

Shrink-Kon® Heat-Shrinkable Tubing

HSFR Series — Flame-Retardant Heavy Wall

- Insulates and protects electrical splices and terminations
- High impact and abrasion resistance
- Thermoplastic adhesive liner
- Rated for 600V, 90° C continuous use. Continuous operating temperature: -55° C to 110° C
- Shrink temperature of 120° C
- Meets: UL® 486D, CSA 22.2 No. 198.2, ANSI C119.1, Western Underground Guide Nos. 2.4, 2.5, MIL-DTL-23053/15, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements

3:1 Shrink Ratio



Wire Termination — Sta-Kon® Wire Termination & Insulation

HSFR Series Heavy-Wall Heat-Shrinkable Tubing

CAT. NO.	MIN. EXPANDED I.D. (IN.)	MAX RECOVERED I.D. (IN.)	NOMINAL RECOVERED WALLED (IN.)	CODE CABLE SIZE	STANDARD LENGTH (IN.)	STD. PKG. QTY.
HSFR16-12-4	.35	.12	.07	#14-#10 AWG	48	25
HSFR12-6-4	.51	.16	.09	#8-#6 AWG	48	25
HSFR6-1-4	.75	.24	.09	#6-#2 AWG	48	25
HSFR4-30-4	1.10	.35	.12	#1-3/0 AWG	48	25
HSFR40-400-4	1.50	.47	.16	2/0 AWG-350 kcmil	48	25
HSFR500-1000-4	2.00	.63	.16	250-500 kcmil	48	25

Custom lengths available, subject to factory quotations.
Minimum quantities may apply.



HSFR Series Specifications

PROPERTY	TEST METHOD	TYPICAL PERFORMANCE	PROPERTY	TEST METHOD	TYPICAL PERFORMANCE
Physical			Chemical		
• Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)	• Fluid Resistance	MIL-DTL-23053/5	Good to Excellent
• Elongation	ASTM D412, ISO 37	600%	• Copper Corrosion	ASTM D2671	No Corrosion
• Longitudinal Change	ASTM D2671	+1%, -10%	• Fungus Resistance	ASTM G21	No Growth
• Specific Gravity	ASTM D792	1.2	• Water Absorption	ASTM D570	0.2%
• Elongation after Heat Aging (168 hrs. at 175° C)	ASTM D2671, ISO 37	500%	Adhesive		
• Heat Shock (4 hrs. at 225° C)	ASTM D2671	No cracking or flowing	• Adhesive Lap Shear (1 in./min. at 23° C)	ASTM D1002	125 psi (.875 MPa)
• Low Temperature Flexibility (4 hrs. at -55° C)	ASTM D2671	No cracking or splitting	• Adhesive Softening Point	ASTM E28	92° C ±5° C
• Hardness (Shore D)	ASTM D2240	50D	• Adhesive Peel Strength (300mm/min. at 23° C) — to steel, aluminum, P.E. — PVC	ASTM D1000	35 pli 20 pli
• Oxygen Index	ASTM D2863	27.00	• Adhesive Blocking (30° C)	ASTM D1146	No Blocking
• Flamibility	ASTM D2671	Flame Retardant	• Adhesive Water Absorption	ASTM D570	Less than 0.3%
Electrical			• Water Penetration	STM 706	No penetration after 286 hrs. of continuous immersion
• Dielectric Strength	ASTM D149	500 V/Mil (20kV/mm)			
• Dielectric Voltage Withstand (2500V, 60 Hz, 1 Min.)	UL 486D	No Breakdown 24kV — 1 min., 15kV — 4 hrs.			
• Volume Resistivity	ASTM D257	1016 ohm-cm			