

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	<b>Standard</b> Black
	<b>Nonstandard</b> 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 <sup>4</sup> ( <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 <sup>14</sup> 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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