

Raychem

- Outstanding all round performance
- Excellent physical and electrical performance
- Good chemical and solvent resistance
- Flexible

RNF-100

A premium grade flame-retarded polyolefin heat-shrinkable tubing

RNF-100 is a premium grade polyolefin based heat-shrinkable tubing with an outstanding overall balance of properties. The product has a wide range of both military and industrial

approvals. RNF-100 tubing possesses a unique blend of physical, chemical and electrical properties and is suitable for a wide range of applications.

Used extensively in military applications for lightweight harness jackets, insulation, colour coding, identification, protection against fluids and provides mechanical strength.

Temperature rating

Operating temperature range:	-55°C to +135°C
Minimum shrink temperature:	+95°C
Minimum full recovery temperature:	+121°C

Ordering Information



Inside diameter		Wall thickness	Standard package		
D (min) Expanded as supplied	d (max) Recovered after heating	W (nom) Recovered after heating	1.2 m Length quantity	Spool quantity	Ordering description
mm	mm	mm	m	m	
1.2	0.6	0.45	60	300	RNF-100-3/64-colour code
1.6	0.8	0.45	60	300	RNF-100-1/16-colour code
2.4	1.2	0.50	60	150	RNF-100-3/32-colour code
3.2	1.6	0.50	60	150	RNF-100-1/8-colour code
4.8	2.4	0.50	60	150	RNF-100-3/16-colour code
6.4	3.2	0.65	36	75	RNF-100-1/4-colour code
9.5	4.8	0.65	36	75	RNF-100-3/8-colour code
12.7	6.4	0.65	36	75	RNF-100-1/2-colour code
19.0	9.5	0.75	36	75	RNF-100-3/4-colour code
25.4	12.7	0.90	18	30	RNF-100-1-colour code
31.0	16.0	0.95	18	30	RNF-100-1 1/4-colour code
38.0	19.0	1.00	18	30	RNF-100-1 1/2-colour code
51.0	25.4	1.15	12	30	RNF-100-2-colour code
76.0	38.0	1.25	6	15	RNF-100-3-colour code
102.0	51.0	1.40	6	15	RNF-100-4-colour code
127.0	63.5	1.52	6	30	RNF-100-5-colour code

Standard colours

Colour	Clear	Black	Red	Yellow	Green	Blue	White
Code	X	0	2	4	5	6	9

RNF-100

Approvals

*UL File E35586	Def Stan 59-97 Type 2b
*CSA LR31929	MIL-DTL-23053/5 Class 1 (colours), Class 2 (Clear)
VG 95343 Part 5 Type A and B	BS 3G-198 Part 3 11B
VDE 0341/P1 9005	
*Not clear product (X).	

Performance

Test	Test method	Test requirement	
Heat Ageing:	ISO 188 (168h at 175°C)	Ultimate elongation:	150% (min)
Corrosion resistance:	ASTM D2671 (16h at 175°C)	No corrosion of mirrors	
Dielectric strength:	IEC 243	Ø ≤ 25.4	20 MV/m
		Ø > 25.4	10 MV/m
Flame retardancy:	ASTM D876 UL 224 (All tube flame test)	Duration of burning 30s max	
Fluid resistance:	24 h at 23°C, ISO 37	Tensile strength:	7 MPa (min)
		Ultimate elongation:	200% (min)
	Test fluids:	Aircraft fuel to ISO1817 liquid B	
		Phosphate ester ISO1817 liquid 103	
		Lubricating oil ISO1817 liquid 101	

For full product performance details consult Raychem Specification RK 6001.

Specifications

Raychem Specification RK 6001.
Material Safety Data Sheet available on request.
Installation instructions available on request.

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TH 93002 1/98

RP 4800 Single Wall Tubing

The pages above appended into one document

Applications

RP 4800 is a 4X expanded, radiation crosslinked polyolefin tubing development for a wide range of harness repair applications. The products 4X expansion eliminates the unnecessary removal of connectors or large transitions and allows for easy harnessing assembly and repair. This heat shrinkable, flexible flame retarded tubing is also compatible with Raychem adhesives, providing a complete environmental seal

Features / Benefits

Flame Retarded
Good mechanical strength
Shrink ratio 4:1
Operating temperature range -55°C to 135°C.

RP 4800 Approvals

Raychem
RT-1122

Military
MIL-DTL*-23053/5 Class 1
VG 95343 Part 5A

Agency
UL 224

* formerly MIL-I-23053/5 Class 1

RP-4800 Characteristic

General
Installation Temperature
121°C

Longitudinal Change
-10% maximum

Electrical
Dielectric strength
19.6 MV/m minimum

Thermal
Heat ageing
336 hours at 175°C
4 hours at 250°C

Low Temperature flexibility
4 hours at -55°C

Flammability / Fire Hazard

Average duration of burning 60s max (ASTM D2671)

Chemical

Fluid resistance

At 23°C for 24 hours for the following fluids

JP-4 Fuel (MIL-T-5606)

Skydrol 500

Hydraulic Fluid (MIL-H-5606)

Aviation Gasoline (100/130) (Mil-G-5572)

Water

RP 4800 Colours

Standard Colours

Colour	Code
Black	0

RP 4800 Size Range

Inside Diameter		Wall thickness	Standard Package	Ordering Description
Expanded as supplied (min)	Recovered after heating (max)	Recovered after heating (nom)	Spool quantity	
mm	mm	mm	m	
25.4	7	1.14	12	RP-4800NR1-0
51	14	1.14	6	RP-4800NR2-0
76	20.5	1.14	6	RP-4800NR3-0
102	27	1.14	6	RP-4800NR4-0

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RT-375 Single Wall Tubing

The pages above appended into one document

Applications

RT-375 is a flexible modified fluoropolymer which provides extreme clarity with UL VW-1 flame retardancy. This 2:1 shrink ratio tube is used to provide protection to cable bundles and markers, from severe chemical and mechanical abuse, whilst retaining the ability to see the substrate. Sizes range from 3/64 inch to 1 inch to allow a wide range of diameters to be covered

Features / Benefits

Extreme clarity
Flexible
Highly flame retarded
Operating temperature range -55°C to 150°C.

RT-375 Approvals

Raychem
RT-375

Military
MIL-DTL*-23053/18
DTL* Formerly MIL-I-23053

Agency
UL 600 V, 150°C VW-1

RT-375 Characteristics

General
Installation Temperature
150°C

Longitudinal Change
0 to -10% maximum

Electrical
Dielectric strength
15.7 MV/m minimum

Thermal
Heat ageing
336 hours at 225°C
4 hours at 250°C

Low Temperature flexibility
4 hours at -55°C

Flammability / Fire Hazard

Self Extinguishing within 1 minute, ASTM D2671

Chemical

Fluid resistance

At 23°C for 24 hours for the following fluids

JP-4 Fuel (MIL-H-5606)

Lubricating oil, (MIL-L23699)

Lubricating oil, (MIL-L-7808)

5% NaCL, O-S-1926

De-icing Fluid (MIL-A-8243)

Water

UV Resistance

RT375 heat shrink sleeving has been subjected to 7,500 hour UV in accordance with ASTM G 53-88. After this period the sleeving remained transparent. The test was performed using UV-B bulbs as stated in the ASTM conditions for ultra violet radiation exposure. The UV-B bulbs are used since they simulate closely normal sunlight and they emit the shortest wavelengths which occur at the Earths surface. It is the short wavelength radiations which cause most damage to polymeric materials.

RT-375 Colours**Standard Colours**

Colour	Code
Clear	X

RT-375 Size Range

Inside Diameter		Wall thickness	Standard Package	Ordering Description
Expanded as supplied (min)	Recovered after heating (max)	Recovered after heating (nom)	Spool quantity	
mm	mm	mm	m	
1.2	0.6	0.25	300	RT-375-3/64-X
1.6	0.8	0.25	300	RT-375-1/16-X
2.4	1.2	0.25	150	RT-375-3/32-X
3.2	1.6	0.25	150	RT-375-1/8-X
4.8	2.4	0.25	150	RT-375-3/16-X
6.4	3.2	0.30	75	RT-375-1/4-X
9.5	4.8	0.30	60	RT-375-3/8-X
12.7	6.4	0.30	45	RT-375-1/2-X
19.0	9.5	0.43	75	RT-375-3/4-X
25.4	12.7	0.48	75	RT-375-1-X

The largest size which will recover snugly over the component to be covered should be ordered.

The wall thickness of the tubing will be less than specified if recovery is restricted during shrinkage. Other lengths and sizes may be available subject to special order.

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