

HEAT SHRINK THIN WALL TUBING

Part Number	Material	Product Type	Shrink Ratio	Operating Temp. & Voltage Rating	Min. Shrink Temp.	Full Recovery Temp.
Q2-CB	Polyolefin	Ultra Thin Wall	2:1	-55°C to +125°C, 300V	70°C	100°C
Q2-F	Polyolefin	Thin Wall	2:1	-55°C to +135°C, 600V	70°C	100°C
Q2-F3X	Polyolefin	Thin Wall	3:1	-55°C to +135°C, 600V	70°C	100°C
Q2-F4X	Polyolefin	Thin Wall	4:1	-55°C to +135°C, 600V	70°C	100°C
Q2-F2XYG Q2-F3XYG	Polyolefin	Thin Wall	2:1, 3:1	-55°C to +135°C, 600V	70°C	100°C
Q2-HF	Polyolefin	Thin Wall	2:1	-55°C to +105°C, 600V	70°C	100°C
Q2-LS	Polyolefin	Thin Wall	2:1	-55°C to +125°C, 600V	65°C	95°C
Q2-R	Polyolefin	Semi-Rigid Thin Wall	2:1	-55°C to +135°C, 600V	70°C	130°C
Q2-Z	Polyolefin	Thin Wall	2:1	-55°C to +125°C, 600V	70°C	100°C
Q2-3X	Polyolefin	Thin Wall	3:1	-55°C to +125°C, 600V	70°C	100°C
Q-150K	Modified PVDF	Flexible Thin Wall	2:1	-55°C to +150°C, 600V	135°C	150°C
Q-175K	PVDF	Semi-Rigid Thin Wall	2:1	-55°C to +175°C, 600V	-	175°C
Q-200E	Modified Fluoroelastomer Viton®	Very Flexible Thin Wall	2:1	-55°C to +200°C, 600V	150°C	175°C
QPTFE	Modified PTFE	Semi-Rigid Thin Wall	2:1	-65°C to +260°C, 600V	-	350°C

HEAT SHRINK MEDIUM / HEAVY WALL TUBING - ADHESIVE LINED

Part Number	Material	Product Type	Shrink Ratio	Operating Temp. & Voltage Rating	Min. Shrink Temp.	Full Recovery Temp.
Q5-2X	Polyolefin	Dual Wall	2:1	-45°C to +125°C, 600V	100°C	125°C
Q5-3X	Polyolefin	Dual Wall	3:1	-55°C to +125°C, 600V	80°C	110°C
Q5-4X	Polyolefin	Dual Wall	4:1	-55°C to +125°C, 600V	80°C	110°C
Q5-F3X	Polyolefin	Dual Wall	3:1	-55°C to +125°C, 600V	70°C	110°C
Q5-F4X	Polyolefin	Dual Wall	4:1	-55°C to +125°C, 600V	70°C	110°C
Q5-4XR	Polyolefin	Semi-Rigid Dual Wall	4:1	-55°C to +125°C, 600V	110°C	135°C
Q5-3XM	Polyolefin	Heavy Dual Wall	3:1	-55°C to +125°C, 600V	80°C	110°C
QRA-6X	Polyolefin	Heavy Dual Wall	6:1	-55°C to +110°C, 600V	120°C	120°C
QBTM QBTH	Non-Halogen Polymer	Bus Bar	-	-55°C to +105°C, 24-36kV	120°C	-

END CAPS

Part Number	Material	Product Type	Shrink Ratio	Operating Temp. & Voltage Rating	Min. Shrink Temp.	Full Recovery Temp.
QSEC	Polyolefin	Cable End Caps	-	-55°C to +110°C, 1000V	120°C	-

SHRINK TUBE KITS, REFILL BAGS, Q BOX & MINI SPOOLS

Q2-F



**ENVIRONMENT FRIENDLY, FLEXIBLE,
HIGHLY FLAME RETARDANT, HEAT SHRINKABLE TUBING
SHRINK RATIO 2:1**

Features/Applications

Provides both commercial and military applications electrical insulation and protects in-line components, disconnect terminals and splices with its high strength and excellent resilience. Bundles wires for very flexible light-duty harnesses. Identifies or color-codes wires, cables, terminals and components.

- Operating temperature: -55°C to +135°C
- Minimum shrink temperature: 70°C
- Full recovery temperature: 100°C
- Approvals⁴: File No. E236137, File No. 242540, 125°C, VW-1, 600V
- Meets: SAE-AMS-DTL-23053/5 Class 1 & 3, Sony-SS-00259
- Material: No PBB's, PBBO's, PBBE's, Free of Cadmium & Lead
- Standard colors: Black, red, blue, yellow, green, white, clear (class 2)
- RoHS Compliant



Technical Data

Property	Test Method	Typical Data
Operating Temperature	IEC 216	-55°C to +135°C
Tensile Strength	ASTM D 2671	>14 MPa
Ultimate Elongation	ASTM D 2671	> 600%
Longitudinal Shrinkage	UL 224	0 ± 5%
Eccentricity	UL 224	< 30%
Heat Aging Tensile Strength Ultimate Elongation	175°C, 168 hrs.	> 11 MPa > 350 %
Flammability	VW-1	Pass
Dielectric Strength	ASTM D 150	>20kV / mm
Voltage Withstand	ASTM D 2671 / AC2500V. 1 min.	No Breakdown
Volume Resistance	ASTM D 876	>10 ¹⁴ Ω.cm
Copper Stability	UL 224	Pass
Copper Corrosion	UL 224	No Corrosion

Product Dimensions

Size		As Supplied (mm)	After Recovered (mm)		Standard Packaging				
		Inside Diameter (min.)	Inside Diameter (max.)	Wall Thickness (min.)	Mini Spool *(MS) (Feet)	Standard Spool *(SS) (Feet)	Box Length *(QX) (Feet)	Cut to Length Pcs. *(QB) Qty per bag	
Inch	mm							6"	48"
3/64	1.2	1.2	0.6	0.40	100	1000	50	40	25
1/16	1.6	1.6	0.8	0.40	100	1000	50	36	25
3/32	2.4	2.4	1.2	0.48	100	500	50	32	25
1/8	3.2	3.2	1.6	0.48	100	500	50	28	25
3/16	4.8	4.8	2.4	0.48	100	500	30	24	25
1/4	6.4	6.4	3.2	0.56	100	500	30	20	25
5/16	8.0	8.0	4.0	0.62	100	250	30	18	24
3/8	9.5	9.5	4.8	0.62	100	250	30	16	25
1/2	12.7	12.7	6.4	0.62	100	200	15	14	5
5/8	15.9	15.9	8.0	0.68	50	200	15	14	5
3/4	19.1	19.1	9.5	0.68	50	200	15	12	5
1	25.4	25.4	12.7	0.87	50	200	15	8	5
1 1/4	31.8	31.8	15.9	1.00	50	100	-	8	5
1 1/2	38.1	38.1	19.1	1.00	50	100	-	5	5
2	50.8	50.8	25.4	1.10	50	100	-	3	5
3	76.2	76.2	38.1	1.20	-	100	-	2	2
4	102.0	102.0	50.8	1.35	-	100	-	1	2
5	125.0	125.0	63.5	1.40	-	50	-	1	2
6	151.0	151.0	75.0	1.40	-	50	-	1	2

Notes:

- * See page 12 - Part Number Guide for standard packaging codes.
- Cross Reference Guide located on page 3.
- Special sizes, packaging, colors and cut pieces are available upon request
- Clear tubing is not flame retardant, UL or CSA approved.