

PVDF Heat-Shrink Tubing

FITCOTUBE® FT190

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 + 190°C, short time up to + 300°C
Shrink temperature:	+ 175° C
Shrink ratio:	2: 1
Standard colors:	Transparent
Specification:	UL 224 150°C 600V VW-1 (File No. E191539), CSA



Description	Inner diameter (mm)		Wall thickness (mm)
	as supplied (min.)	after shrinkage (max.)	after shrinkage (nom.)
FT190-120	1.20	0.60	0.25
FT190-160	1.60	0.80	0.25
FT190-240	2.40	1.20	0.27
FT190-270*	2.70	1.20	0.27
FT190-320	3.20	1.60	0.27
FT190-350*	3.50	1.60	0.50
FT190-480	4.80	2.40	0.27
FT190-640	6.40	3.20	0.33
FT190-950	9.50	4.80	0.33
FT190-1270	12.70	6.40	0.33
FT190-1910	19.10	9.50	0.43
FT190-2540	25.40	12.70	0.48
FT190-2810	28.10	19.10	0.51
FT190-5180	50.80	25.40	0.51

*Spezial Sizes on Request

Packaging: Cut-Lengths of 1200 mm.
Special sizes on request.

Processing note: Care for clean and accurate cutting edge. Start shrinkage on the end.
Pre-heat metal body.

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Attributes	Testing	Requirements	Value
Mechanical			
Tensile strength	ASTM D 412	min. 34.5 MPa	≥ 40 MPa
Ultimate elongation	ASTM D 412	min. 150 %	≥ 350 %
Longitudinal change	SAE-AMS-DTL-23053	± 10 %	- 7 %
Specific Gravity	ASTM D 792	max. 1.8	1,76
Secant Modulus	ASTM D 882	min. 828 MPa	≥ 840 Mpa
Thermal			
Low temperature flexibility (-55 °C x 4h)	SAE-AMS-DTL-23053	no cracking	pass
Elongation after long-term ageing (250°C x 168h)	ASTM D 638	min. 50 %	≥ 200 %
Short term ageing (300°C x 4h)	SAE-AMS-DTL-23053	no cracking, flowing or dripping	pass
Fire behavior	UL 224/CSA	VW-1	pass/self-extinguishing
Electrical			
Dielectric Strength (> ½ inch)	SAE-AMS-DTL-23053	min. 23.6 kV/mm	≥ 30 kV/mm
Dielectric Strength (≤ ½ inch)	SAE-AMS-DTL-23053	min. 31.5 kV/mm	≥ 35 kV/mm
Volume Resistivity	ASTM D 876	min. 10 ¹³ Ω/cm	≥ 10 ¹⁵ Ω/cm
Dielectric Voltage Withstand (2.5 kV x 60 s)	SAE-AMS-DTL-23053	no breakdown	pass
Chemical			
Copper Corrosion (160°C x 16 h)	SAE-AMS-DTL-23053	no corrosion	pass
Water Absorption	ASTM D 570	max. 0.5 %	≤ 0,2 %
Fluid Resistance	SAE-AMS-DTL-23053	-	-
Dielectric Strength (23 °C x 24 h)	-	19.7 kV/mm	pass
Fungus Resistance	SAE-AMS-DTL-23053	ASTM G 21	pass