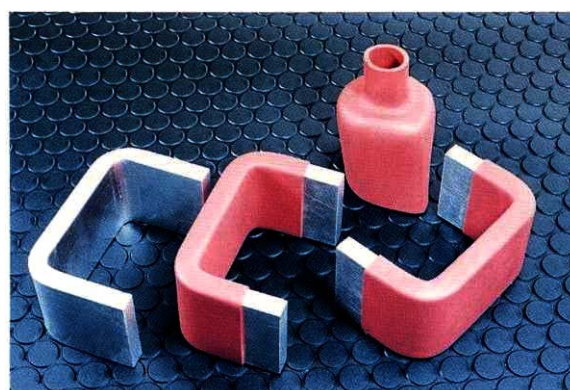
IRRAX™ SLEEVE SBI300 / SBI350

Insulation for Busbars in Switchgear

IRRAX™ SLEEVE SBI300 and SBI350 are irradiated, cross-linked, thermally-stabilized, flame-retardant, flexible, heat-shrinkable polyolefin tubing for busbars protection in switchgear to reduce clearance of phase to phase. SBI350 has thicker wall thickness and more excellent insulation property than SBI300.

■ FEATURES

- Excellent electrical performance
- Protection against flashover
- Stable property for the continuous use in switchgear
- Flexible enough to heat-shrink on bent (90°) busbars
- Flame retardancy (Self-extinguish)



■ APPLICATIONS

- Insulation for busbars in switchgear up to 36kV
- Insulation and protection for busbars

■ PROPERTIES

Items	Test Method	Requirement	Typical Data
Dielectric Strength	JIS K 6911	10 kV / mm min.	39.5 kV/mm (Thickness 0.94 mm)
Volume Resistivity	IEC 93	—	$7.8 \times 10^{16} \Omega \cdot \text{cm}$
Dielectric Constant	IEC 250	—	2.7
Specific Gravity	ISO/R 1183	—	1.31
Tensile Strength	JIS K 6760	5.0 MPa min.	7.6 MPa
Ultimate Elongation	JIS K 6760	300 % min.	525 %
Accelerated Aging : at 160°C for 168 hours Tensile Strength Ultimate Elongation	JIS K 6760	5.0 MPa min. 200 % min.	9.6 MPa 490 %
Low Temperature Flexibility (at -40°C for 4 hours)	ASTM D2671 C	No cracking	No cracking
Operation Temperature Range	—	-40 ~ 110 °C	—
Flammability	UL224 All Tubing	Pass	Pass
Water Absorption (at 23°C for 24hours)	ISO 62	—	0.45
Shrinking Temperature (Start / Finish)			70 °C / 100 °C

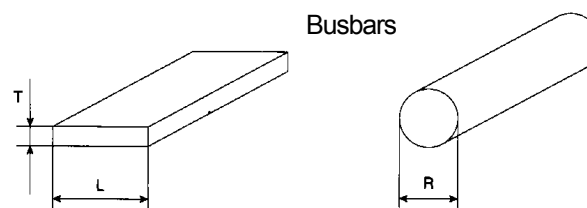


SUMITOMO ELECTRIC INDUSTRIES, LTD.

COLOR

Red

SIZE



Grade	Trade Size	As Supplied		After Shrinkage		Unit Length (min.) [m]	Suitable Busbar Size	
		Inside Diameter (min.) [mm]	Wall Thickness (nom.) [mm]	Inside Diameter (max.) [mm]	Wall Thickness (nom.) [mm]		Rectangular L+T (min.) (max.) [mm]	Round R (min.) (max.) [mm]
SBI300	6/15	15.0	1.10	6.00	2.00	25	12 ~ 18	6.5 ~ 12.0
	12/30	30.0	1.10	12.0	2.30		22 ~ 38	13.5 ~ 25.0
	20/50	50	1.10	20.0	2.50		36 ~ 65	22.0 ~ 43.0
	30/75	75	1.10	30.0	2.50		55 ~ 95	33.0 ~ 63.0
	40/100	100	1.10	40.0	2.50		70 ~ 130	44.0 ~ 86.0
	50/120	120	1.30	50	3.00		90 ~ 165	55.0 ~ 105.0
SBI350	10/25	25.0	1.60	10.0	4.00	25	17 ~ 28	11.0 ~ 20.0
	16/40	40.0	1.60	16.0	4.00		28 ~ 45	18.0 ~ 32.0
	25/65	65	1.60	25.0	4.00		45 ~ 67	28.0 ~ 47.0
	40/100	100	1.60	40.0	4.00		67 ~ 102	44.0 ~ 72.0

Longitudinal Change -15% min.

MINIMUM CLEARANCES (Typical data)

	Commercial Voltage	Impulse Voltage	Phase to Phase Clearances for Rectangular Busbars
SBI300	12kV	75kV	20mm min.
SBI300	24kV	125kV	70mm min.
SBI350	36kV	170kV	120mm min.

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