

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

**Product Facts**

- Emits minimal amounts of toxic or acid gases during combustion
- Meets general 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)
  - DNV (Det Norske Veritas)
  - Lloyd's (Lloyd's Register of Shipping)

**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-24643 MIL-C-24640	NES 713 NES 711	RW-2016

Available in:	Americas	Europe	Asia Pacific
	■	■	■

Product Dimensions

XFFR (Continued)

Size	Inside Diameter		Recovered Wall Thickness* After Heating (Nominal)
	Minimum Expanded as Supplied	Maximum Recovered After Heating	
XFFR-03	7.62 [0.300]	2.54 [0.100]	1.52 [0.060]
XFFR-04	10.16 [0.400]	3.81 [0.150]	1.52 [0.060]
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-27	68.58 [2.700]	26.40 [1.000]	3.81 [0.150]
XFFR-30	76.20 [3.000]	31.75 [1.250]	3.94 [0.155]
XFFR-40	101.60 [4.000]	44.45 [1.750]	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

