



## 102L HEAT-SHRINKABLE END CAP FOR LOW VOLTAGE INSULATION AND OUTER SEALING OF POWER CABLES

### KEY FEATURES

- Reliable sealing
- Approved for use on end seals on plastic, paper insulation, and lead or aluminium sheath
- Excellent electrical performance with high mechanical strength and impact resistance
- Halogen-free material content, non-corrosive and non-toxic smoke in event of fire
- Compliant to RoHS (i.e. free of Lead - and Cadmium)
- Compliant to REACH regulations
- Stabilized against UV radiation

TE Connectivity's (TE) Raychem 102L heat-shrinkable heavy-wall end caps are designed for insulation on low voltage cable accessories and for sealing and protection on low, medium and high voltage cables ends if they are out of operation. The material used is halogen-free and UV resistant.

TE's Raychem cable end caps utilize a technique based on heat-shrinkable materials which has brought unprecedented simplicity and reliability to the problem of protecting and sealing cable ends. TE's cable caps shrink when heated, to tightly fit a range of cable sizes and constructions. A special sealant also melts and flows under the shrinking action, gripping the cable and ensuring a high-integrity moisture seal.

Our advances in materials science ensure that these crosslinked halogen free polymer products also provide high-quality electrical insulation while at the same time resisting abrasion, weathering, and chemical attack.

TE is one of the world's leading producers of heat-shrinkable materials and one of the largest cable accessories makers. Components can be installed over variously-shaped objects to make a tight, rugged and fluid-resistant cover with excellent electrical performance. Available in a wide range of materials. Cable accessories kits, tubings and mouldings are developed to meet the growing demands of the world of energy.

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

## 102L Heat-Shrinkable End Cap



### TESTING

Physical Characteristic	Test Method	Material Requirements
Tensile Strength	ISO 37	12 MPa min.
Ultimate Elongation	ISO 37	200% min
Density	ISO/R 1138 Method A	1,0 - 1,2 g/cm <sup>3</sup>
Hardness	ISO 868	≥ 50 shore D
Accelerated ageing 7 days at 150°C ± 2°C Tensile Strength Ultimate Elongation	ISO 37 ISO 37	12 MPa min. 200% min.
Low Temperature Flexibility	ASTM D 2671 Procedure C	No cracking at 4 hours at - 30°C ± 2°C
Dielectric Strength	IEC 60243 part 1 and 2	≥ 80 kV/mm min
Volume Resistivity	IEC 60093	1x10 <sup>10</sup> Ω cm min
Water Absorption	ISO 62 method 1	≤ 0,5% max after 14 days at 23°C ± 2°C
Weathering	The material from which 102L is manufactured contains carbon black (≥ 2,5 %) to protect it from ultra-violet light.	
Application Characteristics		
Operating temperature range	- 30°C up to + 100°C	
Installation/ shrinking temp	> 120°C	
Low temperatures flexibility	down to - 30°C	
Shrink ratio	> 2,5 : 1	
Longitudinal shrinkage free recovered	≤ - 10 %	

### Characteristics at a glance

- Cross-linked polyolefin, thick wall
- Coated with hot melt adhesive
- Colour black, shrinkage ratio > 2,5 : 1
- Stabilized against UV rays
- Halogen-free, non-corrosive, free of lead and aluminium
- High tensile strength and mechanical robustness

### Applications in

- Low voltage insulation
- Protection against moisture
- Mechanical protection

### PRODUCT SELECTION INFORMATION

Description	Diameter (mm)		Length (mm)		Wall Thickness	Embossed Number (on cap pole)	No. of Flashes (Printing on R06 Version)
	Expanded min	Recovered max	Total Recovered min	Straight part recovered min	Recovered min		
102L011/S	10	4	38	34	2,8	1	N/A
102L022/S	20	7.5	55	50	2,8	2	3
102L033/S	35	15	90	80	3,2	3	4
102L044/S	55	25	143	130	3,9	4	6
102L048/S	75	32	150	140	3,3	none	7
102L055/S	100	45	162	140	3,8	5	10
102L066/S	120	70	145	123	3,8	6	N/A

102L end caps are available coated with an inner wall of hot melt sealant. This 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.

### ORDERING INFORMATION

#### 102L end cap - coated with hot melt adhesive /S

102L011/S (S100)	102L044-R05/S(S50)
102L022/S(S100)	102L048-R05/S(S25)
102L033/S(S100)	102L055-R05/S(S10)
102L044/S(S50)	102L066-R05/S(S10)
102L048/S(S25)	102L022-R06/S(S100)
102L055/S(S10)	102L033-R06/S(S100)
102L066/S(S10)	102L044-R06/S(S50)
102L011-R05/S(S100)	102L048-R06/S(S25)
102L022-R05/S(S100)	102L055-R06/S(S10)
102L033-R05/S(S100)	-

Material: Semi-rigid thermoplastic material, electrically insulating, weather, corrosion and impact resistant.

Adhesive: /S (239) - Hot Melt adhesive provides water tight and environmental seal.

### FOR MORE INFORMATION: TE Technical Support Centers

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