

# Heat Shrinkable Solutions for Automotive Hose and Pipe

## A1 Wire Splices Heat Shrinkable Tubing

**Voltage Class 1kV** Ideal for splice/joint protection in most automotive applications

Clear/black, high shrink ratio, adhesive-lined, semi-rigid polyolefin tubing specially designed for wire splice application in automotive market where longitudinal waterproof sealing is required.

### Applications

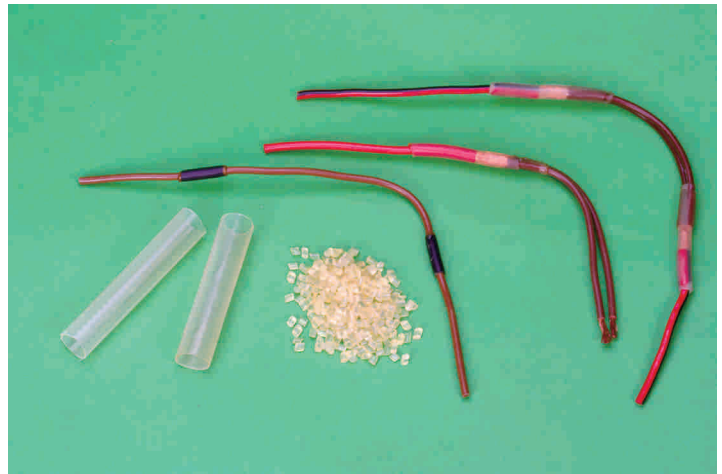
- Insulation and waterproof for automotive wire-to-metal splices, and wire-to-wire joints

### Features/Benefits

- High 4:1 shrink ratio to accommodate wide range of wire harness
- Flame retardant (black only)
- Abrasion resistant
- Hot melt thermoplastic adhesive with good fluidity when melt, effectively flows to and fills void to seal against water and moisture

### Product Code Cross References

Raychem	:	ES1000 / ES2000
DSG Canusa	:	DERAY-SPLICEMELT
3M	:	TES.SMS



### Temperature Range

Operating Temperature : -55 °C ~ 135 °C  
 Shrink Temperature : 125 °C

### Colour

Black, Transparent

### Technical Details

Test Item	Test Method	Typical Value
Tensile strength	ASTM D2671	Black ≥14MPa; Transparent ≥12MPa
Breakdown elongation	ASTM D2671	Black ≥400%; Transparent ≥400%
Outer layer specific gravity	ASTM D792	Black 1.25; Transparent 1.0
Tensile strength after aging	ASTM D2671	Black ≥14MPa; Transparent ≥12MPa
Breakdown elongation after aging	ASTM D2671	Black ≥350%; Transparent ≥350%
Heat impact* (at 200°C/4h)	ASTM D2671	no drop no flow
Low temperature flexibility* (at -55°C/4h)	ASTM D2671	no cracking
Flammability	ASTM D2863	Oxygen Index ≥27 (black)
Volume Resistivity	ASTM D2671	≥ 10 <sup>14</sup> Ω.cm
Dielectric strength	ASTM D2671	≥ 16kV/mm
Water absorption	ASTM D570	≤ 0.5%
Copper corrosion	ASTM D2671	pass

\* Outer layer only



### Product Selection

Product Code	Wall Thickness After Free Recovery(mm)	Standard Package (m/roll)
A1-Φ5.7/1.3	1.2	100
A1-Φ7.4/1.7	1.4	100
A1-Φ10.8/2.5	2.0	100
A1-Φ17.8/4.4	2.3	50

### Ordering

When ordering this product, please specify 1) Product code 2) Colour 3) Quantity Required in number of rolls