

**Halogen-Free,
Flame-Retardant,
Heat-Shrinkable Tubing**

Product Facts

- Emits minimal amounts of toxic or acid gasses during combustion
- Meets performance requirements of MIL-C-24640 and MIL-C-24643 cable jackets
- Resists moisture, fungus, and weathering
- Available in expansion ratios as high as 3:1
- XFFR has the following approvals:
 - ABS (American Bureau of Shipping)
 - Lloyd's (Lloyd's Register of Shipping)
- RoHS compliant

XFFR



Applications

XFFR halogen-free tubing can be used for re-jacketing and repairing halogen-free cables in any enclosed area where a flame-retardant, halogen-free environment is required. These environments include tunnels, buildings, mass transit vehicles, and ships. When installed with S-1305 tape, the tubing can also be used in applications requiring water sealing and protection from abrasion and corrosion.

Installation

Minimum shrink temperature: 70°C [158°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 | Military | Industry | Raychem |
|--------|----------------------------|--------------------|---------|
| XFFR | MIL-C-24640 MIL-C-24643 | NES 713 NES 711 | RW-2016 |

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

XFFR (Continued)

Product Dimensions

| Size | Inside Diameter | | Recovered Wall Thickness* |
|---------|------------------------------|---------------------------------|---------------------------|
| | Minimum Expanded as Supplied | Maximum Recovered After Heating | After Heating (Nominal) |
| XFFR-03 | 7.62 [0.300] | 2.54 [0.100] | 2.03 [0.080] |
| XFFR-04 | 10.16 [0.400] | 3.81 [0.150] | 2.03 [0.080] |
| XFFR-07 | 19.05 [0.750] | 5.59 [0.220] | 2.03 [0.080] |
| XFFR-11 | 27.94 [1.100] | 9.52 [0.375] | 2.67 [0.105] |
| XFFR-15 | 38.10 [1.500] | 12.70 [0.500] | 3.05 [0.120] |
| XFFR-20 | 50.80 [2.000] | 19.05 [0.750] | 3.05 [0.120] |
| XFFR-30 | 76.20 [3.000] | 31.75 [1.250] | 4.06 [0.160] |

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

Ordering Information

| | | |
|--------------------|---|------------|
| Color | Standard | Black (-0) |
| Size selection | Always order the largest size that will shrink snugly over the component to be covered. | |
| Standard packaging | 1.2-meter [4-foot] or 7.5-meter [25-foot] lengths. | |

Part Numbering System

XFFR - 03 X 4 / NM

