



## **Specification RW-2500-3**

**TE 108-121006**

# **THIN-WALL MARKER SLEEVES TW-TMS**

### **Approved Signatories:**

**This document is electronically reviewed and approved by TE Connectivity.**

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TE CONNECTIVITY, SWINDON, UK

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## 1. REVISION HISTORY

Revision Number	Description of change	Date	Incorporated By
1	AFC 256	14/04/04	Alan Kean
2	AFC 372	14/04/04	Alan Kean
3	Refer to PCN	16/07/14 issued 08-2015	Lee Smith

## 2. SCOPE

This specification sheet, when used with RW-2500, defines the product characteristics and performance of TE Connectivity Thin-Wall Marker Sleeves.

The printing system developed for this marker sleeve is now obsolete. TE can only guarantee the physio-chemical nature of the product, and not any marking applied using non-recommended printing systems. Where non-standard systems are used, customers are required to carry out their own validation testing.

## 3. REQUIREMENTS

### 3.1. MATERIAL

The sleeving shall be fabricated from irradiated, thermally stabilized, modified polyvinylidene fluoride compound. It shall be homogeneous and essentially free from flaws, defects, pinholes, bubbles, seams, cracks or inclusions.

### 3.2. COLOR

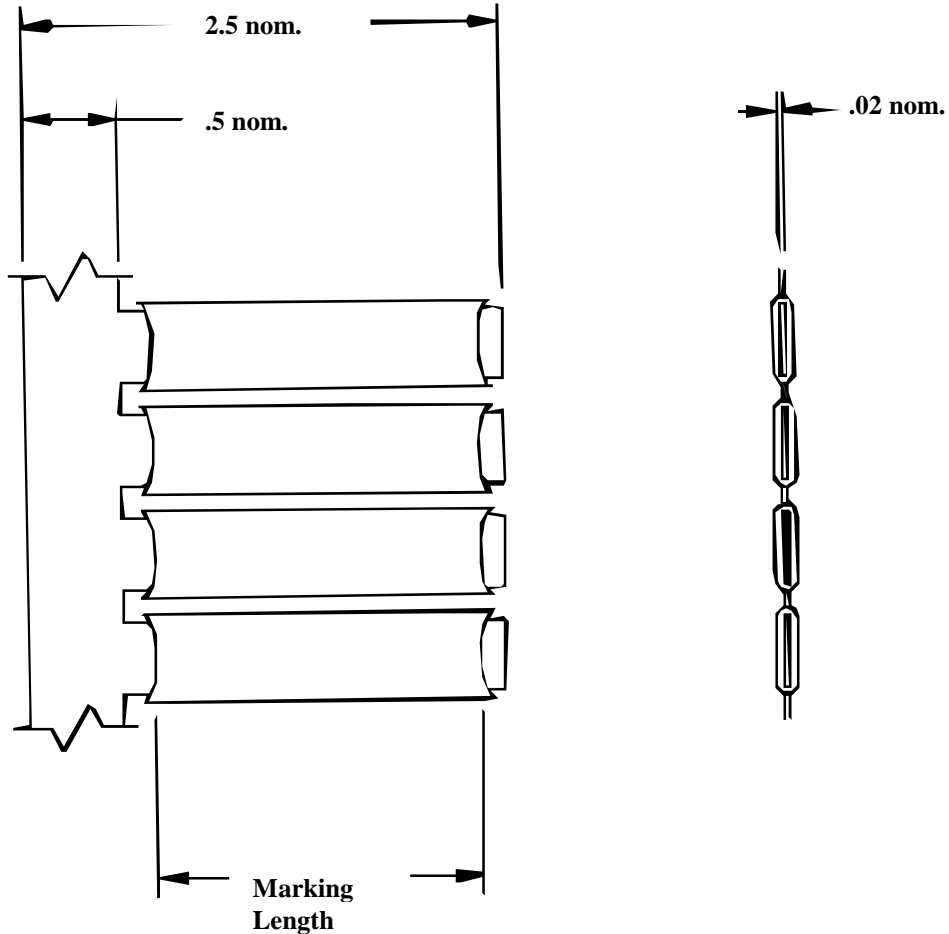
The sleeves shall be supplied in white, unless otherwise specified.

### 3.3. PROPERTIES

The sleeves shall meet the requirements of Table 3.

### 3.4. FORM

The sleeves shall be cut lengths in accordance with Table 1.



See Table 1

Dimensions are in inches

Figure 1

**TABLE 1**  
**Sleeve Dimensions**

Product Description	As Supplied				Recovered			
	Inside Diameter Minimum		Marking Length Minimum		Inside Diameter Maximum		Wall Thickness	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.
TW-TMS-3/32-1.50	.093	2.36	1.60	39.41	.030	0.76	.017 ± .003	0.43 ± 0.08
TW-TMS-1/8-1.50	.125	3.17	1.60	39.41	.050	1.27	.017 ± .003	0.43 ± 0.08
TW-TMS-3/16-1.50	.187	4.74	1.57	38.65	.093	2.36	.018 ± .003	0.46 ± 0.08
TW-TMS-1/4-1.50	.250	6.35	1.55	38.14	.125	3.17	.018 ± .003	0.46 ± 0.08
TW-TMS-3/32-1.75	.093	2.36	1.90	47.00	.030	0.76	.017 ± .003	0.43 ± 0.08
TW-TMS-1/8-1.75	.125	3.17	1.90	47.00	.050	1.27	.017 ± .003	0.43 ± 0.08
TW-TMS-3/16-1.75	.187	4.74	1.85	45.70	.093	2.36	.018 ± .003	0.46 ± 0.08
TW-TMS-3/16-OX-1.75	.187	4.74	1.85	45.70	.062	1.57	.022 ± .003	0.55 ± 0.08
TW-TMS-1/4-1.75	.250	6.35	1.81	44.70	.125	3.17	.018 ± .003	0.46 ± 0.08
TW-TMS-1/4-OX-1.75	.250	6.35	1.81	44.70	.093	2.36	.022 ± .003	0.56 ± 0.08

**TABLE 2**  
**Mandrel Dimensions for Heat Shock, Heat Aging and Low Temperature Flexibility**

Tubing Size	Mandrel Diameter	
	in	mm
3/32 through 3/16	5/16	7.9
1/4 through 3/4	3/4	19.0

**TABLE 3 Requirements**

PROPERTY	UNIT	REQUIREMENT	RW-2500 TEST METHOD
<b>PHYSICAL</b>			
Dimensions	Inches	In accordance with Table 1	
Dimensional Recovery 3 minutes at 200°C (392°F)	Inches	In accordance with Table 1	RW-2500 Section 4.3.1.1 ASTM D 2671
Longitudinal Change 3 minutes at 200°C (392°F)	Percent	10 maximum	
Tensile Strength	MPa (psi)	10.3 (1500) minimum	RW-2500 Section 4.3.2.1 ASTM D 2671
Ultimate Elongation	Percent	200 minimum	2 inches/minute
Specific Gravity	---	1.38 maximum	RW-2500 Section 4.3.3 ASTM D 2671
Low Temperature Flexibility 4 hours at -55°C (-67°F)	---	No cracking	RW-2500 Section 4.3.5.1
Heat Shock 4 hours at 250°C (482°F)	---	No dripping, flowing, or cracking	RW-2500 Section 4.3.6.1
Heat Aging 168 hours at 175°C (347°F)	---	No cracking	RW-2500 Section 4.3.7.1
Copper Contact Corrosion 16 hours at 150°C (302°F)	---	No pitting or blackening of copper	RW-2500 Section 4.3.14.1
Pull-Off Force Size: 3/32	N (Pounds)	26 (6.0) maximum	RW-2500 Section 4.3.8
Size: 1/8	N (Pounds)	31 (7.0) maximum	
Size: 3/16	N (Pounds)	35 (8.0) maximum	
Size: 1/4	N (Pounds)	40 (9.0) maximum	
<b>ELECTRICAL</b>			
Dielectric Strength	kV/mm (V/mil)	19.7 (500) minimum	RW-2500 Section 4.3.11.1 ASTM D 2671
Volume Resistivity	ohm-cm	10 <sup>14</sup> minimum	RW-2500 Section 4.3.12.1 ASTM D 2671
<b>CHEMICAL</b>			
Corrosive Effect 16 hours at 150°C (302°F)	---	Non Corrosive	RW-2500 Section 4.3.13.1 ASTM D 2671
Flammability (FED-STD-228)	---	Burn time shall not exceed one minute, and not more than 25% of indicator flag shall be burned or charred. No dripping or flowing.	RW-2500 Section 4.3.15.3
Fungus Resistance	---	Rating of 1 or less	ASTM G 21
Water Absorption 24 hours at 23°C (73°F)	%	0.5 maximum	ASTM D 570

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