

Introducing
RW-175-E

Highly flame-resistant, high-temperature, chemical-resistant RW-175-E tubing provides tough, semirigid, very-thin-wall insulation and strain relief of multipin connectors, solder joints and other delicate electrical connections and terminations. It is well-suited for applications that require dense packing of components or visual inspection of covered components. It is especially suitable for applications requiring outstanding abrasion and cut-through resistance and superior chemical and solvent resistance. Its high temperature performance meets or exceeds military and industrial standards.

KEY FEATURES

- 2:1 shrink ratio for all standard sizes
- Tough, semirigid, very-thin-wall insulation
- High flame-resistance, meeting the requirements of IEC 60684-2, also with UL and CSA VW-1 flammability rating
- High temperature performance that meets or exceeds military and industrial standards
- Protection from most industrial solvents, fuels, and chemicals
- Offers improved clarity (clear version) and increased resistance to crazing when compared to previously offered solutions

APPLICATIONS

- Appliances
- Military and commercial aircraft
- Commercial electronics and communication
- Industrial equipment

ELECTRICAL

- Provides excellent electrical insulation
- Not recommended for use as a primary insulator at temperatures exceeding 135°C [275°F]

MECHANICAL

- Tough modified polyvinylidene fluoride material provides outstanding abrasion and cut-through resistance
- Excellent for strain relief when installed on delicate electrical connections and terminations

TEMPERATURE RATING

- Full recovery temperature: 175°C [347°F]
- Operating Temperature range: -55°C to 175°C [-67°F to 347°F]

STANDARDS AND SPECIFICATIONS

- RW-3029/1
- UL 224 VW-1
- CSA C22.2 No. 198.1-98 VW-1

ORDERING INFORMATION

- Colour: Clear (-X) (standard); Black (-0) (nonstandard)
- Standard packaging (-STK): 1.2m [4 ft.] lengths
  Optional packaging (-SP): Spool, varying lengths (consult TE for details)
- Ordering description: Specify product name, size, colour and packaging; for example, RW-175-E-3/16-X-STK.

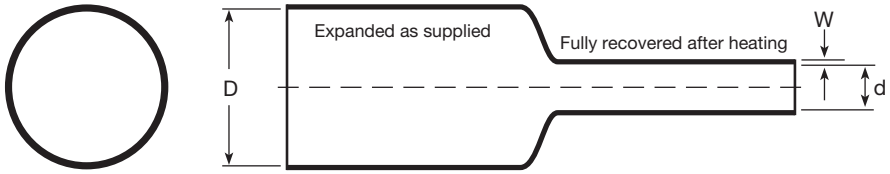
SAMPLES NOW AVAILABLE

te.com/products/RW-175-E

TE connectivity

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RW-175-E DIMENSIONS



Size	Minimum Expanded I.D. (D)		Maximum Recovered I.D. (d)		Nominal Recovered Jacket Wall (W)	
	mm.	in.	mm.	in.	mm.	in.
3/64	1.20	.046	.60	.023	.25 ± .051	.010 ± .002
1/16	1.60	.063	.80	.031	.25 ± .051	.010 ± .002
3/32	2.40	.093	1.20	.046	.25 ± .051	.010 ± .002
1/8	3.20	.125	1.60	.062	.25 ± .051	.010 ± .002
3/16	4.80	.187	2.40	.093	.25 ± .051	.010 ± .002
1/4	6.40	.250	3.20	.125	.33 ± .051	.013 ± .002
3/8	9.50	.375	4.80	.187	.33 ± .051	.013 ± .002
1/2	12.70	.500	6.40	.250	.33 ± .051	.013 ± .002
3/4	19.10	.750	9.50	.375	.43 ± .076	.017 ± .003
1	25.40	1.000	12.70	.500	.48 ± .076	.019 ± .003
1-1/2	38.10	1.500	19.10	.750	.51 ± .076	.020 ± .003
2	50.00	2.000	25.40	1.000	.51 ± .076	.020 ± .003

RW-175 ORDERING DESCRIPTION

Example 1:

RW-175-E-3/8-X-STK

- STK — 1.2m [4 ft.] Length
- X — Colour is Clear
- 3/8 — Size
- E — European Specification
- RW-175 — Semirigid, Very Thin Wall Product

Example 2:

RW-175-E-3/4-0-SP

- SP — Spool Packaging
- 0 — Color is Black
- 3/4 — Size
- E — European Specification
- RW-175 — Semirigid, Very Thin Wall Product

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PRODUCT OFFERING

Material Description	Material Number
RW-175-E-3/64-X-STK	CV20922001
RW-175-E-3/64-X-SP	CV20914001
RW-175-E-1/16-X-STK	CV25362001
RW-175-E-1/16-X-SP	CV21254001
RW-175-E-3/32-X-STK	CV25382001
RW-175-E-3/32-X-SP	CV21204001
RW-175-E-1/8-X-STK	CV25332001
RW-175-E-1/8-X-SP	CV21424001
RW-175-E-3/16-X-STK	CV25372001
RW-175-E-1/4-X-STK	CV25342001

Material Description	Material Number
RW-175-E-1/4-X-SP	CV21104001
RW-175-E-3/8-X-STK	CV25852001
RW-175-E-3/8-X-SP	CV21364001
RW-175-E-1/2-X-STK	CV25902001
RW-175-E-1/2-X-SP	CV25894001
RW-175-E-3/4-X-STK	CV37312001
RW-175-E-3/4-X-SP	CV37304001
RW-175-E-1-X-STK	CV37322001
RW-175-E-1-1/2-X-STK	CV51572001

SAMPLE INVENTORY

RW-175-E-3/64-X-STK
RW-175-E-1/16-X-STK
RW-175-E-3/32-X-STK
RW-175-E-1/8-X-STK
RW-175-E-3/16-X-STK
RW-175-E-1/4-X-STK
RW-175-E-3/8-X-STK
RW-175-E-1/2-X-STK
RW-175-E-3/4-X-STK
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PROPERTY REQUIREMENTS

Property	Unit	Requirement	Test Method
PHYSICAL			
Dimensions	mm	Table 1	RW-3029/1, Section 2.2
Longitudinal Change	Percent	+0, -10 maximum	IEC 60684-2
Tensile Strength	MPa	35 minimum	IEC 60684-2
Ultimate Elongation	Percent	150 minimum	IEC 60684-2
Secant Modulus (expanded)	MPa	690	IEC 60684-2
Specific Gravity		1.8 maximum	IEC 60684-2
Low Temperature Flexibility 4 hours at -55°C ± 2°C (-67 ±4°F)		No cracking	IEC 60684-2
Heat Shock 4 hours at 300 ± 5°C (572 ± 9°F)		No dripping, flowing or cracking	IEC 60684-2
Heat Aging 168 hours at 200 ± 2°C (392 ± 4°F) Followed by test for:			IEC 60684-2
Ultimate elongation	Percent	75 minimum	IEC 60684-2
ELECTRICAL			
Breakdown Voltage	kV		IEC 60684-2
Recovered wall thickness 0.25mm		5.0 minimum	
Recovered wall thickness 0.30mm		6.0 minimum	
Recovered wall thickness 0.45mm		9.0 minimum	
Recovered wall thickness 0.55mm		10.0 minimum	
Volume Resistivity	Ohm-cm	1 X 10^{13} minimum	IEC 60684-2
CHEMICAL			
Corrosive Resistance 16 hours at 150°C		Noncorrosive	IEC 60684-2
Copper Contact		No corrosion of mirrors above 8%	IEC 60684-2
Flammability			IEC 60684-2
Average Time of Burning	Seconds	15 maximum	
Fungus Resistance Followed by tests for:			ISO 846, Method B
Tensile Strength	Mpa	34.5 minimum	IEC 60684-2
Ultimate Elongation	Percent	150 minimum	IEC 60684-2
Dielectric Strength	Volts/mm		IEC 60684-2
Sizes 3/64 through 1/2		31,500	
Sizes 3/4 through 2		23,600	
Water Absorption 24 hours at 23 ± 2°C (73 ± 4°F)	Percent	0.5 maximum	IEC 60684-2
Fluid Resistance 24 hours at 23 ± 3°C Gasoline (ISO 1817 Liquid B) Phosphate Base (ISO 1817 Liquid 103) Isopropyl Alcohol Propanol 25% White spirit 75% Methyl Ethyl Ketone Inhibited Potassium Acetate in Water 50% Ethylene Glycol 80% Water 20% 24 hours at 70 ± 2°C Kerosene (ISO 1817 Liquid F) Silicone Base (S-1714) Synthetic Base (ISO 1817 Liquid 101) Mineral Base (ISO 1817 Oil No 2) Mineral Base (O-1176) 24 hours at 50 ± 2°C Mineral Base (O-142) Followed by tests for:			IEC 60684-2 RW-3029/1, Table 2
Tensile Strength	MPa	25 minimum	IEC 60684-2
Elongation	Percent	150 minimum	

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RH73H2A40MKTN 2098557-4 2310537-1 SBCHE154R7K TE50BR39J 1-962915-1 2-520263-2 2005330-1
ROX05SJ18R SMV1W220KJT 2-521104-2 917688-1 1897725-2 2380312-2 3631B101LL HSHC4508K2J
292206-2 3-1447221-5 MPT100C18RF SBCHE64R7K T4133012081-000 1393454-9 282680-1
HT-CT-50M-1-OUT-0 170376-2 1903112-2 CPF0402B37K4E1 U5254-000005-030PA 175977-2 354022KFT