

HEAT SHRINK TUBING WCSM

THICK-WALL LOW VOLTAGE INSULATION AND OUTER SEALING TUBING

KEY FEATURES

- High electrical characteristics and mechanical strength for low voltage applications
- Thick-wall, cross-linked polyolefin. UV stabilized against irradiation and weathering
- Halogen and silicon-free material content, non-corrosive, non-toxic, free of lead and aluminium
- Available inline coated with hot melt adhesive or uncoated
- Color black, 3:1 shrink ratio
- Unlimited shelf-life

TE Connectivity's (TE) Raychem WCSM heat shrink thick-wall tubing is designed for insulation on low voltage cable accessories, as well as for sealing, protection and rejacketing on low, medium and high voltage cables and cable accessories. With this tubing type, the electrical and physical properties of cable oversheath and core insulation of low voltage cables are combined with ruggedness and easy installation.

On application of heat, TE's Raychem WCSM tubing shrinks to the original smaller extruded diameter, fitting tightly over a wide range of cable sizes and cable accessories because of its high shrink ratio. At the same time the tubing's inner sealant wall gives a reliable moisture seal over even the most irregular shapes.

The WCSM tubing is also used in sealing against moisture of cable splice and mechanical protection for outer rejacketing of low up to high voltage applications. The WCSM tubing's mechanical strength enables immediate back-filling of cable trenches after jointing.

The material content of the WCSM tubing is halogen-free and stabilized against UV irradiation. The WCSM tubing has proven its long-term reliability in harsh climatic conditions and in polluted environments and has an unlimited shelf-life when stored under normal conditions.

Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.



Compliant to RoHS and REACH regulations.
Approved for offshore applications.

TESTING		
Physical Characteristic	**Test Method**	**Material Requirements**
Tensile Strength	ISO 37	12 MPa min
Ultimate Elongation	ISO 37	350% min
Hardness	ISO 868	≥ 45 shore D
Accelerated ageing **7 days at 150°C ± 2°C** **Tensile Strength** **Ultimate Elongation**	 ISO 37 ISO 37	 12 MPa min 350% min
Low Temperature Flexibility	ASTM D2671 Procedure C	No cracking at 4 hours at -40°C ± 3°C
Dielectric Strength	IEC 60243 part 1 and 2	≥ 10 kV/mm min.
Volume Resistivity	IEC 60093	1 x 10^{10} Ω cm min
Water Absorption	ISO 62 method 1	≤ 0.25% max after 14 days at 23°C ± 2°C
Weathering	The material from which WCSM is manufactured contains carbon black (≥ 2.5 %) to protect it from ultra-violet light	
Application Characteristics		
Operating temperature range	- 40°C up to + 100°C (coated)	
Installation/shrinking temp	> 120°C	
Longitudinal shrinkage free recovered	≤ - 10 %	

PRODUCT SELECTION INFORMATION - DIMENSIONS ARE SHOWN IN MM						
Description	**Application Range**		**Diameter**		**Wall Thickness**	
	from	**to**	**Expanded min**	**Recovered max**	**Expanded nom**	**Recovered min**
WCSM- 12/3	3.5	10	12	3	0.7	2.0
WCSM- 16/4	4.5	14	16	4	0.8	2.4
WCSM- 24/6	6.5	22	24	6	0.8	2.7
WCSM- 34/8	9	31	33	8	1.2	4.0
WCSM- 48/12	13	44	48	12	1.3	4.5
WCSM- 56/16	17.5	50	56	16	1.0	4.4
WCSM- 70/20	22	63	70	20	1.0	4.4
WCSM- 90/25	27	81	90	25	1.0	4.3
WCSM- 110/30	33	100	110	30	1.0	4.3
WCSM- 130/35	38	118	130	35	1.0	4.3
WCSM- 160/50	55	144	160	50	1.0	4.3
WCSM- 180/50	55	162	180	50	1.0	4.3
WCSM- 200/50	55	180	200	50	1.0	4.3
WCSM- 250/65	70	225	250	65	1.0	4.3
WCSM- 320/95 *	105	295	320	95	1.1	4.3
WCSM- 385/110 *	125	350	385	110	1.1	4.3

* Available coated and uncoated
Standard Lengths: All sizes are available in the standard lengths 1000 mm. On request, other lengths and on spools. All lengths subject to standard cutting tolerances.

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