

## PRINTASHRINK PF-A1 4-1

Printashrink PF/A1 4-1 is a 4:1 shrink ratio, dual wall heatshrink polyolefin with an integral thermoplastic adhesive liner. It provides encapsulation of inner components, environmental sealing and moisture-resistant insulation, and is available in black and clear as standard in sizes up to 52mm ID. It can be **cut** and **printed** as required. This glue lined, 110°C, 4:1 general purpose tube consists of a flame retarded heatshrink polyolefin tube with a thermally activated inner adhesive liner. The inner liner melts and flows to encapsulate connectors and components providing a moisture-resistant, environmentally protective, permanent seal which is able to accommodate greater differentials between pre and post shrinking. It is available in 1.2 metre lengths or on reels, and can be supplied with UL approval. We offer a range of printing and cutting services on this high strength, resilient tube also making it perfect for identification, branding and marking requirements.

## TECHNICAL DATA

- **SHRINK RATIO** 4:1
- **SHRINK TEMPERATURE** +95°C
- **OPERATING TEMPERATURE** -55°C – +110°C
- **FLAME RETARDANT** Pass (jacket only not clear)
- **COLOURS** Black, Clear, Other colours available upon request
- **SIZES** 4/1mm – 52/13mm
- **PACKING** Bulk reels, small reels, 1.2 metre
- lengths, cut to length, cut sleeves
- **PRINT** Yes, full range of text and logos in all colours
- **APPROVALS** RoHS compliant
- **APPLICATIONS / INDUSTRIES** General, Commercial, Electrical, Electronics, Industrial, Mechanical, Automotive, Marine

Properties	Typical Values	Test Methods
<b>GENERAL</b>		
Operating temperature	-55°C – +110°C	
Shrink temperature	95°C	
Shrink ratio	3:1	
<b>PHYSICAL</b>		
Tensile Strength	15MPa	IEC 60684-2
Ultimate elongation	400%	IEC 60684-2
Specific gravity	1.25g/cm <sup>3</sup> (blk) 1.00g/cm <sup>3</sup> (clr)	ASTM D 792 A-I
Longitudinal change	-15% max (blk), -18% max (clr)	ASTM D 2671
Water absorption	0.15% (blk), 0.17% clr	VDE 0472
<b>THERMAL</b>		
Flammability	Pass (jacket)	ASTM D 876 (blk), FMVSS 302 (clr)
Heat shock (4hrs)	at 200°C, elongation 360% (blk), 380% (clr) tensile 15MPa (blk), 16MPa (clr)	IEC 811-1-1-2
Low temperature flexibility (4hrs @ -55°C)	Does not break	ASTM D 2671 Meth. C

### ELECTRICAL

Dielectric strength	22kV/mm (blk), 23kV/mm (clr)	VDE 0303 Part 2
Volume resistivity	10 <sup>18</sup> Ωcm	VDE 0303 Part 3
Chemical		
Chemical resistance	Good	
Copper corrosion	Non-corrosive	ASTM D 2671 meth A
Copper stability	Non-corrosive	ASTM D 2671 meth B

Size (mm)	Supplied diameter (mm)	Shrunk diameter (mm)	Nominal wall thickness (mm)
4/1	4.0	1.0	1.00
8/2	8.0	2.0	1.20
12/3	12.0	3.0	1.40
16/4	16.0	4.0	1.70
24/6	24.0	6.0	2.10
32/8	32.0	8.0	2.40
52/13	52.0	13.0	2.40

Printasleeve Ltd is as diligent as possible in compiling and updating the above information. It reflects averages derived from product sample testing, is subject to normal manufacturing and testing tolerances and may be changed without notice. Furthermore aesthetic and textural style differences can result in local variation. For specific or further information concerning our products, their specifications and their utilisation please contact us.

