

Highly expanded, polyolefin heat-shrinkable tubing

RP-4800 is a radiation-crosslinked polyolefin material with a 4:1 expansion ratio. It was developed for a wide range of applications where a large expansion is required, such as harness repair. This high expansion simplifies installation and speeds repairs. The high expansion of RP-4800 tubing eliminates the need to remove connectors or large

transitions and allows for easy harness assembly and repair. This heat-shrinkable, flexible, flame-retardant tubing is also compatible with Raychem adhesives, providing a complete environmental seal.

RP-4800 tubing has excellent physical and mechanical properties that meet both military and industrial

requirements. It is highly abrasion-resistant and shows no significant degradation when exposed to common solvents and chemicals, including aviation fuel and hydraulic fluid.

RP-4800 tubing remains flexible at low temperatures and, for short periods, can withstand temperatures of up to 300°C without dripping or flowing.

Temperature rating

Full recovery temperature:	121°C
Continuous operating temperature:	-55°C to 135°C

Specifications*



Type	Raychem	Military	UL
RP-4800	RT-1122	AMS-DTL-23053/5, Class 1	E35586

*When ordering, always specify latest issue.

Dimensions (millimeters/inches)



Part number	Inside diameter		d (max.)		Wall thickness	
	D (min.)	Expanded as supplied	Recovered after heating	Recovered after heating	W	Recovered after heating**
RP-4800-No.1	25.40	1.00	6.99	0.275	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.2	50.80	2.00	13.97	0.550	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.3	76.20	3.00	20.57	0.810	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.4	101.60	4.00	26.67	1.050	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.5	25.40	1.00	11.74	0.462	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.6	60.33	2.37	17.27	0.680	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.7	76.20	3.00	21.34	0.840	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.8	95.25	3.75	23.62	0.930	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.9	114.30	4.50	36.83	1.450	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.10	38.10	1.50	9.53	0.375	1.14 ± 0.18	0.045 ± 0.007
RP-4800-No.11	19.05	0.75	4.57	0.180	1.14 ± 0.18	0.045 ± 0.007

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

Ordering information

Colors	Standard Black
	Nonstandard Brown, red, orange, yellow, green, blue, violet, gray, and white
Size selection	Always order the largest size that will shrink snugly over the component being covered.
Standard packaging	On spools or in 4-foot lengths
Ordering description	Specify product name, size, and color; for example, RP-4800-No.6-0 (0=Black).

Specification values

	Property	Unit	Requirement	Method of test	
Physical	Dimensions	mm (<i>inches</i>)	See reverse	ASTM D 2671	
	Longitudinal change	percent	+0, -10	ASTM D 2671	
	Tensile strength	psi (<i>MPa</i>)	1500 (<i>10.3</i>) minimum	ASTM D 2671	
	Ultimate elongation	percent	200 minimum	ASTM D 2671	
	Secant modulus (expanded)	psi (<i>MPa</i>)	2.5 x 10 ⁴ (<i>172</i>) maximum	ASTM D 2671	
	Specific gravity		1.35 maximum	ASTM D 2671	
	Low-temperature flexibility (4 hours at -55°C/-67°F)		No cracking	See note below	
	Heat shock (4 hours at 250°C/482°F)		No dripping, flowing or cracking	See note below	
Heat resistance (336 hours at 175°C/347°F)			ASTM D 2671		
Followed by test for:					
	Ultimate elongation	percent	150 minimum	ASTM D 2671	
Electrical	Dielectric strength	volts/mil (<i>volts/mm</i>)	500 (<i>19,680</i>) minimum	ASTM D 2671	
	Volume resistivity	ohm-cm	10 ¹⁴ minimum	ASTM D 2671	
Chemical	Corrosive effect (16 hours at 175°C/347°F)		No removal of copper	See note below	
	Copper stability (168 hours at 160°C/320°F)		No brittleness, glazing, cracking, or severe discoloration of tubing.	See note below	
	Followed by test for:				
		Ultimate elongation	percent	200 minimum	ASTM D 2671
		Flammability, average time of burning	seconds	60 maximum 25% maximum flag burn	ASTM D 2671 Procedure B
		Fungus resistance		Rating of 1 or less	ASTM G 21
		Water absorption (24 hours at 23°C/73°F)	percent	0.5 maximum	ASTM D 2671
		Fluid resistance (24 hours at 23°C/73°F) in: JP-8 fuel (MIL-T-5624) Skydrol 500 Hydraulic fluid (MIL-H-5606) Aviation gasoline 100/300 (MIL-G-5572) Water			ASTM D 2671
	Followed by tests for:				
		Dielectric strength	volts/mil (<i>volts/mm</i>)	400 (<i>15,760</i>) minimum	ASTM D 2671
	Tensile strength	psi (<i>MPa</i>)	1000 (<i>6.9</i>) minimum	ASTM D 2671	

Note: Consult RT-1122 for specific details about test procedures.

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

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