

Rugged, heavy wall, adhesive-lined, polyolefin heat-shrinkable tubing

Rugged, heavy wall RHW tubing is specifically designed for insulating, protecting and sealing electrical connections and joints in low-voltage cables. RHW is the ideal choice whenever maximum mechanical protection is required in an electrical insulation system. It provides splice insulation thickness equal to or greater than standard wire insulation manufactured to common industry standards.

RHW withstands mechanical abuse for increased product reliability. It is highly resistant to impact and abrasion and

provides a high level of strain relief when installed on splices and joints. It is also resistant to chemicals, moisture and oils.

Adhesive-lined RHW provides a complete moisture-proof seal, preventing corrosion of underlying components. The thermoplastic adhesive in RHW will adhere to most common insulation materials including crosslinked poly, PVC, neoprene, hypalon and EPR, as well as to most metals including lead, aluminum and steel.

Installation requires no special skills. When heated, RHW tubing shrinks quickly to insulate and encapsulate electrical connections and cable joints. While the tubing is shrinking, the internal adhesive lining melts and flows to environmentally seal the connection.

RHW is the ideal choice for applications where maximum reliability and product performance, and simplified installation are required. Because RHW is heat-shrinkable, a minimum number of sizes are needed to cover a wide range of cable and splice diameters.

Temperature rating

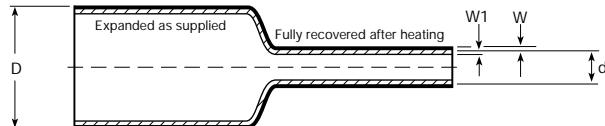
Full recovery temperature: 125°C

Continuous operating temperature: -55°C to 110°C

Specifications*

Type	Raychem	 UL**
RHW	RHW SCD	File E115664

*When ordering, always specify latest issue. **Sizes 9/3 through 70/21 only.

Dimensions (millimeters/inches)

Inside diameter				Recovered wall thickness**				Inside diameter				Recovered wall thickness**					
D (min.)	d (max.)	W	W1	D (min.)	d (max.)	W	W1	Size	as supplied	Recovered	(nom.)	(nom.)	Size	as supplied	Recovered	(nom.)	
Expanded	Recovered	Jacket wall	Adhesive wall	Expanded	Recovered	(nom.)	(nom.)	after heating	after heating	(nom.)	(nom.)	Adhesive wall	after heating	Jacket wall	Adhesive wall		
9/3	9	0.354	3	0.118	2.0	0.079	0.25	0.010	70/21	70	2.756	21	0.827	4.4	0.173	0.40	0.016
13/4	13	0.512	4	0.158	2.4	0.094	0.30	0.012	85/25	85	3.346	25	0.984	4.3	0.169	0.40	0.016
20/6	20	0.787	6	0.236	2.5	0.098	0.35	0.014	105/30	105	4.134	30	1.181	4.3	0.169	0.45	0.018
33/8	33	1.299	8	0.315	3.2	0.126	0.35	0.014	130/36	130	5.118	36	1.417	4.3	0.169	0.45	0.018
43/12	43	1.693	12	0.472	4.3	0.169	0.40	0.016	160/50	160	6.299	50	1.968	4.3	0.169	0.45	0.018
51/16	51	2.008	16	0.630	4.5	0.177	0.40	0.016	180/50	180	7.087	50	1.968	4.3	0.169	0.50	0.020

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

Ordering information

Color	Black (all sizes); red (sizes 9/3, 13/4, 20/6 and 33/8 only)
Size selection	Always order the largest size that will shrink snugly over the component being covered.
Standard packaging	1200MM lengths
Marking	Tubing will be marked with the product name, size and batch number. Sizes 9/3 through 70/21 will also be marked with the UL logo.
Ordering description	Specify product name, size, cut length, coating option and color; for example, RHW-20/6-1200/ADH-0 (ADH = Adhesive-lined, 0=Black).

Specification values

	Property	Unit	Requirement	Method of test
Material	Dimensions	mm (inches)	See reverse	ASTM D 412
	Longitudinal change	percent	+5, -15	ASTM D 792
	Tensile strength	psi (MPa)	1750 (12) minimum	ASTM D 412
	Ultimate elongation	percent	350 minimum	ASTM D 792
	Specific gravity		1.2 maximum	ASTM D 792
	Hardness	Shore D	40 to 60	ASTM D 2240
	Low temperature flexibility (4 hours at -55°C/-67°F)		No cracking	ASTM D 2671
	Heat resistance (168 hours at 150°C/302°F)			
Electrical	Followed by test for:			
	Ultimate elongation	percent	350 minimum	ASTM D 2671
	Dielectric strength	volts/mil (kV/mm)	430 (170) minimum	ASTM D 149
	Dielectric withstand, 2200 V	seconds	60 minimum	UL 486D
Chemical	Volume resistivity	ohm-cm	1 x 10 ¹² minimum	ASTM D 257
	Corrosive effect (16 hours at 150°C/302°F)		Noncorrosive	ASTM D 2671 Procedure A
	Fungus resistance		Rating of 1 or less	ASTM G 21
	Water absorption (24 hours at 23°C/73°F)	percent	0.1 maximum	ASTM D 570
	Fluid resistance (168 hours at 23°C/73°F) in: VDE 0370 oil			ASTM D 2671
	Followed by tests for:			
	Tensile strength	psi	80% minimum of original	ASTM D 2671
	Ultimate elongation	percent	80% minimum of original	ASTM D 2671

Typical performance values

	Property	Unit	Performance	Method of Test
Adhesive Properties	Softening point	°C	90 ± 10	ASTM E 28
	Peel Strength			ASTM D 1000
	Copper		10 lbs./in. width	
	Polyethylene		10 lbs./in. width	
	Adhesive Shear Aluminum to aluminum	psi	150 minimum	ASTM D 1002
	Water absorption	percent	0.5 maximum	ASTM D 570
	Corrosive effect (16 hours at 121°C/250°F)		Noncorrosive	ASTM D 2671 Procedure A

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

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