



The WM Halogen Free Heat Shrinkable Wire Markers are made of halogen free, flame retardant, heat shrinkable polyolefin tubing with ideal printability properties for identification purposes. The compound of the tubing is excluded for halogens and offers excellent fire safety characteristics combined with minimal smoke emission.

**Dimensions**

Size, Inches	Size, mm	Minimum ID, as supplied	Minimum ID, recovered	Recovered wall thickness, mm
3/32	2.4	2.4	1.2	0.43-0.60
1/8	3.2	3.2	1.6	0.55-0.72
3/16	4.8	4.8	2.4	0.55-0.72
1/4	6.4	6.4	3.2	0.65-0.80
3/8	9.5	9.5	4.8	0.65-0.75
1/2	12.7	12.7	6.4	0.65-0.75
3/4	19.1	19.1	9.5	0.65-0.75
1	25.4	25.4	12.7	0.70-0.85
1 1/2	38.1	38.1	19.1	0.85-1.00
2	50.8	50.8	25.4	0.90-1.05

**Physical**

Properties	Test Method	Typical value
Tensile strength	ASTM D 638	13 N/mm <sup>2</sup>
Elongation at break	ASTM D 638	200%
Longitudinal change	ASTM D 2671	≤+5%, ≤-10%
Water absorption	ASTM D 570	≤0, 15%
Specific gravity	ASTM D 792	1.4 g/cm <sup>3</sup>

**Electrical**

Properties	Test Method	Typical value
Dielectric strength	ASTM D 2671	20 kV/mm <sup>2</sup>
Volume resistivity	ASTM D 257	1014 Ω cm

**Standard colours**

Yellow, white

Light blue, light red, black, orange, light green on request

**Material**

Polyolefin

**Operating temperature**

-30°C to +105°C

**Minimum shrink temperature**

>90°C

**Specifications**

Adherence: MIL-M 81531 AS (SAE-AS81531-1998), point 4.6.2.

Passed with following black ribbons on white and yellow tubing: 379521, 356126 (FTI-M), 379804, 356294 (FTI-Y)

Passed with following white ribbon on black tubing: 361182

Passed with following red ribbon on white tubing: 379019

Resistance to solvents (recovered condition): MIL-STD.-202G test method 215 2002

(MIL-M81531/AS SAE-AS81531-1998 clause 3.4.3)

Passed with following black ribbons:

356294(FTI-Y), 356126 (FTI-M) Passed with following red ribbon on white tubing:

379019 Passed with following white ribbon on black tubing: 361182

Tested according to: prEN 50343:2000, table 6 and point no. 7.6.2/7.6.3.

Passed with following ribbon: 356294(FTI-Y)

**Notes:**

This information and data is believed to be accurate and reliable. Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of this date, Link Solutions makes no representations as to the completeness or accuracy thereof. We place at your disposal the technical information necessary for the correct use of our products. As conditions and methods of use are beyond our control, that the person receiving the same will make their own determination as to the suitability for their purpose.

We reserve the right to modify characteristics with the aim of improving the product and adapting it to the requirements of the market.

### Chemical

Properties	Test method	Typical value
Fungus resistance	AMS-DTL-7444	Inert, no growth
Chemical resistance	AMS-DTL-23053/5	Good
Copper corrosion	ASTM D 2671B	No corrosion
Oxygen index	ASTM D 2863	36%

### Thermal

Properties	Test method	Typical value
Heat shock 4 hours at 175°C	ASTM D 2671	No dripping, cracking or flowing
Heat aging 168 hours at 150°C	ASTM D 638	Elongation 100%
Low temperature flexibility -30°C	ASTM D 2671C	No cracking
Flammability	ASTM D 2671	Pass » flame retardant

### Smoke density

Specifications	Flame propagation	Toxicity	Smoke generation
UK (BS 6853)	BS ISO 4589-2 Annex A	BS 6853 Ap. B1 or NF X-70-100	BS 6853 D8.3
France (NF16-101)	NF T 51-071 & NF C 20-455	NF X 70-100	NF X 10-702
America (ASTM)	ASTM 162	SMP 800C	ASTM 662

### 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.



### 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.

### Notes:

This information and data is believed to be accurate and reliable. Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of this date, Link Solutions makes no representations as to the completeness or accuracy thereof. We place at your disposal the technical information necessary for the correct use of our products. As conditions and methods of use are beyond our control, that the person receiving the same will make their own determination as to the suitability for their purpose.

We reserve the right to modify characteristics with the aim of improving the product and adapting it to the requirements of the market.