

## Part Number CB-DWT2X/3X/4X

Header CB-DWT2X/3X/4X Adhesive-Lined Dual Wall Heat Shrink

**Description** CB-DWT is adhesive-lined, flexible, halogen free and flame-retardant polyolefin heat-shrinkable dual wall tubing. This tubing has good mechanical strength, which can protect from fluids, moisture and corrosion. CB-DWT is used in a wide variety of electrical applications, including back end connector sealing, breakouts, and connector-to-cable transitions. A high expansion ratio makes it possible to repair most damaged cable jackets without removing connectors. The product is UL recognized and the file No is E180908.

Agency Approval & Compliance UL, CUL, ROHS, Halogen Free, Flame Retardant, F Mark, UL224, REACH, VW1

**Application** CB-DWT series of tubing can be used in a variety of applications where environmental issues are a concern. The adhesive lining provides an excellent barrier to moisture and is good choice of material for repairing cables, covering components and other electronic/electrical connections in harsh weather conditions.

**Shrink Ratio and Operating Temperature** CB-DWT series is available in 2:1, 3:1 and 4:1 shrink ratios. When fully recovered, the 2:1 material will shrink to one half (50%) of its original supplied diameter, the 3:1 material will shrink to one third (33.3%) of its original supplied diameter and the 4X material will shrink to one quarter (25%) of its original supplied diameter. The tubing's wall thickness will also change proportionally to the degree of recovery.

Operating temperature range is from -55 degree C to 125 degrees C (-67 degrees F to 257 degrees F) and the minimum shrink temperature is 110 degree C (230 degrees F)

## **Standard Sizes and Dimension**



| CB-DWT (2X) |      |                      |             |                 |                                  |
|-------------|------|----------------------|-------------|-----------------|----------------------------------|
| Size        |      | As Supplied          |             | After Recovery  |                                  |
| (Inch)      | (mm) | Nominal Wall<br>(mm) | Max ID (mm) | Total Wall (mm) | Nominal<br>Adhesive Wall<br>(mm) |
| 3/64"       | 1.2  | 0.3                  | 0.6         | 0.45±0.12       | 0.2                              |
| 1/16"       | 1.6  | 0.3                  | 0.8         | 0.45±0.12       | 0.2                              |
| 3/32"       | 2.4  | 0.35                 | 1.2         | 0.55±0.12       | 0.3                              |
| 1/8"        | 3.2  | 0.4                  | 1.6         | 0.60±0.15       | 0.3                              |
| 3/16"       | 4.8  | 0.4                  | 2.4         | 0.75±0.15       | 0.35                             |
| 1/4"        | 6.4  | 0.4                  | 3.2         | 0.75±0.15       | 0.35                             |
| 3/8"        | 9.5  | 0.4                  | 4.8         | 0.80±0.20       | 0.35                             |
| 1/2"        | 12.7 | 0.4                  | 6.4         | 0.80±0.20       | 0.35                             |
| 3/4"        | 19.1 | 0.5                  | 9.5         | 0.95±0.28       | 0.4                              |
| 1"          | 25.4 | 0.5                  | 12.7        | 1.15±0.28       | 0.45                             |
| 1-1/2"      | 38.1 | 0.65                 | 19          | 1.25±0.41       | 0.45                             |
| 2"          | 50.8 | 0.73                 | 25.4        | 1.40±0.41       | 0.5                              |

| CB-DWT (3X) |          |                      |             |                 |                                  |
|-------------|----------|----------------------|-------------|-----------------|----------------------------------|
| Size        |          | After Recovery       |             | After Recovery  |                                  |
| (Inch)      | (mm)     | Nominal Wall<br>(mm) | Max ID (mm) | Total Wall (mm) | Nominal<br>Adhesive Wall<br>(mm) |
| 3/32        | 2.8±0.4  | 0.40±0.15            | 1           | 0.85±0.25       | 0.35±0.10                        |
| 1/8         | 3.6±0.4  | 0.40±0.15            | 1           | 0.85±0.25       | 0.35±0.10                        |
| 3/16        | 5.1±0.4  | 0.40±0.15            | 1.5         | 1.05±0.25       | 0.45±0.10                        |
| 1/4         | 6.9±0.5  | 0.45±0.15            | 2           | 1.10±0.25       | 0.45±0.10                        |
| 5/16        | 8.4±0.5  | 0.55±0.20            | 2.5         | 1.45±0.25       | 0.45±0.10                        |
| 3/8         | 9.9±0.5  | 0.60±0.20            | 3           | 1.45±0.25       | 0.45±0.10                        |
| 1/2         | 13.3±0.6 | 0.60±0.20            | 4           | 1.50±0.35       | 0.45±0.15                        |
| 5/8         | 16.4±0.7 | 0.65±0.25            | 5           | 1.70±0.40       | 0.45±0.15                        |
| 3/4         | 19.7±0.7 | 0.75±0.25            | 6           | 2.00±0.45       | 0.65±0.20                        |
| 1           | 25.9±0.7 | 0.75±0.25            | 8.4         | 2.00±0.55       | 0.65±0.20                        |
| 1-1/4       | 31.0±1.0 | 0.80±0.30            | 10          | 2.20±0.55       | 0.75±0.20                        |
| 1-1/2       | 41.0±1.0 | 0.85±0.35            | 13.7        | 2.50±0.55       | 1.00±0.25                        |
| 2           | 51.0±1.0 | 0.85±0.35            | 16.5        | 2.50±0.55       | 1.00±0.25                        |

| CB-DWT (4X) |      |                      |             |                 |                                  |
|-------------|------|----------------------|-------------|-----------------|----------------------------------|
| Size        |      | As Supplied          |             | After Recovery  |                                  |
| (Inch)      | (mm) | Nominal Wall<br>(mm) | Max ID (mm) | Total Wall (mm) | Nominal<br>Adhesive Wall<br>(mm) |
| 3/16"       | 4    | 0.4                  | 1           | 1.00±0.28       | 0.5                              |
| 1/4"        | 6    | 0.4                  | 1.5         | 1.00±0.28       | 0.5                              |
| 5/16"       | 8    | 0.4                  | 2           | 1.10±0.28       | 0.5                              |
| 3/8"        | 9.5  | 0.45                 | 2.5         | 1.20±0.28       | 0.55                             |
| 1/2"        | 12   | 0.5                  | 3           | 1.40±0.28       | 0.61                             |
| 5/8"        | 16   | 0.6                  | 4           | 1.78±0.38       | 0.76                             |
| 3/4"        | 19   | 0.6                  | 4.8         | 2.00±0.55       | 0.76                             |
| 1"          | 24   | 0.75                 | 6           | 2.25±0.55       | 0.76                             |
| 1-1/4"      | 32   | 0.8                  | 8           | 2.54±0.55       | 1.02                             |
| 1-1/2"      | 38.1 | 0.8                  | 9.5         | 2.54±0.55       | 1.02                             |
| 2"          | 52   | 0.8                  | 13          | 2.60±0.55       | 1.02                             |

## **Specifications**

| ltem                                  | Specifications         |
|---------------------------------------|------------------------|
| Shrink Temperature (°C)               | 110                    |
| Operating Temperature Range (°C)      | -55—125                |
| Tensile Strength (Mpa)                | ≥10.4                  |
| Dielectric Voltage Withstand (v)      | 600                    |
| Ultimate Elongation (%)               | ≥200                   |
| Radial shrinking ratio (%)            | ≥50; ≥66; ≥75          |
| Longitudinal Change (%)               | ≤15                    |
| Aging in Circulating-air Oven         | 158.0±1.0°C, 168hrs    |
| After aging - Tensile Strength (Mpa)  | ≥7.3                   |
| After aging - Ultimate Elongation (%) | ≥100                   |
| Dielectric Strength kV/mm             | ≥15.0                  |
| Volume Resistivity ( $\Omega$ cm)     | ≥10¹³                  |
| Flammability                          | VW-1                   |
| Water Absorption (%)                  | Less than 0.4%         |
| Fluid Resistance                      | Excellent              |
| Softening Point (°C)                  | 85±5°C                 |
| Peel Strength (N/25mm)                | Peel Strength (N/25mm) |

**Availability** Four-foot lengths, master reels and cut pieces

**Important Notice** All information contained in this data sheet is believed to be reliable and accurate. It is advised however that the end user of this material evaluate the suitability of the product for their specific application.

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