

# Dual Wall Tubes for Joints (Black/Red) - RDWT (Electrical Insulating Heat Shrink Tube)

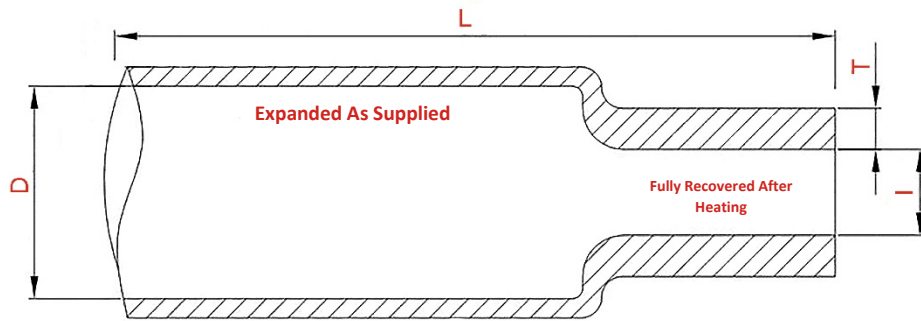


REPL International Ltd UK/Hi-Power Correlation

## RDWT

REPL Heat Shrinkable Dual Wall Tubes (RDWT) are used to reconstruct the electrical cable by providing insulation in form of a dual layer co-extruded tube with a red inner insulating layer and an outer black semi-conductive layer which is used in medium voltage plastic and paper insulated cable joints rated up to 36kV. The single tube provides both an insulating thickness and an insulation screen on the built-up insulation in the joint.

The tubes are made from thermally stabilized, cross linked, polymeric material and have a nominal shrink ratio of 3:1 and an unlimited shelf life when stored at normal warehouse temperatures.



\*Drawing depicts typical dimensions (Dimensions are all in mm)

D – Internal diameter | I – Maximum Internal Diameter | L – Length as per requirement | T – Wall Thickness  
| E – As Supplied | S – After Free Recovery

### PRODUCT DIMENSIONS – RDWT Series

CODE	D		T		
	E	S	(± 20%)		
	Min	Max	I	S	T
RDWT 35/12 +	35	12	5.0	1.0	6.0
RDWT 45/15 +	45	15	5.0	1.0	6.0
RDWT 55/18 +	55	18	5.0	1.0	6.0
RDWT 65/25 +	65	25	5.5	1.0	6.5
RDWT 90/30 +	90	30	5.5	1.0	6.5
RDWT 100/38 +	100	38	5.5	1.0	6.5
RDWT 120/45 +	120	45	6.0	1.0	7.0
RDWT 140/50 +	140	50	6.0	1.0	7.0

+ Available in discrete lengths only.

I – Insulating

S – Semi-Conductive

T – Total Wall

### MATERIAL SPECIFICATIONS

CHARACTERISTIC	VALUE	TEST METHOD
<b>Physical Properties</b>		
Specific Gravity	1.19 ± 0.2	ASTMD - 1505
Water Absorption	1% (max)	ASTM D – 570/ISO 62
Tensile Strength	12 N/sqmm (min)	ASTM D – 412 / ISO 37
Ultimate Elongation	400% (min)	ASTM D – 412 / ISO 37
Hardness	45 ± 3 Shore D	ASTM D - 2240
Longitudinal Change	± 10 %	ESI 09 - 13
Shrink Ratio	3 : 1 (min)	TP/QA/61
<b>Thermal Ageing Tests (120°C for 500 hours)</b>		
Ultimate Elongation	300% (min)	ASTM D – 412 / ISO 37
Tensile Strength	10 N/sqmm (min)	ASTM D – 412 / ISO 37
Low Temp. Flexibility (-40%)	No Cracking	ASTM D -2671
<b>Thermal Tests</b>		
Heat Shock (30min, 200°C)	No Cracking / No Flow	ESI 09-13
Shrink Temperature	120°C (min)	IEC - 216
<b>Electrical Properties</b>		
Dielectric Strength	18 kV/mm (min)	ASTM D – 149 / IEC 243
Dielectric Constant	5 (max)	ASTM D – 150 / IEC 250
Volume Resistivity (on insulating layer)	1x10 <sup>13</sup> Ohm-cm (min)	ASTM D – 257 / IEC 93
Volume Resistivity (semi conductive layer)	1x10 <sup>3</sup> Ohm-cm (max)	ASTM D – 257 / IEC 93
<b>Chemical Properties</b>		
Fungus Resistance	1 (max)	ASTM G - 21
Chemical resistance immersion in following liquids NaOH (40%), H <sub>2</sub> SO <sub>4</sub> (3%), Toluene acetone for 24 hrs at room temperature	Good (no change in appearance)	ISO 175

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DATA SHEET

RDWT 19/01