

## Heat Shrink for Automotive Parts

### A1-R Black Wire Splice Dual Wall Heat Shrink Tube

#### Introduction

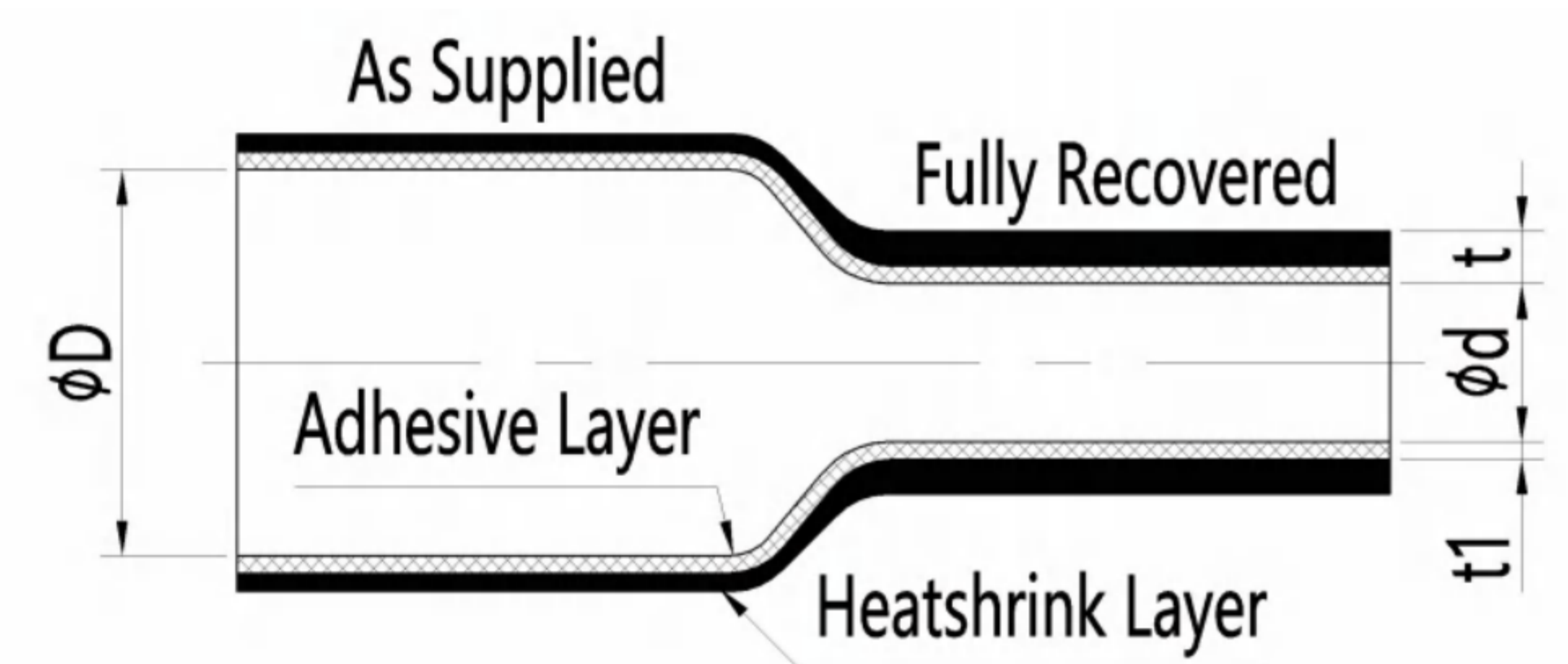
Polyolefin dual wall heat shrinkable tube, high shrinkage rate, flame retardant. Suitable for waterproof sealing and insulation protection of automobile wiring harness wire connectors, terminals and components. Length can be customized.

#### Features

- Operating temperature: -40°C to 125°C
- Shrink ratio: 4:1
- Minimum full recovery temperature: 135°C
- Standard color: Black
- Environmentally friendly, RoHS & ELV compliant

#### Dimension

Part No. A1-R	As Supplied (mm)		After recovered (mm)	
	Inner diameter D (min.)	Inner diameter d (max.)	Wall thickness t (nom.)	Adhesive Wall thickness t1 (nom.)
4.0	4.0	1.00	1.00	0.50
5.75	5.75	1.25	1.20	0.60
7.5	7.5	1.65	1.60	0.80
9.0	9.0	2.30	1.80	0.90
11.0	11.0	2.40	2.00	1.00
14.0	14.0	3.00	2.20	1.20
18.3	18.3	4.45	2.40	1.40



#### Technical Data

Property	Test Method	Requirement
<b>Material Properties</b>		
Longitudinal change	ASTM D2671	$\geq -10\%$
Tensile strength	ASTM D2671	$\geq 10.3\text{MPa}$
Ultimate elongation	ASTM D2671	$\geq 250\%$
Secant modulus 2% (Outer layer / recovered)	ASTM D2671	$\geq 137\text{MPa}$
Heat shock (225°C/4hrs)	ASTM D2671	No cracking, dripping or flowing (outer jacket)
Dynamic cut through	ASTM D3032	$\geq 13.6\text{kg}$
Volume resistivity	ASTM D2671	$\geq 1.0 \times 10^{12}\Omega\cdot\text{cm}$
Flammability (outer layer)	ISO 6722-1	Self-extinguishing within 60S
<b>Splice performance</b>		
Current leakage	Q/DLH 0007	$\leq 0.25\mu\text{A}$
Room temperature flex test	Q/DLH 0007	
Current leakage		$\leq 0.25\mu\text{A}$
Thermal shock	Q/DLH 0007	
Current leakage		$\leq 0.25\mu\text{A}$
Cold Impact	Q/DLH 0007	
Current leakage		$\leq 0.25\mu\text{A}$
Heat aging	Q/DLH 0007	
Current leakage		$\leq 0.25\mu\text{A}$
Fluid immersion	Q/DLH 0007	
Current leakage		$\leq 0.25\mu\text{A}$