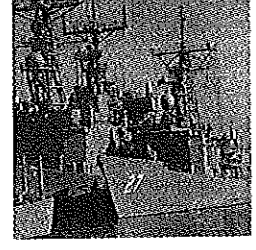
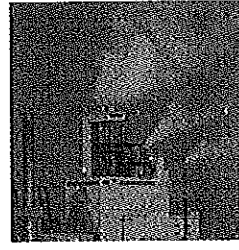
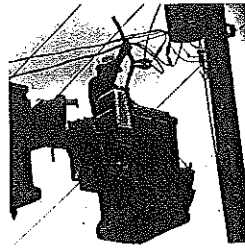


INSULATE
SEAL
PROTECT

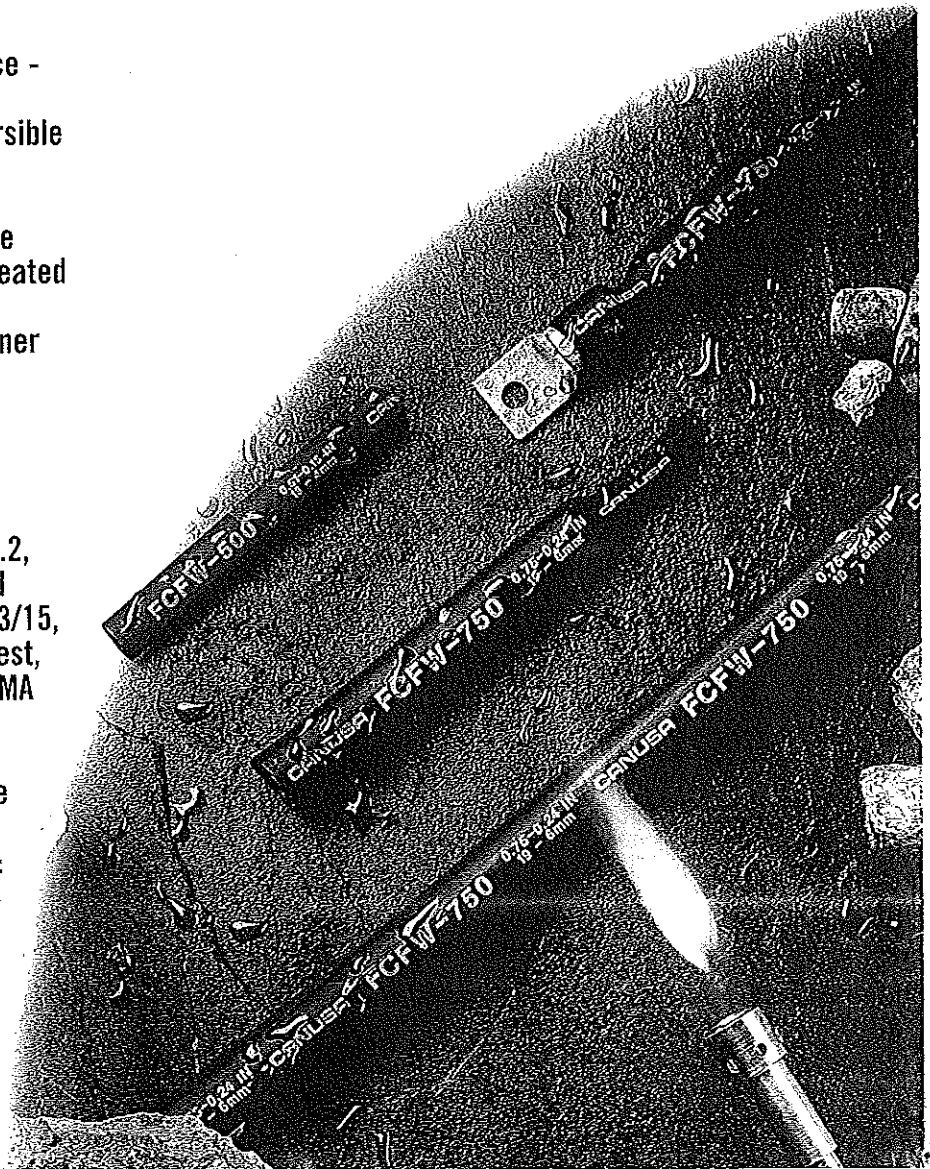


FCFW

Heavy Wall, Heat Shrinkable Tubing insulates and protects electrical splices and terminations where maximum flame retardancy and exceptional insulating and sealing characteristics are required

Features

- High impact and abrasion resistance - capable of withstanding severe mechanical abuse of U.R.D., submersible and direct burial installations
- FCFW tubing will not split or rupture during installation, even when overheated
- Optional Thermoplastic Adhesive Liner provides complete environmental protection and insulation
- Flame retardant
- Meets: UL 486D, CSA C22.2 No. 198.2, ANSI C119-1, Western Underground Guides Nos. 2.4, 2.5, MIL-DTL-23053/15, Class 1, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements
- Rated for 1 kV, 90°C continuous use
- Continuous operating temperature: -55°C to 110°C
- Shrink temperature: 120°C



Technical Data

Physical

Property	Test Method	Typical Performance
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5 MPa)
Elongation	ASTM D412, ISO 37	600%
Elongation after Heat Aging (168 hrs at 175°C)	ASTM D2671, ISO 37	500%
Longitudinal Change on Recovery	ASTM D2671	+1%, -10%
Specific Gravity	ASTM D792	1.2
Heat Shock (4hrs at 225°C)	ASTM D2671	No cracking or flowing
Low Temperature Flexibility (4hrs at -55°C)	ASTM D2671	No cracking or splitting
Hardness (Shore D)	ASTM D2240	50D
Oxygen Index	ASTM D2863	27.00
Flammability	ASTM D2671	Flame Retardant

Electrical

Dielectric Strength	ASTM D149	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500V, 60Hz, 1 min.)	UL 486D	No breakdown, 24kV-1 min, 15kV-4hrs.
Volume Resistivity	ASTM D257	10 ¹⁶ ohm-cm

Chemical

Fluid Resistance	MIL-DTL-23053/15	Good to Excellent
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.2%
Fungus Resistance	ASTM G21	No Growth

Adhesive

Adhesive softening point	ASTM E28	92°C +/- 5°C
Adhesive peel strength (300mm/min at 23°C)	ASTM D1000	35 pli 20 pli
- to steel, alum, P.E.		
- to PVC		
Adhesive Lap Shear (1in./min at 23°C)	ASTM D1002	125 psi (0.875 MPa)
Adhesive Blocking (30°C)	ASTM D1146	No blocking
Adhesive Water Adsorption	ASTM D570	less than 0.3%
Water Penetration	STM 706	No penetration after 236 hrs. (min) of continuous immersion

DSG-Canusa

There's no end to what we cover

Using heat shrink technology, DSG-Canusa provides electrical and mechanical insulation for electrical/utility, communications, automotive, and electronics markets. Our continued investment in research and development continues to yield new products to meet industry trends. Moreover, an aptitude and readiness to engineer unique solutions to suit Customer applications has earned us a reputation of excellence in Customer satisfaction. DSG-Canusa is a market leader with manufacturing and support facilities throughout the globe.

www.dsgcanusa.com

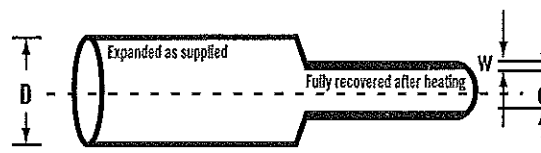
All information contained in this leaflet is believed to be reliable. We advise however that customers should separately evaluate the suitability of our products for their particular application. DSG-Canusa and Shawcor give no guarantees in respect of the accuracy or sufficiency of the information presented and disclaim any liability regarding its use. Our responsibilities are only those listed in our Standard Terms and Conditions of Sale for these products. In no instance will we be liable for any eventual, indirect, or consequential damage or damages arising from the sale, resale, transfer, use or misuse of the product.

Dimensions

ORDER REF. NO. METRIC	ORDER REF. NO. IMPERIAL	EXPANDED		RECOVERED		WALL THICKNESS (mm)	APPLICATION RANGE FOR GENERAL USE	SHEATHING SHELF CONDUCTOR SIZE	LENGTHS			
		INTERNAL DIAMETER (mm)	INTERNAL DIAMETER (IN)	INTERNAL DIAMETER (mm)	INTERNAL DIAMETER (IN)				mm	IN		
0089	0350*	8.9	0.35	3.0	0.12	1.8	0.07	3.5-3	15-3	#14 - #10	1.2	6, 48
0130	0500*	13.0	0.51	4.1	0.16	2.4	0.080	4.5-11	2-45	#8 - #6	1.2	6, 48
0191	0750	19.1	0.75	6.1	0.24	2.5	0.09	6.5-16.5	25-65	#6 - #2	1.2	9, 12, 48
0279	1100	27.9	1.10	8.9	0.35	3.0	0.12	10-24	4-95	#1 - 3/0	1.2	9, 12, 48
0381	1500	38.1	1.50	11.9	0.47	4.1	0.16	13-35	5-1.4	2/0 - 350	1.2	9, 12, 48
0508	2000	50.8	2.00	16.0	0.63	4.1	0.16	17.5-44	7-1.75	250 - 500	1.2	9, 12, 48
0681	2700	68.1	2.70	22.1	0.87	4.1	0.16	24-59	95-2.3	600 - 1000	1.2	12, 18, 48
0899	3500*	89.9	3.54	30.0	1.18	4.1	0.16	33-80	1.3-3.1	800 - 1250	1.2	12, 18, 48
1199	4700*	119.9	4.72	39.9	1.57	4.2	0.17	44-104	1.75-4.1	1500-2500	1.2	12, 18, 48

* FCFW 3500 and FCFW 4700 are not UL or CSA listed.

** Meets the material performance of MIL Spec only.



Ordering

Select a dimension which will shrink snugly over the component to be covered. If recovery is restricted the resultant wall thickness will be less than specified. For each item, please specify the product name plus each of the following options:

1 Order Reference Number

See above in the "Dimensions" chart

2 Color Options

black red

3 Printing Options

printed unprinted

4 Lining Options

lined unlined

5 Length Options

(specify metric or imperial)

See above in the "Dimensions" chart

For Example: FCFW, 1500, black, unprinted, unlined, 48" lengths

FOR INFORMATION ON CUSTOMER SPECIALS AND LENGTH OPTIONS CONTACT OUR SALES REPRESENTATIVE

Standards: UL486D, CSA C22.2 No. 198.2, ANSI C119.1, Western Underground Guides Nos. 2.4, 2.5, MIL-DTL-23053/15, Class 1, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA and NEMA insulation thickness requirements.