



## Introducing TTMS-MP Heat-Shrinkable Tubing

TTMS-MP tubing is a semi-flattened, heat-shrinkable tubing intended for wire and cable identification. Available in continuous spools only, TTMS-MP tubing is designed for computer-based printing using a T2000CT-PRINTER. However, the real advantage of TTMS-MP is the ease with which it slips over wires due to its oval shape. The product format makes TTMS-MP identification tubing ideal for applications where in-sequence kitting is not of over-riding importance, for example where several hundred identical markers are required.

### KEY FEATURES

- Easier to use than standard TTMS due to its oval shape
- 3 : 1 shrink ratio (except sizes 38.1mm and 50.8mm which are 2 : 1)
- Thin walled and flame retardant
- Thermal Transfer printable only
- Meets military specifications for material and print performance
- -55°C to 135°C operating temperature
- CSA certified, UL recognized UL224
- RoHS compliant

### APPLICATIONS

Used for wire and cable harness identification in the following industries :

- **Aerospace**
- **Lighting**
- **Commerical**
- **Marine**
- **Defense**
- **Rail & Mass Transit**
- **Industrial**

### MECHANICAL

- **TENSILE STRENGTH** :  
10MPa minimum (SAE -AMS-DTL-23053/5)
- **ULTIMATE ELONGATION** :  
200% minimum (SAE-AMS-DTL-23053/5)
- **LONGITUDINAL CHANGE** :  
-20% maximum (SAE-AMS-DTL-23053/5)
- **HEAT AGING** : 100% UE retained and print legible after 168 hours at 175°C (347°F)
- **HEAT SHOCK** : No cracking, dripping or flowing and print legible after 4 hours at 250°C (482°F)
- **LOW TEMPERATURE FLEXIBILITY** :  
No cracking after 4 hours at -55°C (-67°F),  
11mm (7/16 inch) mandrel bend.

### ELECTRICAL

- **DIELECTRIC STRENGTH** : 20MV/m minimum (IEC 243)

### STANDARDS AND SPECS

- **TE Connectivity** : RW 2517
- **UL** : recognized Standard 224, (File E35586)
- **CSA** : certified CSA C22.2 No. 198.1-98, (File 31929)
- **Military** : AMS-DTL-23053/5, AS-81531, MIL-STD-202F Method 215

### MATERIALS

- Thin wall, flame retardant radiation cross-linked polyolefin heat-shrinkable tubing

### PRODUCT DIMENSIONS in inches and (millimeters)

Part Number	Exp. (Min)	Recovered (max)	Rec. use range	Rec. wall thickness	Weight lb/ft (g/m)
TTMS-MP-2.4	0.093 (2.36)	0.031 (0.79)	0.032 - 0.075 (0.91 - 1.90)	0.021 ± 0.003 (0.53 ± 0.08)	0.0017 (2.76)
TTMS-MP-3.2	0.125 (3.18)	0.042 (1.07)	0.044 - 0.105 (1.11 - 2.66)	0.023 ± 0.003 (0.58 ± 0.08)	0.0025 (3.73)
TTMS-MP-4.8	0.187 (4.75)	0.062 (1.57)	0.069 - 0.160 (1.75 - 4.06)	0.023 ± 0.003 (0.58 ± 0.08)	0.0033 (4.93)
TTMS-MP-6.4	0.250 (6.35)	0.083 (2.11)	0.091 - 0.215 (2.31 - 5.46)	0.023 ± 0.003 (0.58 ± 0.08)	0.0043 (6.46)
TTMS-MP-9.5	0.375 (9.53)	0.125 (3.18)	0.137 - 0.320 (3.47 - 8.12)	0.023 ± 0.003 (0.61 ± 0.08)	0.0062 (9.27)
TTMS-MP-12.7	0.500 (12.70)	0.166 (4.22)	0.183 - 0.425 (4.64 - 10.79)	0.024 ± 0.003 (0.61 ± 0.08)	0.0084 (12.53)
TTMS-MP-19.0	0.750 (19.05)	0.250 (6.35)	0.275 - 0.640 (6.99 - 16.25)	0.024 ± 0.003 (0.61 ± 0.08)	0.0149 (22.13)
TTMS-MP-25.4	1.000 (25.40)	0.333 (8.46)	0.366 - 0.850 (9.29 - 21.59)	0.025 ± 0.003 (0.64 ± 0.08)	0.0190 (28.24)
TTMS-MP-38.1	1.500 (38.10)	0.750 (19.05)	0.825 - 1.300 (20.95 - 33.02)	0.020 ± 0.003 (0.51 ± 0.08)	0.0340 (50.61)
TTMS-MP-50.8	2.000 (50.80)	1.000 (25.40)	1.100 - 1.750 (27.94 - 44.95)	0.025 ± 0.003 (0.64 ± 0.08)	0.0584 (86.96)

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