



Raychem CRSM Heat-shrinkable Halogen-free  
Wraparound System for Plastic or Metal  
Sheathed Cable Repair

**Raychem**  
from TE Connectivity

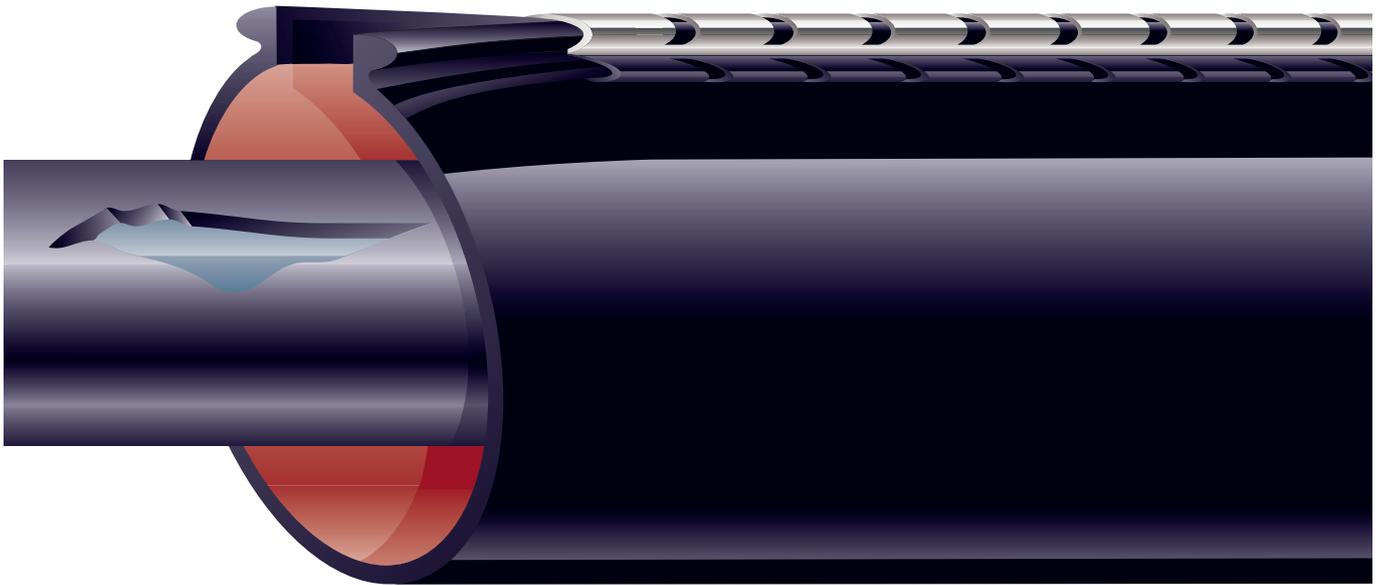
## Raychem CRSM Heat-shrinkable Halogen-free Wraparound System for Plastic or Metal Sheathed Cable Repair

CRSM wraparounds are a fast and permanent cable repair and sealing system. The repair sleeve is quickly fitted in place by means of its rail and channel closure. A moisture-proof, insulating and tight-fitting repair is then obtained in one step by heating, which makes the sleeve diameter shrink and the sealant coating melt and flow into interstices. Because of its heat-shrinkability, each CRSM size will fit several different cable diameters. The sealant exhibits excellent bonding and sealing characteristics to all materials commonly used in the various cable and sheath constructions, such as plastic, rubber, lead and aluminium. CRSM wraparounds are made of an abrasion and corrosion resistant semi-rigid material, and are one result of our extensive capability in materials technology.

As the world's leading maker of heat-shrinkable materials, we offer a wide range of tubing and moulded parts for any application where a tight, insulating or fluid resistant cover is required over uniform or irregularly shaped objects. These products are available in a wide range of formulations to meet the demands of the growing world of energy.



CRSM wraparounds are used in a railway goods yard in Germany to restore the insulating, sealing and mechanical protection functions of damaged cable oversheaths.



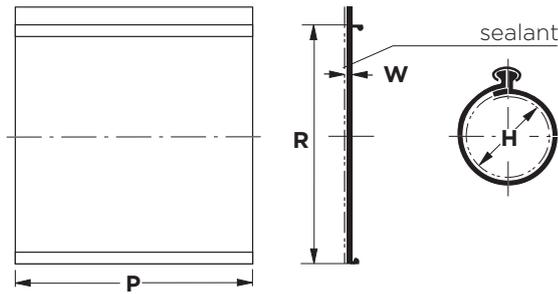
**Labour-saving installation. Fitting and sealing all in one step. Abrasion and corrosion resistant. Each size covers a range of cable sizes.**

Raychem's distinctive closure system, which incorporates a stainless steel channel slid over rails on the sleeve, keeps the wraparound in place during installation but can be easily removed when the adhesive has set.

| Material Properties                |   | Test Method | Requirement                                  |
|------------------------------------|---|-------------|--|
| <b>Tensile Strength</b>            |   | ISO 37      | 17 MPa min.                                  |
| <b>Ultimate Elongation</b>         |   | ISO 37      | 350% min.                                    |
| <b>Density</b>                     |   | ISO 1183    | Method A<br>1.0 - 1.2 g/cm <sup>3</sup>      |
| <b>Hardness</b>                    |   | ISO 868     | 50 - 70 D                                    |
| <b>Accelerated Ageing</b>          | 7 days at 150°C ±2°C  | ISO 188     |  |
|                                    | Tensile Strength  | ISO 37      | 14 MPa min.                                  |
|                                    | Ultimate Elongation   | ISO 37      | 300% min.                                    |
| <b>Thermal Endurance</b>           |   | IEC 60216   | 120°C  |
| <b>Low Temperature Flexibility</b> | 4 hours at -40°C ±3°C   | ASTM D2671  | Procedure C<br>No cracking                   |
| <b>Dielectric Strength</b>         |   | IEC 60243   | 1 mm 180 kV/cm min.<br>3.5 mm 120 kV/cm min. |
| <b>Volume Resistivity</b>          |   | IEC 60093   | 1 x 10 <sup>12</sup> Ω cm min.               |
| <b>Dielectric Constant</b>         |   | IEC 60250   | 5 max.                                       |
| <b>Water Absorption</b>            | 14 days at 23°C ±2°C  | ISO 62      | Method 1<br>0.5% max.                        |
| <b>Resistance to Liquids</b>       | 7 days in transformer oil at 23°C ±2°C (VDE 0370)   | ISO 1817    |  |
|                                    | Tensile Strength  | ISO 37      | 14 MPa min.                                  |
|                                    | Ultimate Elongation   | ISO 37      | 300% min.                                    |
| <b>Resistance to Fungi</b>         |   | ASTM G21    | Pass Rating 1                                |
| <b>Weathering</b>                  | The material from which CRSM is manufactured, contains carbon black to protect it from ultra-violet radiation, and is halogen-free.       |             |  |
| <b>Additional Properties</b>       | Sealant characteristics are detailed in Raychem specification PPS 3012/70. Further details are given in Raychem specification PPS 3010/9. |             |  |

### CRSM Ordering Information

**Dimensions**



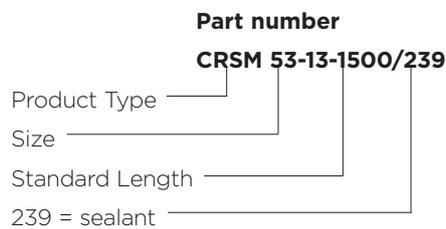
| Product/Size | Application Range | H      |        | R      |        | W       |        | P   |
|--------------|-------------------|--------|--------|--------|--------|---------|--------|---|
|              |                   | a min. | b max. | a min. | b max. | a min.* | b min. |   |
| CRSM 34/10   | 11-21             | 35     | 9      | 110    | 35     | 0.3     | 2.4    | all sizes are available in lengths of 250, 500, 750, 1000 and 1500 mm |
| CRSM 53/13   | 17-32             | 54     | 15     | 170    | 49     | 0.3     | 2.0    |   |
| CRSM 84/20   | 24-50             | 86     | 21     | 270    | 69     | 0.3     | 2.0    |   |
| CRSM 107/29  | 31-65             | 108    | 27     | 340    | 90     | 0.3     | 2.0    |   |
| CRSM 143/36  | 33-86             | 144    | 28     | 455    | 119    | 0.3     | 1.8    |   |
| CRSM 198/55  | 56-120            | 203    | 50     | 640    | 172    | 0.3     | 2.1    |   |
| CRSM 250/98  | 103-150           | 257    | 91     | 810    | 314    | 0.4     | 1.7    |   |

**Notes:**

1. Dimensions in millimetres  
 a = as supplied  
 b = after free recovery  
 \* = at minimum supplied width

2. Max. longitudinal change after free recovery: - 0 - +10%

**Ordering example**



Raychem CRSM wraparounds are supplied complete with detailed installation instructions.

For further details on this product or any other Raychem products please contact your local sales representative.

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Tyco Electronics Raychem GmbH  
 a TE Connectivity Ltd. Company  
 TE Energy  
 Finsinger Feld 1  
 85521 Ottobrunn/Munich, Germany

Phone: +49-89-6089-0  
 Fax: +49-89-6096345

energy.te.com

