

Semirigid, adhesive-lined, polyolefin heat-shrinkable sealing caps

Adhesive-lined, heat-shrinkable ES Caps are specifically designed to provide mechanical and environmental protection of stub splices in electrical harnesses. Clear ES Caps allow see-through inspection; black ES Caps


are flame-retardant. The radiation-crosslinked polyolefin outer jacket is mechanically tough, providing abrasion protection. The cap's inner layer is a unique hot-melt adhesive, specially formulated to seal to most types of commercial wire insulation

and to perform well at an extended temperature range. The thick adhesive forms an effective barrier against fluids and moisture, helping protect the harness from the effects of corrosion and water wicking.

**Temperature rating**

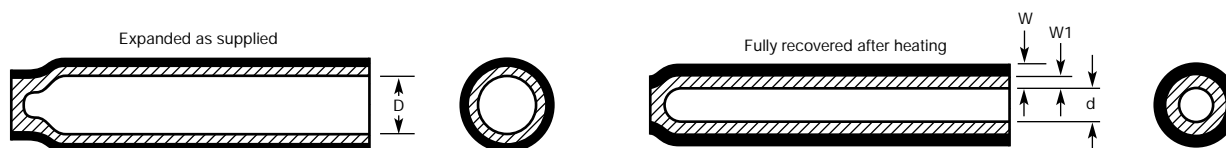
Full recovery temperature:	135°C
Continuous operating temperature:	-40°C to 105°C

**Specifications\***

<b>Type</b>	<b>Raychem</b>	
ES Caps	RW-3006	UL E85381

\*When ordering, always specify latest issue.

**Dimensions (millimeters/inches)**



Part number	Minimum lengths as supplied (millimeters)	Inside diameter (including core)		Recovered wall thickness**	
		D (min.) Expanded as supplied	d (max.) Recovered after heating	W Minimum total wall	W1 Minimum adhesive wall
ES Cap-No. 1	30, 35, 40, 50	5.70 0.225	1.27 0.050	1.20 0.047	0.56 0.022
ES Cap-No. 2	30, 35, 40, 50	7.40 0.293	1.65 0.065	1.52 0.060	0.76 0.030
ES Cap-No. 3	40, 50	10.85 0.427	2.41 0.095	1.91 0.075	1.02 0.040

\*\*Wall thickness will be less if tubing recovery is restricted during shrinkage.

**Ordering information**

Colors	Clear, black
Size selection	Always order the largest size that will fit snugly over the component being covered.
Standard packaging	In pieces.
Marking	Caps will be marked with the number size (for example, ES-1, ES-2, or ES-3).
Ordering description	Specify product name, size, color, and length; for example, ES-CAP-NO.2-X-35MM (X=Clear).
Cap lengths	Other cap lengths available upon request.

## Specification values

	Property	Unit	Requirement	Method of test
Physical*	Dimensions	mm ( <i>inches</i> )	See reverse	ASTM D 2671
	Tensile strength**	psi ( <i>MPa</i> )	1500 ( <i>10.3</i> ) minimum	ASTM D 2671
	Ultimate elongation**	percent	250 minimum	See below***
	Heat shock (4 hours at 225°C/437°F)		No dripping, flowing, or cracking of outer jacket	ASTM D 2671
	Dynamic cut-through	pounds ( <i>kg</i> )	30 ( <i>13.6</i> ) minimum	ASTM D 3032 See below***
	Flammability (black only)		Self-extinguishing within 60 seconds	ASTM D 2671 See below***
Splice performance	Current leakage test		0.25 microamp maximum	See below***
	Insulation resistance test		10 <sup>8</sup> ohms minimum	
	Room temperature flex test			See below***
	Current leakage test		0.25 microamp maximum	
	Insulation resistance test		10 <sup>8</sup> ohms minimum	
	Thermal shock			See below***
	Current leakage test		0.25 microamp maximum	
	Insulation resistance test		10 <sup>8</sup> ohms minimum	
	Cold impact		No cracking of outer jacket	See below***
	Current leakage test		0.25 microamp maximum	
	Insulation resistance test		10 <sup>8</sup> ohms minimum	
	Heat aging			See below***
	Current leakage test		0.25 microamp maximum	
	Insulation resistance test		10 <sup>8</sup> ohms minimum	
Fluid immersion			See below***	
Current leakage test		0.25 microamp maximum		
Insulation resistance test		10 <sup>8</sup> ohms minimum		

\*Note: These requirements apply to ES Cap material only. These tests, except dimensions, cannot be performed on material in ES Cap configuration.

\*\*Calculation based on wall thickness of jacket only.

\*\*\*Consult Raychem RW-3006 for specific details about test procedures.

Raychem is a trademark of Tyco Electronics Corporation.

**Users should independently evaluate the suitability of the product for their application.**

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