

Low Voltage Cable Accessories



**WCSM**  
**Heat-shrinkable heavy-wall insulation and outer sealing sleeve**

**General Description**

Raychem WCSM heat-shrinkable heavy-wall tubing WCSM for insulating and sealing power cables and accessories. The UV stable and halogen free specially formulated to match the electrical and mechanical properties of cable jackets.

**Features & Benefits**

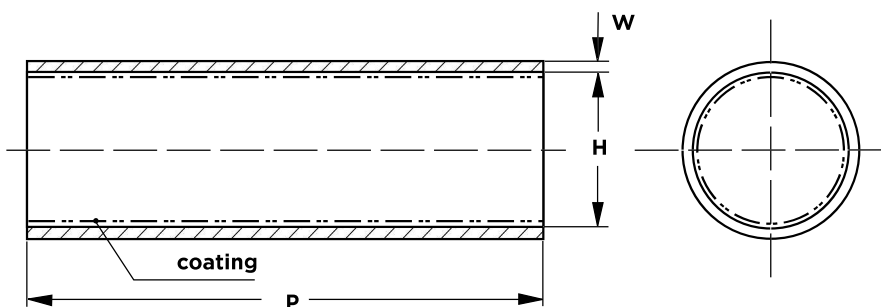
UV stable and pollution resistant unlimited shelf life when stored under normal condition. High shrink ratio enables perfect fit on a wide range of cables. Hot melt sealant provides an excellent moisture seal. High mechanical strength enables immediate back feeling.

Selection Information: dimensions shown in millimeters

WCSM Properties		Test Method	Material Requirements
<b>Tensile Strength</b>		ISO 37	12 MPa min
<b>Ultimate Elongation</b>		ISO 37	350% min
<b>Density</b>		ISO 1183 Method A	0.8-1.0 g/cm <sup>3</sup>
<b>Hardness</b>		ISO 868	40-50 shore D
<b>Accelerated Ageing</b>	7 days at 150 °C ± 2 °C	ISO 188	
	Tensile Strength	ISO 37	12 MPa min
	Ultimate Elongation	ISO 37	350% min
<b>Low Temperature Flexibility</b>	4 hours at -40 °C ± 3 °C	ASTM D2671 Procedure C	No cracking
<b>Dielectric Strength</b>		IEC 60243 Part 1 and 2	170 kV/cm min (1 mm wall) 120 kV/cm min (2 mm wall)
<b>Volume Resistivity</b>		IEC 60093	1 x 10 <sup>12</sup> Ω cm min
<b>Dielectric Constant</b>		IEC 60250	5.0 max
<b>Water Absorption</b>		ISO 62 Method 1	0.2% max after 14 days at 23 °C ± 2 °C
<b>Weathering</b>	The material from which WCSM tubing 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.

**Dimensions**



**Notes:**

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

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

Raychem WCSM is supplied complete with installation instructions.

Product Size	Application range		H		W	
	from mm	to mm	a min	b max	a nom	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 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**

