

HRHF/HRNF/HRSR

**High-Ratio,
Heat-Shrinkable Tubing**

Product Facts

- Offers toughness and durability
- Provides excellent insulation and abrasion protection
- Is available in flame-retardant material
- Shrinks to fit (5.6:1)
- FR callouts meet all of the requirements of AMS-DTL-23053/15*, except for some of the tubing sizes, which do not meet the exact recovered wall thickness requirements
- HRHF and HRSR have the following agency approvals:
 - ABS (American Bureau of Shipping)
 - Lloyd's (Lloyd's Register of Shipping)
- RoHS compliant



Applications

High-ratio (HR) heat-shrinkable tubing, with expansion ratios as high as 5.6 to 1, is designed to accommodate large size differences between cables and cable connectors and backshells, thus simplifying repair of damaged cable. High-ratio tubing is available in semirigid flame-retardant (SR), standard (NF), or high-flex flame-retardant (HF)

material and 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 offers excellent strain relief and environmental sealing.

Installation

Minimum shrink temperature: 80°C [176°F]
Minimum full recovery temperature: 121°C [250°F]

Operating Temperature Range

-55°C to 110°C
[-67°F to 230°F]

Specifications/Approvals

| Series | Agency | Raychem |
|--------|--------------|---------|
| HRSR | ABS, Lloyd's | RW-2013 |
| HRHF | ABS, Lloyd's | RW-2013 |
| HRNF | — | RW-2013 |

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
| | ■ | ■ | ■ |

HRHF/HRNF/HRSR (Continued)

Product Dimensions

| Size† | Inside Diameter | | Recovered Wall Thickness†† |
|---------|------------------------------|---------------------------------|----------------------------|
| | Minimum Expanded as Supplied | Maximum Recovered After Heating | Nominal After Heating |
| HR**060 | 15.24 [0.600] | 3.81 [0.150] | 1.52 [0.060] |
| HR**125 | 31.75 [1.250] | 6.10 [0.240] | 1.52 [0.060] |
| HR**175 | 44.45 [1.750] | 8.00 [0.315] | 2.41 [0.095] |
| HR**200 | 50.80 [2.000] | 9.52 [0.375] | 2.67 [0.105] |
| HR**250 | 63.50 [2.500] | 12.70 [0.500] | 3.05 [0.120] |
| HR**300 | 76.20 [3.000] | 19.05 [0.750] | 3.05 [0.120] |
| HR**400 | 101.60 [4.000] | 22.86 [0.900] | 3.56 [0.140] |

†For ** substitute HF, NF or SR for material required.

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

Ordering Information

| | | |
|----------------------|---|---|
| Color | Standard | Black (-0) |
| | Nonstandard | Clear available on request (not flame-retardant; HRHF only) |
| Size selection | Always order the largest size that will shrink snugly over the component to be covered. Other sizes are available upon request. | |
| Standard packaging | Up to 18 inch lengths maximum.* | |
| Ordering description | See below. | |

*Cutting tolerance is ± 0.125".

Part Numbering System

