RBK-ILS-125 is a dual-wall, heat-shrinkable tubing designed to provide moisture proof encapsulation of an electrical splice in an automotive environment. Moisture may enter a splice area directly or indirectly via a capillary action between individual wires, thus causing corrosion.

The tubing is centred over the splice area and on heating the adhesive melts and is squeezed around where the wires are crimped or welded and between the conductors, by the shrinking action of the sleeve. The installed product provides low profile mechanical protection against flexing, abrasion and cut-through as well as electrical insulation. The jacket is flame-retarded.

There are five sizes to cover the range of splice profiles found, and up to seven wires may enter either end of the product. The sleeves are marked with size, i.e., RBK-1 to RBK-ILS-125-NR4-0.

The wall thickness of the tubing will be less than specified if recovery is restricted during shrinkage.

**Ordering information**

<table>
<thead>
<tr>
<th>Inside diameter</th>
<th>Wall thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expanded d (min)</td>
<td>Recovered d (max)</td>
</tr>
<tr>
<td>d (max) Recovered after heating*</td>
<td>d (max) Recovered after heating</td>
</tr>
<tr>
<td>mm</td>
<td>mm</td>
</tr>
<tr>
<td>5.75</td>
<td>1.25</td>
</tr>
<tr>
<td>7.5</td>
<td>1.65</td>
</tr>
<tr>
<td>10.0</td>
<td>2.70</td>
</tr>
<tr>
<td>14.0</td>
<td>3.00</td>
</tr>
<tr>
<td>18.3</td>
<td>4.00</td>
</tr>
</tbody>
</table>

*Nominal thicknesses for reference only

**Performance**

- **Strain relief:** Insulation resistance does not drop below $2 \times 10^8$ ohms (min) after sample loaded to 50 N at 100 mm/min.
- **Flammability:** Self-extinguishing within 30s (ISO 6722).
- **Heat ageing:** No cracking of jacket at 125°C after 3000 h.
- **Insulation resistance:** 2 x 10^8 ohms (min) after each of the following tests:
  - Split resistance: No splitting at +200°C
  - Longitudinal change: 0 to -10%
  - Strain relief:
  - Cold impact: No cracking of jacket at -40°C for 4 h (ISO 6722)
  - Accelerated ageing: +130°C for 168 h
  - Thermal shock: 5 cycles of +130°C for 1 h followed by immersion in saline solution at 0 to +5°C for 30 mins.
  - Temperature/humidity cycling: 5 cycles of +40°C for 12 h at 95% R.H.
  - -40°C for 4 h
  - +40°C for 3 h at 95% R.H.
  - +23°C for 5 h
  - Mechanical vibration: IEC 60068-2-6
  - Flex test: Mandril Flex under load 5 cycles
  - Fluid soak: Samples soaked for 30 mins at 23°C in:
    - Engine oil ISO 1817 No 1
    - Automatic transmission fluid Dextron™ 2
    - Diesel fuel ISO 1817 Liquid F
    - Brake fluid Dot 4
    - Gunk degreaser
    - Fuel C ISO 1817, 1985
    - Fuel 3 ISO 1817, 1985
    - Car wash detergent 1%
    - Teepol/water by volume
    - Battery acid BS 3031 (1.25 SG)
    - Anti-freeze 50/50 v/v

**Installation**

The product may be installed using a Raychem RBK-ILS Processor or other recommended application equipment. Consult your local Tyco Electronics office for more information.