

PVDF Heat-Shrink Tubing

FITCOTUBE® FT175

Semi-rigid, abrasion resistant, flame-resistant high temperature-PVDF-heat shrink tubing with reliable insulation and excellent mechanical protection of wires and components in high temperature environment. Protection of soldering and crimp connections. High chemical stability.

Operating temperature:	- 55°C to + 175°C, short time up to + 300°C
Shrink temperature:	+ 170° C
Shrink ratio:	2 : 1
Standard color:	Transparent Other colors on request
Specification:	UL 224 150°C 600V VW-1 (File No. E191539)



Description	Inner diameter (mm)		Wall thickness (mm)
	as supplied (min.)	after shrinkage (max.)	after shrinkage (nom.)
FT175-120	1.20	0.60	0.25
FT175-160	1.60	0.80	0.25
FT175-240	2.40	1.20	0.27
FT175-320	3.20	1.60	0.27
FT175-480	4.80	2.40	0.27
FT175-640	6.40	3.20	0.33
FT175-950	9.50	4.80	0.33
FT175-1270	12.70	6.40	0.33
FT175-1900	19.00	9.50	0.43
FT175-2540	25.40	12.70	0.48
FT175-3800	38.00	19.00	0.51
FT175-5180	51.00	26.00	0.51

Packaging: Rods goods, cut lengths or printed tubing on request.

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Properties	Test Method	Requirements	Typical Value
Mechanical			
Tensile strength	ASTM D 412	Min. 34.5 MPa	≥ 40 MPa
Ultimate elongation	ASTM D 412	Min. 150 %	≥ 350 %
Longitudinal change	SAE-AS23053	± 10 %	- 7 %
Specific density	ASTM D 792	Max. 1.8	1.76
Elastic modulus	ASTM D 882	Min. 828 MPa	≥ 840 MPa
Thermal			
Low temperature flexibility (4h x - 55°C)	SAE-AS23053	No cracking	Pass
Elongation after long term aging (168h x 250°C)	ASTM D 638	Min. 50 %	≥ 200 %
Heat shock (4h x 300°C)	SAE-AS23053	No cracking, flowing or dripping	Pass
Flammability	UL 224 / CSA	VW-1	Pass
Transparency (24h x 175°C)	SAE-AS23053	Readable marking	Pass
Electrical			
Dielectric strength (> 1/2 Zoll)	SAE-AS23053	Min. 23.6 kV/mm	≥ 30 kV/mm
Dielectric strength (≤ 1/2 Zoll)	SAE-AS23053	Min. 31.5 kV/mm	≥ 35 kV/mm
Volume resistance	ASTM D 876	Min. 10 ¹³ Ω*cm	≥ 10 ¹⁵ Ω*cm
Nominal voltage	UL 224	600 V	Pass
Breakdown test (2,5 kV x 60 s)	SAE-AS23053	No breakthrough	Pass
Chemical			
Water absorption	ASTM D 570	Max. 0.5 %	≤ 0.2 %
Fungus resistance	SAE-AS23053	ASTM G 21	Pass
Copper corrosion (16h x 160°C)	SAE-AS23053	No corrosion	Pass
Fluid resistance (24h x 24°C)	SAE-AS23053	Min. 34.5 MPa (Tensile strength)	Pass
Fluid resistance (24h x 24°C)	SAE-AS23053	Min. 19,7 kV/mm (Dielectric strength)	Pass