tyco Electronics

RT-3

Raychem

Semirigid, flame-retardant polyolefin heat-shrinkable tubing

PBBs PBBEs PBBOs

RT-3 tubing is ideally suited for wire strain-relief applications. It provides excellent strain relief and insulation of "weak points," transferring flex stress away from solder and crimp joints and other typically sensitive wire-splice and termination points.

RT-3 is especially well suited for semi-automated production equipment requiring tubing with a tightly controlled expanded diameter. Sizes and expansion ratios of RT-3 are available for specific spade/disconnect terminals.

RT-3 tubing is made from a semirigid, radiation-crosslinked, flame-retardant polyolefin. Unlike other typical flame-retardant tubings, RT-3 tubing is free of polybrominated biphenyls (PBBs) and polybrominated biphenyl oxides (PBBOs). In Europe, these chemicals are classified as environmentally hazardous substances.

RT-3 is UL-recognized in all colors and CSA- certified in black at 125°C, 600 V.

Temperature rating

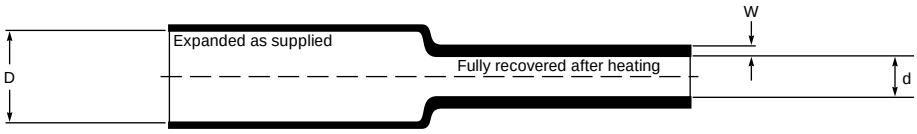
Full recovery temperature:	135°C
Continuous operating temperature:	–55°C to 135°C

*Specifications**

Type	Raychem	UL	CSA
RT-3	RT-360**	E35586	LR31929 (Black only)

* When ordering, always specify latest issue.
** Except dimensions and longitudinal change.

*Dimensions (*millimeters/*inches)*



Size*	Inside diameter D Expanded as supplied	d (max.) Recovered after heating	Wall thickness W Recovered after heating***
RT-3 No. 1	6.1 ± 0.4 *0.240 ± 0.015*	2.4 *0.095*	0.79 ± 0.08 *0.031 ± 0.003*
RT-3 No. 2	8.1 ± 0.4 *0.320 ± 0.015*	3.2 *0.125*	0.79 ± 0.08 *0.031 ± 0.003*
RT-3 No. 3	9.5 ± 0.5 *0.375 ± 0.020*	3.8 *0.150*	0.79 ± 0.08 *0.031 ± 0.003*
RT-3 No. 4	12.3 ± 0.5 *0.485 ± 0.020*	5.1 *0.200*	0.79 ± 0.08 *0.031 ± 0.003*

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

Ordering information

Color	**Standard** Black only.
Size selection	Always order the largest size that will shrink snugly over the component being covered. A variety of nonstandard sizes are available.
Standard packaging	1-inch cut-pieces or 4-foot lengths
Ordering description	Specify product name, size, and color; for example, RT-3 No. 1-0 (0=Black).

Specification values

	Property	Unit	Requirement	Method of test
Physical	Dimensions	mm *(inches)*	See reverse	ASTM D 2671
	Longitudinal change	percent	+0, –10	ASTM D 2671
	Tensile strength	psi *(MPa)*	2000 *(13.8)* minimum	ASTM D 2671
	Ultimate elongation	percent	200 minimum	ASTM D 2671
	Secant modulus (expanded)	psi *(MPa)*	2.5×10^4 *(172)* minimum	ASTM D 2671
	Specific gravity		1.35 maximum	ASTM D 2671
	Low-temperature flexibility (4 hours at –55°C/*–67°F*)		No cracking	ASTM D 2671
	Heat shock (4 hours at 250°C/*482°F*)		No dripping, flowing, or cracking	ASTM D 2671
	Heat resistance (168 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 *(kV/mm)*	500 *(19.7)* minimum	ASTM D 2671
	Volume resistivity	ohm-cm	10^{14} minimum	ASTM D 2671
Chemical	Copper mirror corrosion (16 hours at 150°C/*302°F*)		Noncorrosive	ASTM D 2671 Procedure A
	Copper contact corrosion (168 hours at 150°C/*302°F*)		No pitting or blackening of copper	ASTM D 2671 Procedure B
	Flammability		Self-extinguishing within 1 minute; no more than 25% of indicator burned or charred; no falling, burning particles.	ASTM D 2671 Procedure B
	Fungus resistance			ISO 846
	Followed by tests for:			Method B
	Tensile strength	psi *(MPa)*	2000 (*13.8)* minimum	ASTM D 2671
	Ultimate elongation	percent	200 minimum	ASTM D 2671
	Dielectric strength	volts/mil *(kV/mm)*	500 *(19.7)* minimum	ASTM D 2671
	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 *(kV/mm)*	400 *(15.8)* minimum	ASTM D 2671
	Tensile strength	psi *(MPa)*	1600 *(11.0)* minimum	ASTM D 2671

Note: Consult RT-360 for specific details about test procedures.

Skydrol is a trademark of Monsanto Company.
Raychem is a trademark of Tyco Electronics Corporation.

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

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