

# **RP-4800**

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, flameretardant 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 abrasionresistant 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\*

			.74	
Туре	Raychem	Military	UL	
RP-4800	RT-1122	AMS-DTL-23053/5, Class 1	E35586	
*When ordering, alway	s specify latest issue.			

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#### Dimensions (millimeters/inches)



	ameter			Wall thicknes	S
D (min.)		d (max.)		W	
Expande	ed	Recover	ed after	Recovered af	iter
as suppl	ied	heating		heating**	
25.40	1.00	6.99	0.275	1.14 ± 0.18	0.045 ± 0.007
50.80	2.00	13.97	0.550	1.14 ± 0.18	0.045 ± 0.007
76.20	3.00	20.57	0.810	1.14 ± 0.18	0.045 ± 0.007
101.60	4.00	26.67	1.050	1.14 ± 0.18	0.045 ± 0.007
25.40	1.00	11.74	0.462	1.14 ± 0.18	0.045 ± 0.007
60.33	2.37	17.27	0.680	1.14 ± 0.18	0.045 ± 0.007
76.20	3.00	21.34	0.840	1.14 ± 0.18	0.045 ± 0.007
95.25	3.75	23.62	0.930	1.14 ± 0.18	0.045 ± 0.007
114.30	4.50	36.83	1.450	1.14 ± 0.18	0.045 ± 0.007
38.10	1.50	9.53	0.375	1.14 ± 0.18	0.045 ± 0.007
19.05	0.75	4.57	0.180	1.14 ± 0.18	0.045 ± 0.007
	Expande as suppl 25.40 50.80 76.20 101.60 25.40 60.33 76.20 95.25 114.30 38.10 19.05	Expanded         as supplied         25.40       1.00         50.80       2.00         76.20       3.00         101.60       4.00         25.40       1.00         60.33       2.37         76.20       3.00         95.25       3.75         114.30       4.50         38.10       1.50         19.05       0.75	Expanded         Recover           as supplied         heating           25.40         1.00         6.99           50.80         2.00         13.97           76.20         3.00         20.57           101.60         4.00         26.67           25.40         1.00         11.74           60.33         2.37         17.27           76.20         3.00         21.34           95.25         3.75         23.62           114.30         4.50         36.83           38.10         1.50         9.53	Expanded as supplied         Recovered after heating           25.40         1.00         6.99         0.275           50.80         2.00         13.97         0.550           76.20         3.00         20.57         0.810           101.60         4.00         26.67         1.050           25.40         1.00         11.74         0.462           60.33         2.37         17.27         0.680           76.20         3.00         21.34         0.840           95.25         3.75         23.62         0.930           114.30         4.50         36.83         1.450           38.10         1.50         9.53         0.375           19.05         0.75         4.57         0.180	Expanded as suppliedRecovered after heatingRecovered after heating** $25.40$ $1.00$ $6.99$ $0.275$ $1.14 \pm 0.18$ $50.80$ $2.00$ $13.97$ $0.550$ $1.14 \pm 0.18$ $76.20$ $3.00$ $20.57$ $0.810$ $1.14 \pm 0.18$ $101.60$ $4.00$ $26.67$ $1.050$ $1.14 \pm 0.18$ $25.40$ $1.00$ $11.74$ $0.462$ $1.14 \pm 0.18$ $101.60$ $4.00$ $26.67$ $1.050$ $1.14 \pm 0.18$ $25.40$ $1.00$ $11.74$ $0.462$ $1.14 \pm 0.18$ $60.33$ $2.37$ $17.27$ $0.680$ $1.14 \pm 0.18$ $76.20$ $3.00$ $21.34$ $0.840$ $1.14 \pm 0.18$ $76.20$ $3.00$ $21.34$ $0.840$ $1.14 \pm 0.18$ $95.25$ $3.75$ $23.62$ $0.930$ $1.14 \pm 0.18$ $114.30$ $4.50$ $36.83$ $1.450$ $1.14 \pm 0.18$ $38.10$ $1.50$ $9.53$ $0.375$ $1.14 \pm 0.18$ $19.05$ $0.75$ $4.57$ $0.180$ $1.14 \pm 0.18$

\*\*Wall thickness will be less if recovery is restricted during shrinkag

#### 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 na	me, 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/ <i>482°F</i> )		No dripping, flowing or cracking	See note below
	Heat resistance (336 hours at 175°C/ <i>347°F</i> ) Followed by test for:			ASTM D 2671
	Ultimate elongation	percent	150 minimum	ASTM D 2671
Electrical	Dielectric strength	volts/mil (volts/mm)	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/ <i>73°F</i> ) 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 (volts/mm)	400 <i>(15,760)</i> minimum	ASTM D 2671
	Tensile strength	psi <i>(MPa)</i>	1000 <i>(6.9)</i> minimum	ASTM D 2671

Skydrol is a trademark of Monsanto Company.

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

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