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HSP1 - General purpose, flame retardant, halogen free polyolefin heat-shrinkable tubing

Features & Benefits

- Very good chemical and solvent resistance
- Wide range of colours including Green/Yellow stripes
- Flexible
- Excellent physical and electrical performance
- Operating Temperature range –55°C to +125°C
- Environmentally friendly halogen free material
- Anti-static material

Standard Colours & Colour Codes

Black - 0	Yellow - 4	Grey - 8
Brown - 1	Green - 5	White - 9
Red - 2	Blue - 6	Clear - X
Orange - 3	Violet - 7	Green / Yellow - 45

Specifications

Material:	Polyolefin
Feature:	Flame Retardant
Voltage:	600V
Shrink Temp:	90°C

Applications

HSP1 is a tough, flexible, general purpose tubing with good resistance to common fluids and solvents and a high dielectric strength.

Available in 2:1 shrink ratio, its unique blend of chemical, electrical and physical properties make it suitable for a wide range of applications. Including electrical insulation, strain relief, cable bundling, colour coding and identification of wires, cables, pipes and electrical components and mechanical protection.

Inside Diameter		Wall Thickness	
Supplied (min)	After heating (max)	Recovered after heating (nom)	
mm	mm	mm	Ordering Quantity
1.2	0.6	0.45	HSP1-1.2/0.6-colour code-SP
1.6	0.8	0.45	HSP1-1.6/0.8-colour code-SP
2.4	1.2	0.5	HSP1-2.4/1.2-colour code-SP
3.2	1.6	0.5	HSP1-3.2/1.6-colour code-SP
4.8	2.4	0.5	HSP1-4.8/2.4-colour code-SP
6.4	3.2	0.65	HSP1-6.4/3.2-colour code-SP
9.5	4.8	0.65	HSP1-9.5/4.8-colour code-SP
12.7	6.4	0.65	HSP1-12.7/6.4-colour code-SP
16	8	0.7	HSP1-16.0/8.0-colour code-SP
19	9.5	0.75	HSP1-19.0/9.5-colour code-SP
25.4	12.7	0.9	HSP1-25.4/12.7-colour code-SP
32	16	0.95	HSP1-32.0/16.0-colour code-SP
38.1	19	1	HSP1-38.1/19.0-colour code-SP
50.8	25.4	1.15	HSP1-50.8/25.4-colour code-SP
76.2	38.1	1.25	HSP1-76.2/38.1-colour code-SP
101.6	50.8	1.4	HSP1-101.6/50.8-colour code-SP
120	60	1.5	HSP1-120.0/60.0-colour code-SP

Technical Data

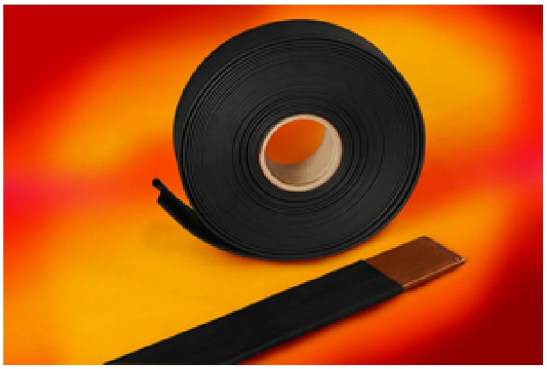
Tensile Strength:	>10.4 MPa
Breakdown Elongation:	>350°C
Longitudinal Shrink Ratio	< +/-5%
Flame Retardant	VW-1
Heat Shock (200°C):	No drop/No flow
Dielectric Strength:	20kV/mm
Water Absorption:	<0.5%
Specific Gravity:	1.25g/cm³

HSP1 - General purpose, polyolefin heat shrinkable tubing

HSP1—Jumbo Tubing

Features & Benefits

- Reduce bus bar clearance requirement
- Give designer more freedom in designing switchgear cabinets when space is premium
- Protects against accidental flashover up to 1kV
- Protects against corrosion dirt and other contaminants that may cause accidental flashover
- Halogen Free
- Flame resistant with oxygen index higher than 27
- Available in continuous length for convenient and economical installation



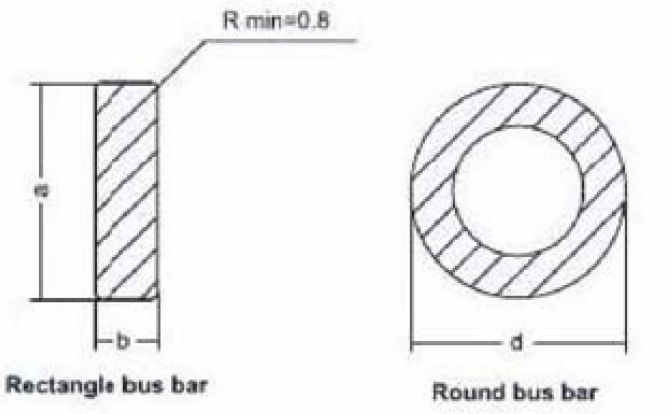
Standard Colours & Colour Codes

Black - 0

Applications

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

Min ~ Max a+b (mm)	Min ~ Max d (mm)	Pre-Shrunk Wall Thickness	After Shrink Wall Thickness	Min. Thickness for 1kV Shrink on The Bus Bar (mm)	Standard Length Roll (m/roll)	Ordering Description
85 165	55 100	0.65	1.45	0.8	30	HSP1-150.0/75.0-0-SP
130 195	75 130	0.7	1.55	1.0	30	HSP1-180.0/90.0-0-SP
175 260	110 160	0.9	1.6	1.0	30	HSP1-230.0/115.0-0-SP



Rectangle bus bar

Round bus bar

Test Item	Test Method	Typical Value
Density	ASTM D2671	1.3~1.35
Thermal Endurance	IEC 216	105°C
Tensile Strength	ASTM D2671	>12Mpa
Ultimate Elongation	ASTM D2671	>400%
Accelerated ageing 168hrs at 136°C Tensile Strength Ultimate Elongation	ASTM D2671	 >12Mpa >300%
Low temperature Flexibility 4hrs at –40°C	ASTM D2671	No cracking
Heat shock 4hrs at 200°C	ASTM D2671	No drop / no flow
Flammability	ASTM D2863	OI>30
Smoke Index	/	Less than 120
Dielectric Strength	ASTM D2671	>20kV/mm
Volume Resistivity	ASTM D2671	>1014Ω.cm
Water absorption 336hrs at 23°C	ASTM D570	<0.5%
Resistance to selected fluids 168hrs at 23°C Tensile Strength Ultimate Elongation	IEC 60684-2	 >8Mpa >250%
Copper Corrosion 158°C for 168hrs	IEC 60684-3	Pass
Long term ageing 3000hrs at 120°C Elongation at break	IEC 60684-2	>175%
Colour Fastness to light	IEC 60684-3	Contrast between exposed and unexposed parts. The colour does not change