

# SCT

## Adhesive-lined, semirigid, polyolefin heat-shrinkable tubing (extended temperature range)

SCT is a high-quality, dual-wall tubing designed to insulate and seal automotive wire splices and components made by ultrasonic welding, clip-and-dip, or soldering. Typical applications are insulating and sealing splices in an under-the-hood automotive environment.

SCT has a tough outer wall made of radiation crosslinked, flame-retardant, semirigid polyolefin. The inner wall is a unique, specially formulated hot-melt adhesive designed to function at an extended temperature range. The adhesive forms an outstanding barrier against moisture and automotive fluids.

This barrier provides exceptional protection against corrosion.

Because SCT has a high shrink ratio, only a few sizes are needed to cover a wide range of splice and component diameters.

### Temperature rating

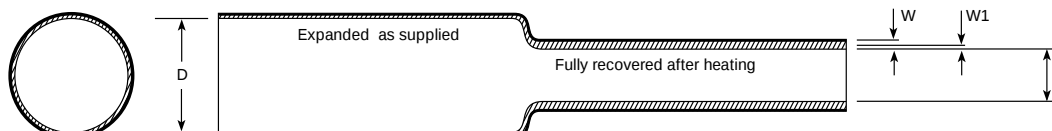
|                                   |                |
|-----------------------------------|----------------|
| Full recovery temperature:        | 135°C          |
| Continuous operating temperature: | -40°C to 150°C |

### Specifications\*

| Type | Raychem |
|------|---------|
| SCT  | SCT SCD |

\*When ordering, always specify latest issue.

### Dimensions (millimeters/inches)



| Size      | Inside diameter                     |                                        | Recovered wall thickness** |               |                               |       |
|-----------|-------------------------------------|----------------------------------------|----------------------------|---------------|-------------------------------|-------|
|           | D (min.)<br>Expanded as<br>supplied | d (max.)<br>Recovered after<br>heating | W<br>Total<br>wall         |               | W1 (min.)<br>Adhesive<br>wall |       |
| SCT No. 0 | 5.1 0.200                           | 1.3 0.050                              | 1.4 ± 0.30                 | 0.055 ± 0.012 | 0.76                          | 0.030 |
| SCT No. 1 | 7.6 0.300                           | 1.7 0.065                              | 1.52 ± 0.30                | 0.060 ± 0.012 | 0.76                          | 0.030 |
| SCT No. 2 | 9.0 0.355                           | 2.3 0.090                              | 1.52 ± 0.30                | 0.060 ± 0.012 | 0.76                          | 0.030 |
| SCT No. 3 | 11.6 0.455                          | 2.5 0.100                              | 2.29 ± 0.30                | 0.090 ± 0.012 | 1.40                          | 0.055 |
| SCT No. 4 | 17.8 0.700                          | 4.4 0.175                              | 2.54 ± 0.30                | 0.100 ± 0.012 | 1.52                          | 0.060 |
| SCT No. 5 | 27.9 1.100                          | 8.4 0.330                              | 2.54 ± 0.30                | 0.100 ± 0.012 | 1.52                          | 0.060 |

\*\*Wall thickness will be less if tubing recovery is restricted during shrinkage.

### Ordering information

|                      |                                                                                                     |
|----------------------|-----------------------------------------------------------------------------------------------------|
| Color                | Black                                                                                               |
| Size selection       | Always order the largest size that will shrink snugly over the component being covered.             |
| Standard packaging   | Cut pieces. See reverse for information on standard cut lengths.                                    |
| Marking              | Tubing will be marked with the number size (for example, SCT-0, SCT-1, SCT-2, SCT-3, SCT-4, SCT-5). |
| Ordering description | Specify product name, size, and color, and cut length; for example, SCT-No.2-0-50MM (0=Black).      |

## Specification values

|            | Property                                                                                                                                                                  | Unit                 | Requirement                                   | Method of test |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------|----------------|
| Physical   | Dimensions                                                                                                                                                                | mm ( <i>inches</i> ) | See reverse                                   | ASTM D 2671    |
|            | Longitudinal change                                                                                                                                                       | percent              | +0, -10                                       | ASTM D 2671    |
|            | Tensile strength                                                                                                                                                          | psi                  | 1500 minimum                                  | ASTM D 2671    |
|            | Ultimate elongation                                                                                                                                                       | percent              | 300 minimum                                   | ASTM D 2671    |
|            | Secant modulus (as supplied)                                                                                                                                              | psi                  | 35,000 minimum                                | ASTM D 2671    |
|            | Concentricity (as supplied)                                                                                                                                               | percent              | 60 minimum                                    | ASTM D 2671    |
|            | Heat shock<br>(4 hours at 250°C/482°F)                                                                                                                                    |                      | No cracking, dripping or<br>flowing of jacket | ASTM D 2671    |
| Electrical | Dielectric strength (jacket only)                                                                                                                                         | volts/mil            | 500 minimum                                   | ASTM D 149     |
|            | Volume resistivity                                                                                                                                                        | ohm-cm               | 10 <sup>13</sup> minimum                      | ASTM D 257     |
|            | Immersion leak resistance                                                                                                                                                 | microamps            | 0.25 maximum                                  | See note below |
|            | Thermal aging<br>(1000 hours at 150°C/302°F)<br>Followed by test for:                                                                                                     |                      |                                               | See note below |
|            | Immersion leak resistance                                                                                                                                                 | microamps            | 0.25 maximum                                  |                |
|            | Thermal cycling<br>25 cycles<br>(-40°C to 135°C/-40°F to 225°F)<br>Followed by test for:                                                                                  |                      |                                               | See note below |
|            | Immersion leak resistance                                                                                                                                                 | microamps            | 0.25 maximum                                  |                |
| Chemical   | Fluid resistance<br>(24 hours at 25°C/77°F) in:<br>ASTM Reference Fuel C<br>VV-F-800 Diesel Fuel<br>(24 hours at 100°C/212°F) in:<br>ASTM #3 Oil<br>Followed by test for: |                      |                                               | See note below |
|            | Immersion leak resistance                                                                                                                                                 | microamps            | 0.25 maximum                                  |                |

Note: Consult Raychem SCT SCD for specific details about test procedures.

## Standard cut lengths

| Part number | Standard cut length  | Cut length tolerance |
|-------------|----------------------|----------------------|
| SCT No. 0   | 50 mm, 75 mm, 105 mm | ± 1.5 mm             |
|             | 1220 mm              | ± 25.4 mm            |
| SCT No. 1   | 27 mm, 50 mm, 65 mm  | ± 1.5 mm             |
|             | 1220 mm              | ± 25.4 mm            |
| SCT No. 2   | 27 mm, 50 mm, 65 mm  | ± 1.5 mm             |
|             | 1220 mm              | ± 25.4 mm            |
| SCT No. 3   | 27 mm, 65 mm, 75 mm  | ± 1.5 mm             |
|             | 1220 mm              | ± 25.4 mm            |
| SCT No. 4   | 27 mm, 75 mm, 90 mm  | ± 1.5 mm             |
|             | 1220 mm              | ± 25.4 mm            |
| SCT No. 5   | 50 mm, 200 mm        | ± 1.5 mm             |
|             | 1220 mm              | ± 25.4 mm            |

**Users should independently evaluate the suitability of the product for their application.**

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