



# PRINTASLEEVE

## Printashrink SPF-L

Printashrink SPF-L is a flattened 135°C, UL approved, 2:1 shrink ratio heatshrink polyolefin. It is in the form of printable labels organised on ladder-style carriers which meet MIL-SPEC requirements. They are fire retardant and available in a range of colours and sizes up to 50.8mm ID and can be [printed](#) as required.

This flattened 2:1 heatshrink polyolefin tube can be supplied on a number of differently sized and structured ladder-style carriers making it compatible with most printers. It is a UL/CSA approved sleeve which meets MIL-SPEC requirements, has a 135°C working temperature and excellent electrical, chemical and physical properties. These attributes make it perfect for aerospace, military, defence, and many other professional applications. Its surface and profile are designed for thermal transfer printing and it is available in varying sleeve lengths to suit any print requirement and set up. We can supply unprinted or pre-printed as required.



## Technical Data

- **Shrink Ratio:** 2:1
- **Shrink Temperature** +85°C
- **Operating Temperature** -40°C – +135°C
- **Flame Retardant:** Yes
- **Colours:** Yellow, White, Other colours available upon request
- **Sizes:** 2.4 x 13, 19, 25, 38, 50mm ? 50.8 x 13, 19, 25, 38, 50mm
- **Packing:** Rolls, mini-packs
- **Approvals:** MIL-STD-202F method 215J, UL224 125C 600V VW-1, CSA 25C 600V VW-1, SAE-AMS-DTL-23053/5 class 1&3 (mark performance: SAE AS81531:1998 point 4.6.2) RoHS Compliant

| Properties                                 | Typical Values   | Test Methods      |
|--|--|-------------------|
| General                                    |  |                   |
| Operating Temperature                      | -40°C – + 135°C  |                   |
| Minimum shrink temperature                 | 85°C   |                   |
| Shrink Ratio                               | 2:1  |                   |
| Physical                                   |  |                   |
| Tensile Strength                           | ?14MPa   | ASTM D 638        |
| Ultimate elongation                        | ? 400%   | ASTM D 638        |
| Specific gravity                           | 1.34g/cm <sup>3</sup>  | ASTM D 792        |
| Longitudinal change                        | 0% – -2%   | SAE-AMS-DTL-23053 |
| Secant Modulus                             | 65MPa  | ASTM D 882        |
| Thermal                                    |  |                   |
| Flammability                               | VW-1 pass  | UL224             |
| Heat shock (4hrs)                          | No dripping, cracking or flowing                             | SAE-AMS-DTL-23053 |
| Low temperature flexibility (4hrs @ -55°C) | No cracking  | SAE-AMS-DTL-23053 |
| Heat ageing (168hrs)                       | Elongation ? 400%  | SAE-AMS-DTL-23053 |
| Electrical                                 |  |                   |
| Dielectric strength                        | ? 37 kV/mm   | UL 224            |
| Volume resistivity                         | 3.1 x 10 <sup>12</sup> ? cm                                  | ASTM D 876        |
| Voltage rating                             | 600V   | UL 224            |
| Dielectric Voltage                         | withstands 2.5kV for 60s                                     | UL 224            |
| Chemical                                   |  |                   |
| Copper corrosion                           | Pass   | SAE-AMS-DTL-23053 |
| Copper stability                           | Pass   | SAE-AMS-DTL-23053 |
| Fluid resistance                           | Gasoline, hydraulic fluid, lubricating oil, tensile 25-14MPa | SAE-AMS-DTL-23053 |
| Fungus resistance                          | Pass, no growth  | ASTM G 21         |



| Size (mm)                 | Supplied diameter (mm) | Shrunk diameter (mm) | Nominal wall thickness (mm) |
|---------------------------|------------------------|----------------------|-----------------------------|
| 2.4 x 13, 19, 25, 38, 50  | 2.4                    | 1.2                  | 0.57                        |
| 3.2 x 13, 19, 25, 38, 50  | 3.2                    | 1.6                  | 0.61                        |
| 4.8 x 13, 19, 25, 38, 50  | 4.8                    | 2.4                  | 0.67                        |
| 6.4 x 13, 19, 25, 38, 50  | 6.4                    | 3.2                  | 0.71                        |
| 9.5 x 13, 19, 25, 38, 50  | 9.5                    | 4.8                  | 0.77                        |
| 12.7 x 13, 19, 25, 38, 50 | 12.7                   | 6.4                  | 0.80                        |
| 19.1 x 13, 19, 25, 38, 50 | 19.1                   | 9.5                  | 0.84                        |
| 25.4 x 13, 19, 25, 38, 50 | 25.4                   | 12.7                 | 0.86                        |
| 38.1 x 13, 19, 25, 38, 50 | 38.1                   | 19.0                 | 0.89                        |
| 50.8 x 13, 19, 25, 38, 50 | 50.8                   | 25.4                 | 0.90                        |

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 utilization please contact us. E & OE

