

- 5.6:1 shrink ratio
- Available in semi-rigid or flexible flame retarded material
- Available with or without sealant/adhesive coating

HRSR/HRNF/HRHF

High ratio heat-shrinkable tubing

Raychem

High Shrink Ratio heat-shrinkable tubing (HR), with expansion ratios as high as 5.6:1, is designed to accommodate large size differences between cables and cable

connectors and adaptors, thus simplifying repair of damaged cable.

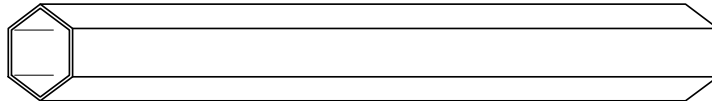
HRSR tubing is available in semi-rigid (FR) or flexible (HF) flame retarded material, with or without factory applied sealants

and adhesives. The water-proofing sealant provides environmental sealing and is watertight in wet and corrosive locations. The thermoplastic adhesive coating provides excellent strain relief as well as environmental sealing.

Temperature rating

Operating temperature range:	-55°C to +90°C
Minimum recovery temperature:	+120°C

Ordering information

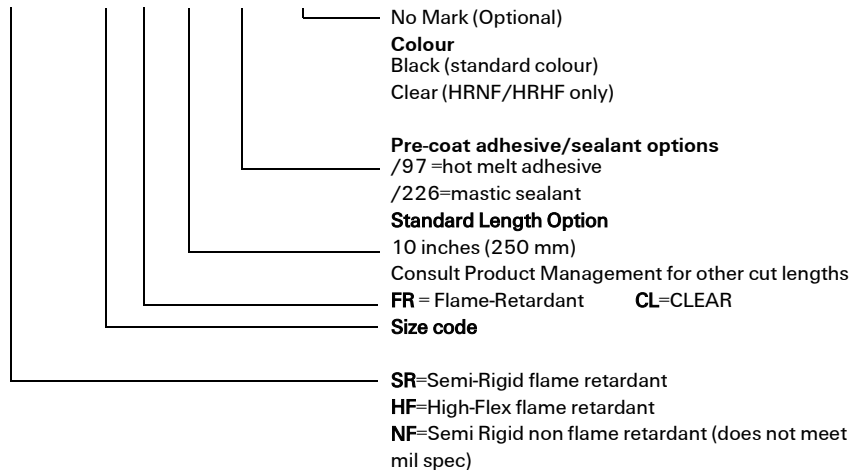


Inside diameter		Wall thickness				Size description
(Min) Expanded as supplied		(Max) Recovered after heating		(Nom) Recovered after heating		
mm	Inches	mm	Inches	mm	Inches	
15.3	(0.6)	3.9	(0.15)	1.5	(0.06)	HR**-060
31.8	(1.25)	6.1	(0.24)	1.5	(0.06)	HR**-125
44.5	(1.75)	8.0	(0.32)	2.4	(0.10)	HR**-175
50.8	(2.0)	9.6	(0.38)	2.7	(0.11)	HR**-200
63.5	(2.5)	12.7	(0.5)	3.0	(0.12)	HR**-250
76.2	(3.0)	19.0	(0.75)	3.0	(0.12)	HR**-300
101.6	(4.0)	22.9	(0.9)	3.5	(0.14)	HR**-400

Dimensions apply to uncoated tubing. Allow approximately 1.3 mm for coating.

Ordering example:

HRSR- 060 FR - 10 /97 /NM



HRSR/HRNF/HRHF

Performance

HRHF is a black, highly flexible, crosslinked polyolefin-based material. It is flame retarded and heat resistant.

HRSR is a black, semi-rigid crosslinked polyolefin-based material. It is flame retarded and heat resistant.

	Test method	HRHF	HRSR
Mechanical			
Tensile strength (min)	ASTM D638	8.4 MPa	8.4 MPa
Ultimate elongation (min)	ASTM D638	200%	200%
2% secant modulus (max)	ASTM D882	105 MPa	175 MPa
Heat ageing (168 h at 175°C)			
Tensile strength (min)	ASTM D638	7 MPa	7 MPa
Ultimate elongation (min)	ASTM D638	100%	100%
Heat shock			
4 h at 225°C	MIL-I-23053/15A	Pass	Pass
Electrical			
Dielectric strength	ASTM D2671	7.9 MV/m	7.9 MV/m
Volume resistivity (min)	ASTM D876	10 ¹³ ohm.cm	10 ¹³ ohm.cm
Flammability			
Flammability (method B)	MIL-I-23053/15A	15 secs (max)	15 secs (max)
Chemical			
Corrosion	MIL-I-23053/15A	Pass	Pass
Water absorption (max)	ASTM D570	0.5%	0.5%
Specific gravity (max)	ASTM D1505	1.4	1.5
Fungus resistance	ASTM G21	1 or less	1 or less
Fluid resistance (24 h at room temperature)			
De-icing fluid (MIL-A-8243)			
Hydraulic fluid (MIL-H-5606)			
JP-8 fuel (MIL-T-83133)			
Lubricating oil (MIL-L-7808)			
Lubricating oil (MIL-L-23699)			
5% NaCl (O-S-1926)			
After immersion in the above fluids:			
Tensile strength (min)	ASTM D638	5.3 MPa	5.3 MPa
Ultimate elongation (min)	ASTM D638	100%	100%

Specifications

Type	Raychem
HRSR	RW 2013
HRHF	RW 2013
/226 (S-1278)	RW 2020
/97 (S-1297)	RW 2019

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