Raychem Heat-shrinkable Heavy Wall Insulation and Outer Sealing Sleeve WCSM

Raychem
from TE Connectivity

Raychem Heat-shrinkable Heavy Wall Halogen-free Insulation and Outer Sealing Sleeve WCSM

Raychem heat-shrinkable heavy-wall tubing WCSM for insulating and sealing power cables and accessories. In this tubing, the electrical and physical properties of a cable oversheath material are combined with ruggedness and easy installation. The material used is halogen-free and UV resistant.

On heating, Raychem tubing WCSM recovers to a smaller diameter, fitting tightly over a wide range of cable sizes and accessories because of its high shrink ratio. At the same time the tubing's inner sealant wall gives a dependable moisture seal over the most irregular shapes.

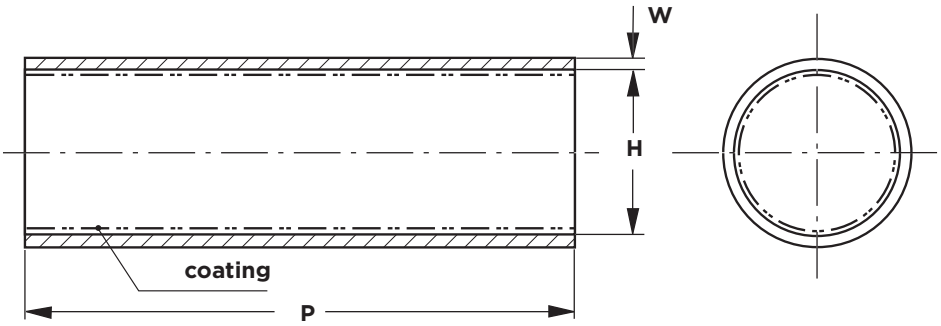
Raychem tubing WCSM's mechanical strength enables immediate back-filling of cable trenches after jointing. Widely used to insulate, protect and seal power cable joints, accessories and electrical connections, it is one result of our extensive capability in materials technology.

TE Energy is one of the world leaders in the technology of heat-shrinkable materials and one of the largest producers of heat-shrinkable polymeric and elastomeric components.
By electron beam radiation Raychem materials are given an "elastic memory". They can then be installed over variously-shaped objects to make a tight, insulating or fluid-resistant cover. In a wide range of formulations, Raychem products are engineered to meet the specific demands of the growing world of energy.

WCSM Properties		Test Method	Material Requirements
Tensile Strength		ISO 37	12 MPa min
Ultimate Elongation		ISO 37	350% min
Density		ISO 1183 Method A	0.8-1.0 g/cm^3
Hardness		ISO 868	40-50 shore D
Accelerated Ageing	7 days at 150 °C ± 2 °C	ISO 188	
	Tensile Strength	ISO 37	12 MPa min
	Ultimate Elongation	ISO 37	350% min
Low Temperature Flexibility	4 hours at -40 °C ± 3 °C	ASTM D2671 Procedure C	No cracking
Dielectric Strength		IEC 60243 Part 1 and 2	170 kV/cm min (1 mm wall) 120 kV/cm min (2 mm wall)
Volume Resistivity		IEC 60093	1 x 10^{12} Ω cm min
Dielectric Constant		IEC 60250	5.0 max
Water Absorption		ISO 62 Method 1	0.2% max after 14 days at 23 °C ± 2 °C
Weathering		The material from which WCSM is manufactured contains carbon black to protect it from ultra-violet light.	
Additional Properties	Further details are given in Raychem specification PPS 3010/10 (A) [1326]. Sealant characteristics are detailed in Raychem specification PPS 3012/76.		

Ordering information

Dimensions



Notes:
1. Dimensions in millimeters
   a = as supplied
   b = after free recovery

1. Max. longitudinal change after free recovery: +5% / -10%

Raychem tubing WCSM is supplied complete with installation instructions.

Product Size	Application range from mm	Application range to mm	H a min	H b max	W a nom	W b min
WCSM 12/3	3.5	10	12	3	0.8	2.0
WCSM 16/4	4.5	14	16	4	0.9	2.4
WCSM 24/6	6.5	22	24	6	1.0	2.7
WCSM 34/8	9	31	33	8	1.3	4.0
WCSM 48/12	13	44	48	12	1.5	4.5
WCSM 56/16	17.5	50	56	16	1.5	4.4
WCSM 70/20	22	63	70	20	1.4	4.4
WCSM 90/25	27	81	90	25	1.3	4.3
WCSM 110/30	33	100	110	30	1.2	4.3
WCSM 130/35	38	118	130	35	1.2	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	n.a.	4.3
WCSM 250/65	70	225	250	65	n.a.	4.3
WCSM 320/95	105	295	320	95	n.a.	4.3
WCSM 390/110	125	350	390	110	n.a.	4.3

Standard Lengths and Sealant

Lengths
All sizes are available in the standard lengths: 1000 mm and 1500 mm.

On request: other lengths and on spools.

All lengths subject to standard cutting tolerances.

Sealant
Raychem tubing WCSM are coated with an inner sealant wall. The sealant exhibits excellent bonding and sealing characteristics to all materials commonly used in the various cable insulation and sheath constructions, such as plastic, rubber, lead, and aluminium.
Sealant /S (equivalent /243 and S1323) meets Raychem specification PPS 3012/76.

Ordering Example **Part Number**

WCSM 9/3-1500/S

Product Type
Size
Standard Length
/S = Sealant

About TE Connectivity

TE Connectivity is a global, $14 billion company that designs and manufactures approximately 500,000 products that connect and protect the flow of power and data inside the products that touch every aspect of our lives. Our nearly 100,000 employees partner with customers in virtually every industry – from consumer electronics, energy and healthcare, to automotive, aerospace and communication networks – enabling smarter, faster, better technologies to connect products to possibilities.

More information on TE Connectivity can be found at: www.te.com

TE Energy – innovative and economical solutions for the electrical power industry: cable accessories, connectors & fittings, insulators & insulation, surge arresters, switching equipment, street lighting, power measurement and control.

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