

# QFRA3



**FLAME RETARDANT, HEAVY WALL, ADHESIVE LINED,  
POLYOLEFIN TUBING  
SHRINK RATIO 3:1**



**Features/Applications**

QFRA is made from radiation cross-linked polyolefin lined with hot melt adhesive. Suitable for protecting electrical splices, joints and terminations where flame retardant, electrical insulation and water proof are required.

- Operating temperature: -55°C to +110°C
- Minimum shrink temperature: 120°C
- Standard color: Black
- RoHS Compliant

**Technical Data**

Property	Test Method	Typical Data
Tensile Strength	ASTM D 2671	≥ 14 MPa
Tensile Strength after Aging (158°C, 168 hrs.)	ASTM D 2671	≥ 12MPa
Longitudinal Change after Shrinking	ASTM D 2671	0 to -10%
Elongation at Break	ASTM D 2671	≥ 300%
Elongation at Break after Aging (120°C, 168 hrs.)	ASTM D 2671	≥ 200%
Dielectric Strength	IEC 243	≥ 20kV / mm
Heat Shock (225°C, 4 hrs.)	ASTM D 2671	No cracking or flowing
Volume Resistance	IEC 93	≥ 10 <sup>14</sup> Ω.cm
Flammability	SAE-AMS-DTL-23053/5	Self extinguish in 30 seconds

**Thermoplastic Adhesive for QFRA3**

Property	Test Method	Typical Data
Water Absorption	ISO 62	< 0.2%
Softening Point	ASTM D E28	85°C
Peel Strength (PE)	DIN 30672	4N/cm
Copper Stability	ASTM D 2671	Non-Corrosive
Resistance to Fungus and Decay	ISO 846	Pass

**Product Dimensions**

Size (mm)	As Supplied (mm)	After Recovered (mm)		Tubing Shape	Standard Packaging
	Inside Diameter (min.)	Inside Diameter (max.)	Total Wall Thickness (min.)		Cut to Length Pcs. *(QB) Qty per bag 48"
9/3	9	3	2.0	Round	5
13/4	13	4	2.5	Round	5
22/6	22	6	2.7	Round	5
33/8	33	8	3.2	Round	5
40/12	40	12	4.1	Round	5
55/16	55	16	4.1	Round	5
75/22	75	22	4.1	Round	3
95/29	95	29	4.1	Round	3
115/34	115	34	4.3	Round	3
130/36	130	36	4.3	Round	3

- Notes:
1. \* See Part Number Guide for standard packaging codes.
  2. Special sizes, packaging, colors and cut pieces are available upon request.