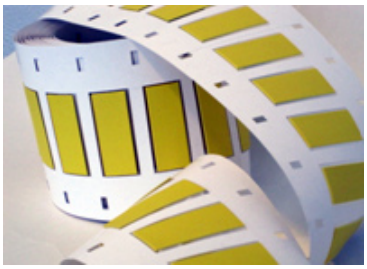
WM – 3-1 Heat Shrinkable Wire Markers

11/2009



MARKWM

The WM 3-1 Heat Shrinkable Wire Markers are made of a very flexible, highly flame retardant, high grade polyolefin tubing. SAE-AMS-DTL, UL224 and CSA recognized. Meets the requirements of a wide range of industrial and high-tech standards. Very versatile through excellent balance of chemical, electrical and mechanical properties.

Dimensions

Size, Inches	Size, mm	Minimum ID, as supplied	Maximum ID, recovered	Recovered wall thickness, mm
1/8	3.0	3.0	1.0	Nom. 0.60
3/16	4.8	4.8	1.6	Nom. 0.65
1/4	6.0	6.0	2.0	Nom. 0.70
3/8	9.0	9.0	3.0	Nom. 0.80
1/2	12.0	12.0	4.0	Nom. 0.85
3/4	18.0	18.0	6.0	Nom. 1.00
1	24.0	24.0	8.0	Nom. 1.20
1 ½	40.0	40.0	13.0	Nom. 1.25

Technical

Properties	Test Method	Typical value
Tensile strength	ASTM D 638	13 N/mm²
Elongation at break	ASTM D 638	≥ 400%
Longitudinal change	ASTM D 2671	-7 %
Specific gravity	ASTM D 792	1.34 g/cm³
Secant Modulus	ASTM D 882	65 MPa

Electrical

Properties	Test Method	Typical value
Dielectric strength	UL224	≥ 37 kV/mm
Volume resistivity	ASTM D 876	3,1 x 1014 Ω cm
Voltage rating	UL224	600V
Dieelectric Voltage Withstand (2,5 kV x60s)	UL224	Pass, no breakdown

Standard colours
Yellow, white

Blue, red, black, orange, light green on request

Material
Crosslinked polyolefin, shrink ratio 3:1

Operating temperature
-55°C to +135°C

Minimum shrink temperature
90°C

Specifications
CSA C 22.2 No. 198.1: 125°C 600V VW-1,
SAE-AMS-DTL-23053/5 class 1&3 (except sizes / LC),
UL 224 125°C 600V VW-1 (File No. E48762)

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Chemical

Properties	Test Method	Typical value
Fungus resistance	ASTM G 21	Pass, no growth
Fluid resistance (after immersion 23°C x 24h)	SAE-AMS-DTL-23053	7,25 – 14 MPa

Thermal

Properties	Test Method	Typical value
Heat shock (250°C x 4h)	SAE-AMS-DTL-23053	No dripping, cracking or flowing, pass
Elongation after heat ageing (158°C x 4h)	SAE-AMS-DTL-23053	≥ 400%
Copper corrosion (158°C x 168h)	SAE-AMS-DTL-23053	Pass
Stability against copper (158°C x 168h)	SAE-AMS-DTL-23053	Pass
Low temperature flexibility (-55°C x 4h)	SAE-AMS-DTL-23053	No cracking
Flammability	UL224	VW-1, pass

Carrier liner
White, non-coated, medium range thermal sensitive paper cardstock.
Thickness 185 ± 10 µm. Width 109mm ± 0.5mm.

Adhesive backing
Clear, polyethylene film coated with an acrylic-based pressure sensitive adhesive.
Thickness 0.10mm. Width 72/85mm.

The products are supplied on a thermal sensitive cardstock liner converted into a ladder construction offering superb organization of the markers. The cardstock liner is die-cutted with cavities where into the sleeves are applied, supported by a backing adhesive.

RoHS

Storage
Store in original packaging.
Recommended temperature at +10°C to +25°C
and 45-55% relative humidity
Use within 3 years from date of Manufacture.

Printer recommended
CAB A4+ 300dpi printer

Applications
Common uses include marking, insulation, Wire bundling and mechanical protection