



HEAT-SHRINKABLE TUBING WCSM

THICK-WALL LOW VOLTAGE INSULATION AND OUTER SEALING TUBINGS

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
- Compliant to RoHS and REACH regulations. Approved for offshore applications
- Color black, 3:1 shrink ratio
- Unlimited shelf-life

TE Connectivity's (TE) Raychem WCSM heat-shrinkable thick-wall tubings are designed for insulation on low voltage cable accessories, as well as for sealing, protection and re-jacketing 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.

During heating, 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.

WCSM tubings are also used in sealing against moisture of cable splice and mechanical protection for outer re-jacketing of low up to high voltage applications. WCSM tubings mechanical strength enables immediate back-filling of cable trenches after jointing.

The material content of the WCSM tubings is halogen-free and stabilized against UV irradiation. WCSM tubings have proven their long-term reliability in harsh climatic conditions and in polluted environments. WCSM tubings have 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.



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
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
WCSM- 48/12	13	44	48	12	1.3	4.5
WCSM- 56/16	17.5	50	56	16	1	4.4
WCSM- 70/20	22	63	70	20	1	4.4
WCSM- 90/25	27	81	90	25	1	4.3
WCSM- 110/30	33	100	110	30	1	4.3
WCSM- 130/35	38	118	130	35	1	4.3
WCSM- 160/50	55	144	160	50	1	4.3
WCSM- 180/50	55	162	180	50	1	4.3
WCSM- 200/50	55	180	200	50	1	4.3
WCSM- 250/65	70	225	250	65	1	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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