



DUAL WALL, FLAME RETARDANT, HALOGEN FREE (DWHF) TUBING

KEY PRODUCT ATTRIBUTES

- 3:1 shrink ratio
- Flame retardant
- Halogen free
- Fluid and moisture resistant
- Operating temperature of 110°C
- Low acid gas generation

PRODUCT BENEFITS

- Seals and protects against the ingress of moisture to the wire joint and prevents corrosion of the terminations and conductors
- EN45545 qualified
- Suitable for rail applications
- Prevention of damage to equipment and applications

Part of the Raychem tubing product portfolio, the new DWHF heat shrink tubing is a dual wall tube with a flame retardant and halogen free jacket, in line with the high requirements of the rail industry EN45545 standard (high level of flame retardancy, low level of toxicity, smoke, in a fire situation).

The inner adhesive layer will melt during installation and create a seal, with the underlying substrate preventing ingress of moisture, corrosion, and connectivity issues.

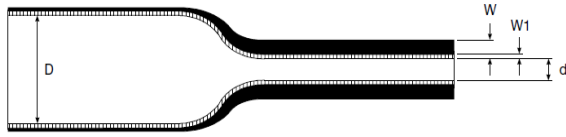
DWHF tubing can be installed using a hot air gun, or other standard application tooling equipment.

Whilst this product has been developed for rail industry applications, its use expands beyond this, reaching other markets such as offshore and marine, or indeed anywhere where the application environment is constrained. Highlighting DWHF tubing is a versatile product within the portfolio, suitable for an extensive range of environments and markets.

TYPICAL MARKETS



DUAL WALL, FLAME RETARDANT, HALOGEN FREE (DWHF) TUBING



INSTALLATION TEMPERATURES

- Minimum Shrink Temperature: 110°C
- Full Recovery Temperature: 135°C
- Operating Temperature: 110°C

PRODUCT SELECTION INFORMATION - DIMENSIONS IN MM AND (INCHES)

Size	Inside Diameter		Recovered Wall Thickness		Delivery Units (Pack Size)
	Minimum Expanded as Supplied	Maximum Recovery after Heating	Total Wall after Heating	Adhesive Wall after Heating (Nominal)	1.2M sticks - STK (Piece) Spools - SP (Meters)
3:1					
3/1	3.0 (0.118)	1.0 (0.039)	1.00 ± 0.28 (0.039 ± 0.010)	0.50 (0.020)	Pcs (125), Metres (150)
4.5/1.5	4.5 (0.177)	1.5 (0.059)	1.10 ± 0.28 (0.043 ± 0.010)	0.50 (0.020)	Pcs (125), Metres (150)
6/2	6.0 (0.236)	2.0 (0.079)	1.00 ± 0.28 (0.039 ± 0.010)	0.50 (0.020)	Pcs (125), Metres (250)
9/3	9.0 (0.354)	3.0 (0.118)	1.40 ± 0.28 (0.055 ± 0.010)	0.61 (0.024)	Pcs (125), Metres (200)
12/4	12.0 (0.472)	4.0 (0.157)	1.78 ± 0.38 (0.070 ± 0.015)	0.76 (0.030)	Pcs (100), Metres (200)
19/6	19.0 (0.748)	6.0 (0.236)	2.25 ± 0.55 (0.088 ± 0.022)	0.76 (0.030)	Pcs (100), Metres (150)
24/8	24.0 (0.940)	8.0 (0.315)	2.54 ± 0.55 (0.100 ± 0.022)	1.02 (0.040)	Pcs (50), Metres (80)
40/13	40.0 (1.570)	13.0 (0.512)	2.54 ± 0.55 (0.100 ± 0.022)	1.02 (0.040)	Pcs (30), Metres (60)

Imperial Dimensions

Colour	Black (-0)
Size Selection	Always order the largest size that will shrink snugly over the component to be covered.
Standard Packaging	1.2m lengths (UOM Piece).
Marking	No marking.
Ordering Description	Specify product name, size, colour, and length (for example, DWHF-9/3-0-SP).

SPECIFICATIONS AND APPROVALS

Series	Standard/Approval	Raychem
DWHF	EN45545 R22 at HL3	108-120066

Are you looking to seal out moisture, offer enhanced strain relief, or provide rigorous mechanical protection? Do you need a flame retardant product? Leverage TE Connectivity's (TE) comprehensive portfolio of heat shrink tubing products in a wide range of applications.

[Learn more at TE.com/heatshrinktubing](https://www.te.com/heatshrinktubing)

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