

# RAYCHEM HEAT SHRINK REINFORCED WRAPAROUND SLEEVES CNSM AND CFMSM

FOR CABLE JACKET REPAIR AND REJACKETING WITH CFMSM OR WITHOUT ALUMINIUM FOIL WITH CNSM



WRAPAROUND SLEEVES WITH FIBER-REINFORCED COMPOSITE LAMINATE MATERIAL PROVIDE HIGH DURABILITY AND IMPROVED LONGEVITY

## APPLICATIONS

- Underground Power Networks
- Substation

## RELEVANT STANDARDS AND TEST REPORTS

- ANSI C119.1, EN 50393:3015 and IEEE 404-2012
- Flexible insulating sleeving test standard IEC 60684-2

## KEY FEATURES

- Thermochromic paint and white line to indicate correct installation
- Semi-rigid material with excellent resistance against splitting, cut-through and mechanical abuse during and after installation
- REACH and RoHS compliant
- Applicable for wide range of cable diameter from 8 mm to 205 mm (0.31 inch to 8.07 inch)

TE Connectivity's (TE) Raychem heat shrink heavy-wall reinforced wraparound sleeves are available with or without aluminium foil. They are designed for cable rejacketing and sealing of low, medium, and high-voltage cable accessories. The fiber-reinforced composite structure provides excellent resistance against split, cut-through, and mechanical damage.

Green thermochromic paint distributed on the outer surface of the sleeves and a white dual stripe at the rail area serve as visual indicators for correct installation. Our Raychem wraparound sleeves are supplied with a hot-melt adhesive coating that ensures a permanent and reliable watertight seal.

CFMSM and CNSM wraparound sleeves accommodate a wide range of cable diameters, from 8 mm to 205 mm (0.31 inch to 8.07 inch).

## TESTING INFORMATION

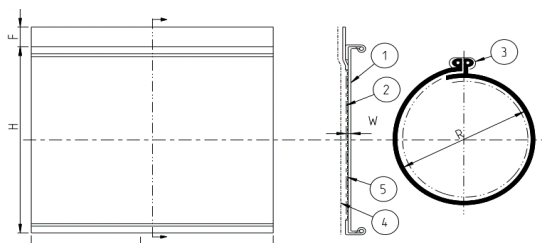
Physical Characteristic		
	Test Method	Material Requirements
Burst Strength	ISO 3303 -A	3000 N min.
Bursting Strength After Accelerated Heat Aging (7 days at 150°C)	ISO 3303 -A	2000 N min.
Low Temperature Flexibility	IEC 60684-2/ASTM D2671	No cracking at 4 hours at -40°C ± 3°C (-40°F ± 3°F)
Dielectric Strength	IEC 60684-2/ASTM D149	≥ 12 kV/mm min.
Water Absorption	IEC 60684-2/ASTM D1249	≤ 0.3% max.
Corrosion	ASTM D2671 PART A	No corrosion after 16h at 150°C (303.8°F)
Weathering	IEC 60684-2/ASTM D412	The material contains carbon black (≥ 2.5 %) to protect it from ultra-violet light
Application Characteristics		
Operating Temperature Range	- 30°C up to + 100°C (-22°F up to 212°F)	
Installation / Shrinking Temperature	> 120°C (248°F)	
Shrink Ratio	> 3 : 1	
Longitudinal Shrinkage Free Recovered	≤ 5 %	

## ORDERING INFORMATION CNSM AND CFMS

Product Size	Application Range R mm (inch)*		Width min mm (inch)		Thickness W mm (inch)	
	min	max	Ha min	Fa min	a min	b min
45/8	8 (0.32)	45 (1.77)	180 (7.08)	20 (0.78)	1.5 (0.05)	4.5 (0.18)
55/12	12 (0.47)	55 (2.16)	215 (8.46)	20 (0.78)	1.5 (0.05)	4.5 (0.18)
84/15	15 (0.59)	84 (3.30)	305 (12.00)	20 (0.78)	1.5 (0.05)	4.5 (0.18)
100/25	25 (0.98)	100 (3.93)	355 (13.97)	20 (0.78)	1.5 (0.05)	4.5 (0.18)
125/30	30 (1.81)	125 (4.92)	430 (16.92)	20 (0.78)	1.5 (0.05)	4.5 (0.18)
146/34	34 (1.33)	146 (5.74)	480 (18.89)	20 (0.78)	1.5 (0.05)	4.5 (0.18)
165/42	42 (1.65)	165 (6.49)	560 (22.04)	20 (0.78)	1.5 (0.05)	4.5 (0.18)
205/50	50 (1.97)	205 (8.07)	700 (27.55)	20 (0.78)	1.5 (0.05)	4.5 (0.18)

Note:-  
 1. DIMENSIONS IN mm (inch). a = AS SUPPLIED, b = AFTER FREE RECOVERY  
 2. STANDARD LENGTHS L: 500 mm, 700 mm, 1000 mm, 1500 mm. OTHER CUT LENGTHS AVAILABLE UNDER REQUEST  
 3. MAXIMUM LONGITUDINAL CHANGE AFTER FREE RECOVERY: -5%  
 4. STANDARD CUT LENGTH TOLERANCES:  
 ± 5 mm (L 500) / ± 10 mm (L < 1000) / ± 15 mm (L < 1500)  
 \*SIZE LISTED IS THE APPLICATION RANGE

## ORDER SELECTION EXAMPLE



Item	Description	Material	
		CNSM	CFMS
1	Heatshrink Sleeve	Crosslinked Polyolefin Based	
2	Hotmelt Adhesive	Polyamide Based	
3	Closure System	Stainless Steel	
4	Removable Protective Foil	PE (Polyethylene)	
5	Aluminum Foil	Not Included	Included

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