

## Semirigid, flame-retardant, polyolefin heat-shrinkable tubing

Heat-shrinkable CRN tubing is ideally suited for wire strain-relief applications. It provides excellent strain-relief and insulation of weak points such as wire splices and terminations. CRN tubing helps ensure a reliable connection because it transfers the flex stress away from typically sensitive points such as solder and crimp joints.

CRN tubing has a broad range of uses including component protective covering and packaging. The flame-retardant material is fabricated from radiation-crosslinked polyolefin and exhibits excellent mechanical and chemical properties. It meets major military and industrial specifications for an all-purpose, semirigid tubing.

CRN tubing is abrasion-resistant. It's superior chemical properties permit satisfactory performance after exposure to common chemicals and solvents.

Only a few sizes of CRN tubing are required to cover a wide range of substrate diameters.

### Temperature rating

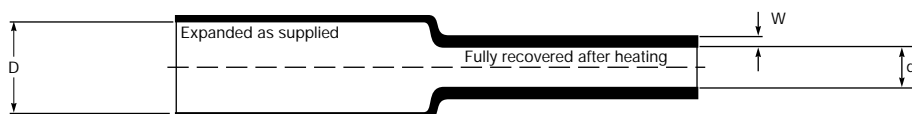
Full recovery temperature:	135°C
Continuous operating temperature:	-55°C to 135°C

### Specifications\*

Type	Raychem	Military	UL	CSA
CRN Type 1 (colors)	RT-360 Type 1	AMS-DTL-23053/6 Cl. 1	E35586	LR31929 (Black only)
CRN Type 2 (clear)	RT-360 Type 2	AMS-DTL-23053/6 Cl. 2		

\*When ordering, always specify latest issue.

### Dimensions (millimeters/inches)



Size	Inside diameter		Wall thickness	
	D (min.) Expanded as supplied	d (max.) Recovered after heating	W Recovered after heating**	
3/64	1.2 0.046	0.6 0.023	0.51 ± 0.08	0.020 ± 0.003
1/16	1.6 0.063	0.8 0.031	0.51 ± 0.08	0.020 ± 0.003
3/32	2.4 0.093	1.2 0.046	0.51 ± 0.08	0.020 ± 0.003
1/8	3.2 0.125	1.6 0.062	0.51 ± 0.08	0.020 ± 0.003
3/16	4.8 0.187	2.4 0.093	0.64 ± 0.08	0.025 ± 0.003
1/4	6.3 0.250	3.2 0.125	0.64 ± 0.08	0.025 ± 0.003
3/8	9.5 0.375	4.8 0.187	0.76 ± 0.08	0.030 ± 0.003
1/2	12.7 0.500	6.4 0.250	0.76 ± 0.08	0.030 ± 0.003
3/4	19.0 0.750	9.5 0.375	0.89 ± 0.12	0.035 ± 0.005

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

### Ordering information

Colors	Standard Nonstandard	Black Clear (not flame-retardant)
Size selection	Always order the largest size that will shrink snugly over the component being covered.	
Standard packaging	4-foot lengths	
Ordering description	Specify product name, size, and color; for example, CRN 1/4-0 (0 = Black).	

## Specification values

	Property	Unit	Requirement Type 1 (Colors)	Requirement Type 2 (Clear)	Method of test
Physical	Dimensions	mm ( <i>inches</i> )	See reverse	See reverse	ASTM D 2671
	Longitudinal change	percent	5 maximum	5 maximum	ASTM D 2671
	Tensile strength	psi ( <i>MPa</i> )	2000 ( <i>13.8</i> ) minimum	2000 ( <i>13.8</i> ) minimum	ASTM D 2671
	Ultimate elongation	percent	200 minimum	200 minimum	ASTM D 2671
	Secant modulus (expanded)	psi ( <i>MPa</i> )	2.5 x 10 <sup>4</sup> ( <i>172</i> ) minimum	2.5 x 10 <sup>4</sup> ( <i>172</i> ) minimum	ASTM D 2671
	Specific gravity		1.35 maximum	1.0 maximum	ASTM D 792
	Low-temperature flexibility (4 hours at -55°C/-67°F)		No cracking	No cracking	AMS-DTL 23053 ASTM D 2671 Procedure C
	Heat shock (4 hours at 250°C/482°F)		No dripping, flowing, or cracking	No dripping, flowing, or cracking	AMS-DTL 23053 ASTM D 2671
	Heat resistance (168 hours at 175°C/347°F)				ASTM D 2671
	Followed by test for:				
	Ultimate elongation	percent	150 minimum	150 minimum	ASTM D 2671
Electrical	Dielectric strength	volts/mil ( <i>volts/mm</i> )	500 ( <i>19,680</i> ) minimum	500 ( <i>19,680</i> ) minimum	ASTM D 2671
	Volume resistivity	ohm-cm	10 <sup>14</sup> minimum	10 <sup>16</sup> minimum	ASTM D 2671
Chemical	Copper mirror corrosion (16 hours at 150°C/302°F)		No removal of copper	No removal of copper	ASTM D 2671 Procedure A
	Copper contact corrosion (168 hours at 150°C/302°F)		No pitting or blackening of copper	No pitting or blackening of copper	ASTM D 2671 Procedure B
	Flammability		Self-extinguishing within 1 minute; 25% of indicator burned or charred; no falling, burning particles.	Not applicable	ASTM D 2671 Procedure B
	Fungus resistance				ISO 846 Method B
	Followed by tests for:				
	Tensile strength	psi ( <i>MPa</i> )	2000 ( <i>13.8</i> ) minimum	2000 ( <i>13.8</i> ) minimum	ASTM D 2671
	Ultimate elongation	percent	200 minimum	200 minimum	ASTM D 2671
	Dielectric strength	volts/mil ( <i>volts/mm</i> )	500 ( <i>19,680</i> ) minimum	500 ( <i>19,680</i> ) minimum	ASTM D 2671
	Water absorption (24 hours at 23°C/73°F)	percent	0.5 maximum	0.2 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 (100/130) (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	400 ( <i>15,760</i> ) minimum	ASTM D 2671
	Tensile strength	psi ( <i>MPa</i> )	1600 ( <i>11.0</i> ) minimum	1600 ( <i>11.0</i> ) minimum	ASTM D 2671

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

Raychem is a trademark of Tyco Electronics Corporation.

\*Trademark of the Monsanto Company.

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

### Tyco Electronics Corporation

300 Constitution Drive  
Menlo Park, CA 94025-1164  
USA  
Tel: (800) 926-2425 (US & Canada)  
Tel: +1 (650) 361-3860 (All other countries)

Faraday Road  
Dorcan, Swindon, SN3 5HH  
United Kingdom  
Tel: +44 1793 528171

3816 Noborito, Tama-ku  
Kawasaki, Kanagawa 214-8533  
Japan  
Tel: +81 44 900 5102

Asia Pacific Headquarters  
26 Ang Mo Kio, Industrial Park 2  
Singapore 569507  
Tel: +65 4866 151

All information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each product for their application. Tyco Electronics Corporation makes no warranties as to the accuracy or completeness of the information, and disclaims any liability regarding its use. Tyco Electronics Corporation's only obligations are those in the Standard Terms and Conditions of Sale for these products and in no case will Tyco Electronics Corporation be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of the product. Tyco Electronics Corporation's Specifications are subject to change without notice. In addition, Tyco Electronics Corporation reserves the right to make changes in materials or processing without notification to the Buyer which do not affect compliance with any applicable specification.

**For more information about this product visit [www.tycoelectronics.com](http://www.tycoelectronics.com)**

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[CRN-1/16-0-SP](#)