

Medium/Heavy Wall Tubing

| PRODUCT NAME | SHRINK RATIO | DESCRIPTION | OPERATING TEMPERATURE | | TYPICAL APPLICATIONS |
|--------------|--------------|---|-----------------------|-----|---|
| | | | MAX °C | MIN | |
| → CFM | 3:1 | Medium Wall Polyolefin, optionally adhesive-lined | 110 | -55 | Splice, Termination & Cable Insulation, Mechanical Protection, Environmental Sealing |
| → CFW | 3:1 | Heavy Wall Polyolefin, optionally adhesive-lined | 110 | -55 | Splice, Termination & Cable Applications including Direct Burial, URD and Submersible |
| → CFTV | 3:1 | Flexible Polyolefin, adhesive-lined, with heat indicating lines | 110 | -55 | Cable TV & Communication Industries, waterproof sealing & mechanical protection for cable connections |
| → CFHR | 6:1 | Very High Shrink Ratio, Flexible Polyolefin | 110 | -55 | Support & Insulation of Military, Electronic & Transportation Wiring Applications |

→ **Heat Shrink Tubing Products**



Medium & Heavy Wall products

Medium Wall and Heavy Wall heat shrinkable tubing possesses excellent insulating, environmental sealing, and impact and abrasion resistance.

Medium Wall & Heavy Wall tubing is used in a variety of general purpose applications to seal and protect electrical connections and terminations and provide excellent mechanical protection.

DSG-Canusa's line of specially designed medium & heavy wall products are used as the industry standard in several markets including Electrical/Utility and Mass Transportation.

→ **Product Selection Chart**

CFM

Medium wall heat shrinkable tubing suitable for a variety of low voltage electrical and mechanical applications, where lighter weight and greater flexibility are important

Features

- Seals and protect cable splices and terminations
- High resistance to impact and abrasion
- Optional thermoplastic adhesive liner for complete environmental protection and insulation
- Continuous Operating Temperature: -55°C to 110°C
- Shrink Temperature: 120°C



Dimensions

| ORDER REF. NO. | EXPANDED | | RECOVERED | | DELIVERY UNITS |
|----------------|------------------------------|----|------------------------------|-----------------------------------|-------------------|
| | INTERNAL DIAMETER (MIN) D | | INTERNAL DIAMETER (MAX) D | WALL THICKNESS OVERALL (NOM) w | Lengths 1.22 m |
| | mm | IN | mm | mm | pcs. |
| 0400 | 10,2 | - | 3,8 | 2,00 | 75 |
| 0750 | 19,1 | - | 5,6 | 2,00 | 35 |
| 1100 | 27,9 | - | 10,2 | 2,00 | 75 |
| 1300 | 33,0 | - | 10,2 | 2,00 | 60 |
| 1500 | 38,1 | - | 12,7 | 2,00 | 40 |
| 1700 | 43,2 | - | 12,7 | 2,00 | 40 |
| 2050 | 52,1 | - | 19,1 | 2,00 | 25 |
| 2750 | 69,9 | - | 25,4 | 2,00 | 15 |
| 3500 | 88,9 | - | 30,0 | 2,40 | 10 |
| 4700 | 119,4 | - | 39,9 | 2,70 | 5 |
| 6700 | 170,2 | - | 58,4 | 2,80 | 5 |
| 9000 | 228,6 | - | 77,0 | 3,00 | 5 |

Technical Data

Physical

| Property | Test Method | Typical Performance |
|--|---------------------|-----------------------------|
| Tensile Strength | ASTM-D 412, ISO 37 | 14,5 MPa |
| Elongation | ASTM-D 412, ISO 37 | 550% |
| Longitudinal Change | ASTM-D 2671 | +1% to -10% max. |
| Specific Gravity | ASTM-D 792, A-I | 1,10 g/cm ³ max. |
| Elongation after Heat Aging (168 hrs at 150°C) | ASTM-D 2671, ISO 37 | 500% |
| Elongation after Heat Shock (4 hrs at 225°C) | ASTM-D 2671 | No cracking or flowing |
| Low Temperature Flexibility | ASTM-D 2671 Meth. C | does not break at -55°C |

Electrical

| Property | Test Method | Typical Performance |
|---------------------|----------------------|-------------------------|
| Dielectric Strength | ASTM-D 149 / IEC 243 | 20 kV/mm |
| Volume Resistivity | ASTM-D 257 | 10 ¹⁶ Ω x cm |

Chemical

| Property | Test Method | Typical Performance |
|---------------------|--------------|---------------------|
| Copper Corrosion | ASTM-D 2671 | No Corrosion |
| Chemical Resistance | | good to excellent |
| Water Absorption | ASTM - D 570 | 0,10% |

Adhesive

| Property | Test Method | Typical Performance Adhesive | Typical Performance Sealant |
|------------------|-------------|---------------------------------|--------------------------------|
| Water Absorption | - | <0,3% | <0,1% |
| Softening Point | ASTM-E 28 | 95°C to 105°C | 80°C to 90°C |

| Standard Colours | Special Colours |
|------------------|-----------------|
| black ■ | Not Available |

Ordering: **Specify the product name** plus each of the following options: 1) Size 2) Colour 3) Total Quantity + Delivery Unit 4) Lining Options
For example: CFM 1500 black, 200 pcs., 1,22 mtr lengths, lined

→ **Product Selection Chart**

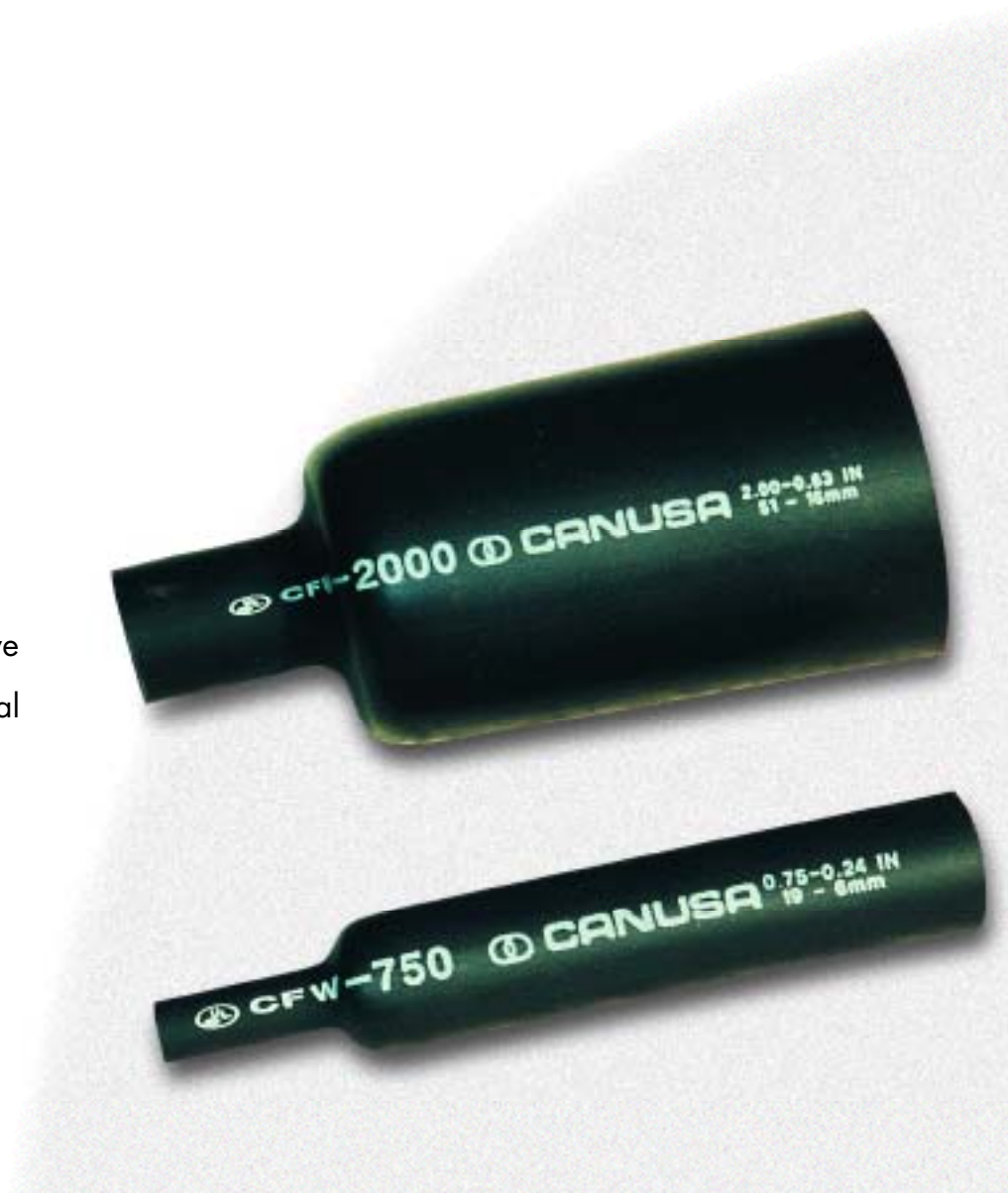
CFW

Heavy wall heat shrinkable tubing provides maximum reliability for insulating and protecting cable joints and terminations



Features

- Withstands severe mechanical requirements of U.R.D., submersible and direct burial installations
- Rated for 600V, 90°C continuous use
- Optional thermoplastic adhesive liner for complete environmental protection and insulation
- Continuous Operating Temperature: -55°C to 110°C
- Shrink Temperature: 120°C



Dimensions

| ORDER REF. NO. | EXPANDED | | RECOVERED | | DELIVERY UNITS |
|----------------|------------------------------|----|------------------------------|-----------------------------------|-------------------|
| | INTERNAL DIAMETER (MIN) D | | INTERNAL DIAMETER (MAX) D | WALL THICKNESS OVERALL (NOM) w | Lengths 1.22 m |
| | mm | IN | mm | mm | pcs. |
| 0350 | 8,9 | - | 3 | 1,80 | 100 |
| 0500 | 13,0 | - | 4,1 | 2,40 | 75 |
| 0750 | 19,1 | - | 6,1 | 2,40 | 35 |
| 1100 | 27,9 | - | 8,9 | 3,00 | 75 |
| 1500 | 38,1 | - | 11,9 | 4,10 | 40 |
| 2000 | 50,8 | - | 16 | 4,10 | 25 |
| 2700 | 68,1 | - | 22,1 | 4,10 | 15 |
| 3500* | 89,9 | - | 30,0 | 4,10 | 10 |
| 4700* | 119,9 | - | 39,9 | 4,30 | 5 |

*CFW 3500 and CFW 4700 are not UL or CSA listed

Technical Data

Physical

| Property | Test Method | Typical Performance |
|--|---------------------|-------------------------|
| Tensile Strength | ASTM-D 412, ISO 37 | 14,5 MPa |
| Elongation | ASTM-D 412, ISO 37 | 600% |
| Longitudinal Change | ASTM-D 2671 | +1% to -10% max. |
| Specific Gravity | ASTM-D 792, A-I | 1,10 g/cm ³ |
| Elongation after Heat Aging (168 hrs at 150°C) | ASTM-D 2671, ISO 37 | 500% |
| Elongation after Heat Shock (4 hrs at 225°C) | ASTM-D 2671 | No cracking or flowing |
| Low Temperature Flexibility | ASTM-D 2671 Meth. C | does not break at -55°C |

Electrical


| Property | Test Method | Typical Performance |
|---------------------|-------------|-------------------------|
| Dielectric Strength | ASTM-D 149 | 20 kV/mm |
| Volume Resistivity | ASTM-D 257 | 10 ¹⁶ Ω x cm |

Chemical

| Property | Test Method | Typical Performance |
|---------------------|--------------|---------------------|
| Copper Corrosion | ASTM-D 2671 | No Corrosion |
| Chemical Resistance | | good to excellent |
| Water Absorption | ASTM - D 570 | 0,10% |

Adhesive

| Property | Test Method | Typical Performance Adhesive | Typical Performance Sealant |
|------------------|-------------|------------------------------|-----------------------------|
| Water Absorption | - | <0,3% | <0,1% |
| Softening Point | ASTM-E 28 | 95°C to 105°C | 80°C to 90°C |

| Standard Colours | Special Colours |
|---|-----------------|
| black  | Not Available |

Ordering: **Specify the product name** plus each of the following options: 1) Size 2) Colour 3) Total Quantity + Delivery Unit 4) Lining Options
For example: CFW 0750 black, 350 pcs., 1,22 mtr lengths, unlined

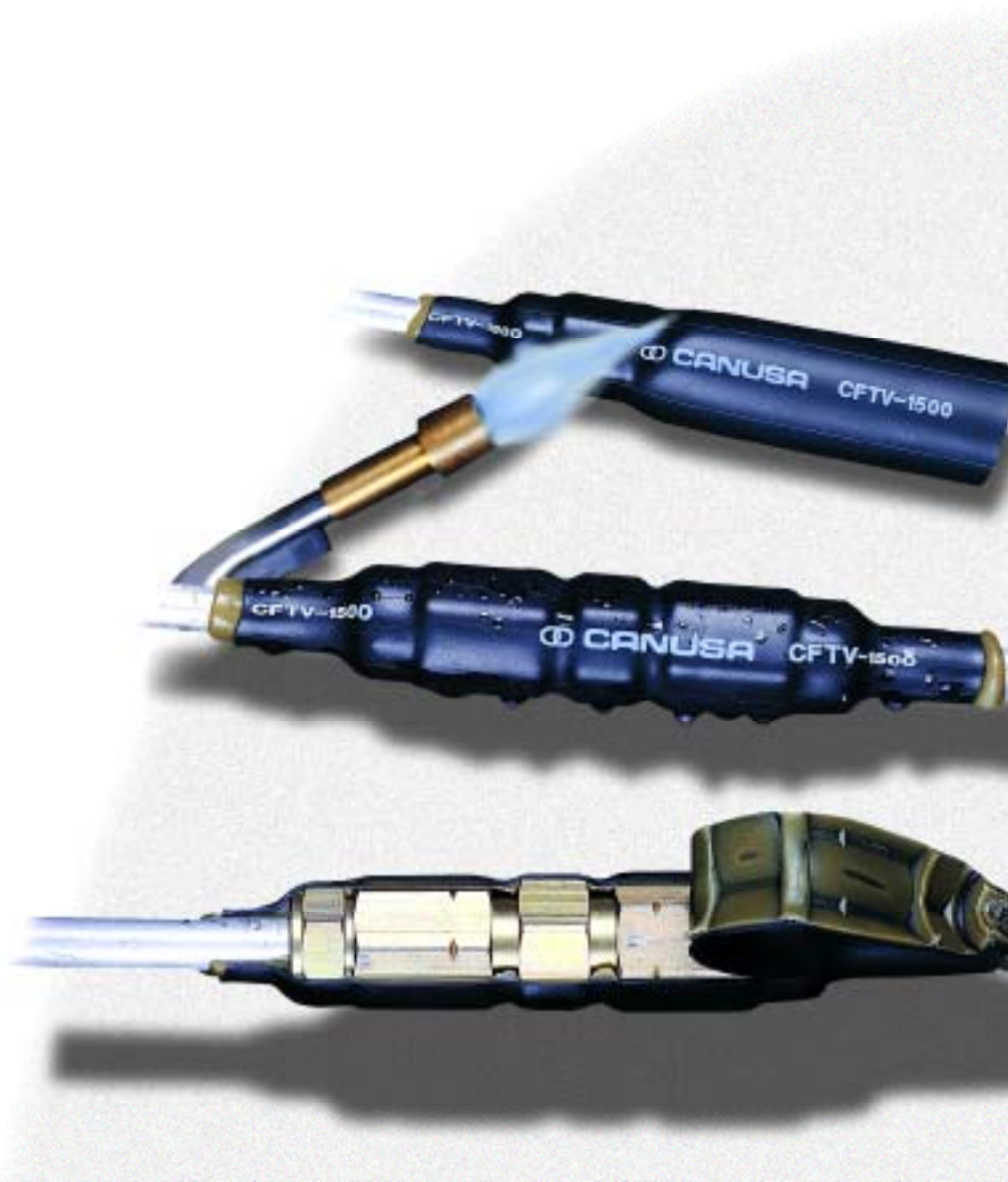
→ **Product Selection Chart**

CFTV

Heat shrinkable tubing and adhesive liner combination that established the CATV industry standard for splice and connector protection

Features

- An absolutely waterproof seal
- Selective strippability to meet CATV industry specifications
- Minimal heat required to produce error free installation without splitting
- Heat indicative paint ensures integrity of seal
- Continuous Operating Temperature: -55°C to 110°C
- Shrink Temperature: 120°C



Dimensions

| ORDER REF. NO. | EXPANDED | | RECOVERED | | DELIVERY UNITS |
|----------------|---------------------------|----|---------------------------|--------------------------------|----------------|
| | INTERNAL DIAMETER (MIN) D | | INTERNAL DIAMETER (MAX) D | WALL THICKNESS OVERALL (NOM) w | Lengths 1.22 m |
| | mm | IN | mm | mm | pcs. |
| 0400 | 10,2 | - | 3,8 | 2,00 | 75 |
| 0750 | 19,0 | - | 5,6 | 2,00 | 35 |
| 1100 | 27,9 | - | 10,2 | 2,00 | 75 |
| 1300 | 33,0 | - | 10,2 | 2,00 | 60 |
| 1500 | 38,1 | - | 12,7 | 2,00 | 40 |
| 1700 | 43,2 | - | 12,7 | 2,00 | 40 |
| 2050 | 52,1 | - | 19,0 | 2,00 | 25 |
| 2750 | 69,8 | - | 25,4 | 2,00 | 15 |

Technical Data

Physical

| Property | Test Method | Typical Performance |
|---|---------------------|-------------------------|
| Tensile Strength | ASTM-D 412, ISO 37 | 14,5 MPa |
| Elongation | ASTM-D 412, ISO 37 | 600% |
| Low Temperature Flexibility | ASTM-D 2671 Meth. C | does not break at -55°C |
| Abrasion Resistance | ASTM-D 2671 | 60 mg |
| Adhesive Softening Point | ASTM-E 28 | 85° C |
| Adhesive Peel Strength to PE | ASTM-D 1000 | 110N/25mm |
| Adhesive Peel Strength to Aluminium | ASTM-D 1000 | 80N/25mm |
| Adhesive Lap Shear (1 in./min. at 23°C) | ASTM-D 1002 | 0,1 MPa |
| Adhesive Viscosity (132°C) | ASTM-D 1084 | 32000 CPS |
| Water Penetration (on installed tubing: 50°C for 14 days) | STM-706 | No penetration |

Chemical

| Property | Test Method | Typical Performance |
|-------------------|-------------|---------------------|
| Copper Corrosion | ASTM-D 2671 | No Corrosion |
| Fungus Resistance | | no growth |
| Water Absorption | ASTM-G 21 | 0,10% |

| Standard Colours | Special Colours |
|------------------|-----------------|
| black | Not Available |

Ordering: **Specify the product name** plus each of the following options: 1) Size 2) Colour 3) Total Quantity + Delivery Unit
For example: CFTV 0750 black, 480 pcs., 1,22 mtr.-lengths

→ **Product Selection Chart**

CFHR

High ratio heat shrinkable tubing accommodates extreme differences between cables, connectors and backshells

Features

- 6:1 Shrink ratio
- Accommodates a wide variety of connector shapes and configurations
- Optional thermoplastic adhesive liner for complete environmental protection and insulation
- Continuous Operating Temperature: -55°C to 110°C
- Shrink Temperature: 120°C



Dimensions

| ORDER REF. NO. | EXPANDED | | RECOVERED | | DELIVERY UNITS |
|----------------|------------------------------|----|------------------------------|-----------------------------------|-------------------|
| | INTERNAL DIAMETER (MIN) D | | INTERNAL DIAMETER (MAX) D | WALL THICKNESS OVERALL (NOM) w | Lengths 1.22 m |
| | mm | IN | mm | mm | pcs. |
| 0750 | 19,0 | - | 3,2 | 3,20 | 35 |
| 1300 | 33,0 | - | 5,5 | 3,40 | 60 |
| 1750 | 44,4 | - | 7,4 | 3,60 | 40 |
| 2000 | 50,8 | - | 8,3 | 4,30 | 25 |
| 2750 | 69,8 | - | 11,7 | 4,80 | 15 |
| 3500 | 88,9 | - | 17,1 | 4,80 | 10 |
| 4700 | 119,4 | - | 22,9 | 4,80 | 5 |

Technical Data

Physical

| Property | Test Method | Typical Performance |
|--|---------------------|-------------------------|
| Tensile Strength | ASTM-D 412, ISO 37 | 14,5 MPa |
| Elongation | ASTM-D 412, ISO 37 | 600% |
| Longitudinal Change | ASTM-D 2671 | +1% to -10% max. |
| Specific Gravity | ASTM-D 792 | 1,10 g/cm ³ |
| Elongation after Heat Aging (168 hrs at 150°C) | ASTM-D 2671 | 400% |
| Elongation after Heat Shock (4 hrs at 225°C) | ASTM-D 2671 | No cracking or flowing |
| Low Temperature Flexibility | ASTM-D 2671 Meth. C | does not break at -55°C |
| Hardness (Shore D) | ASTM-D 2240 | 50 D |

Electrical

| Property | Test Method | Typical Performance |
|---|----------------------|-------------------------|
| Dielectric Strength | ASTM-D 149 / IEC 243 | 20 kV/mm |
| Dielectric Voltage Withstand (2500 V, 60Hz, 1min) | UL 486D | no breakdown |
| Volume Resistivity | ASTM-D 257 | 10 ¹⁶ Ω x cm |

Chemical

| Property | Test Method | Typical Performance coloured |
|---------------------|--------------|------------------------------|
| Copper Corrosion | ASTM-D 2671 | No Corrosion |
| Chemical Resistance | | good to excellent |
| Water Absorption | ASTM - D 570 | 0,10% |

Adhesive

| Property | Test Method | Typical Performance |
|--|-------------|--|
| Adhesive Lap Shear (1in./min at 23°C) | ASTM-D 1002 | 0,875 Mpa |
| Softening Point | ASTM-E 28 | 92°C/-5°C |
| Adhesive Peel Strength (300mm/min at 23°C) > to steel, aluminium, P.E > to PVC | ASTM-D 1000 | 110 N/25mm 80 N/25mm |
| Adhesive Blocking (30°C) | ASTM-D 1146 | no blocking |
| Water Penetration | STM 706 | no penetration after 236 hrs.of continuous immersion |

| Standard Colours | Special Colours |
|------------------|-----------------|
| black | Not Available |

Ordering: **Specify the product name** plus each of the following options: 1) Size 2) Colour 3) Total Quantity + Delivery Unit 4) Lining Options
For example: CFHR 0750 black, 140 pcs., 1,22 mtr lengths, lined