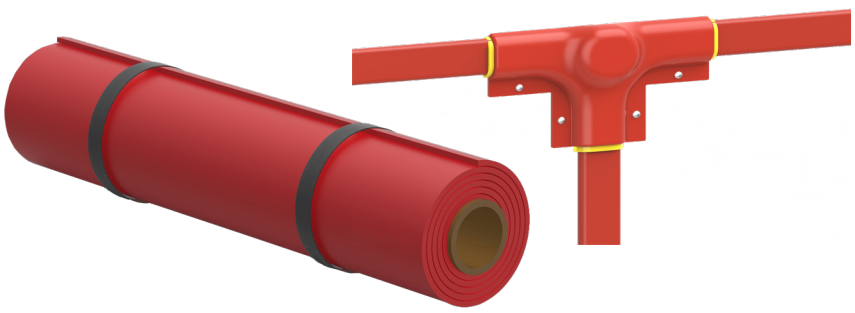
# RAYCHEM HIGH VOLTAGE INSULATION SHEETS HVIS

WILDLIFE AND ASSET PROTECTION PRODUCTS



**REDUCE THE NOXIOUS AND CORROSIVE EFFECTS IN THE EVENT OF FIRE THANKS TO A NON-HALOGEN BASED MATERIAL.**

## APPLICATIONS

- Substation Solutions
- Switchgear Solutions
- Medium Voltage Switchgears

## RELEVANT STANDARDS AND TEST REPORTS

- Dielectric Strength - ASTM D149
- High Tracking Resistance - ASTM D2303
- Thermal Endurance - IEC 60216
- UV Weathering - ASTM G154

## KEY FEATURES

- Simple on-site installation with a hot air device or gas torch
- Excellent anti-tracking properties
- Can be used both indoors and outdoors thanks to its excellent UV and weather-resistant qualities
- Compatible with our complete range of TE Raychem medium voltage insulating products
- Can be stored indefinitely at temperatures up to 50°C (122°F) without loss of performance

TE Connectivity (TE) Raychem hot melt, adhesive-coated, heat-shrinkable sheets HVIS provide insulation enhancement and protection against accidentally-induced discharge. Our HVIS sheets will provide flashover protection up to 17.5 kV or 25 kV if the void-filling mastic is applied underneath the sheet. It can also offer flashover protection up to 36 kV if a double layer of HVIS is used. Re-usable joint covers can also be made to allow access or maintenance when required.

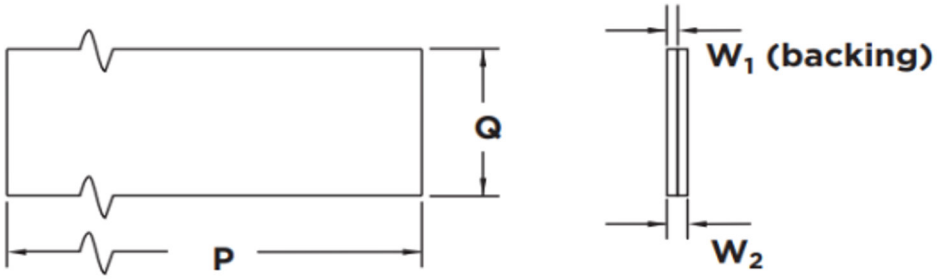
Our HVIS sheets can be cut to size on-site and loosely secured with clamps and brackets. The clamps and brackets can be ordered separately as kits. Once installed, they can be removed and reused.

Our HVIS sheets cover almost any size or shape of busbar joint, making it ideal for insulating busbar tees, elbows, and other connections where tubes and tapes cannot be used. When heated HVIS sheets shrink in two directions to tightly conform to complex shapes, our TE Raychem void-filling mastic S1061 can be used to ensure uneven and protruding shapes are insulated. Our TE Raychem sealing mastic, S1085, can also provide an environmentally sealed connection.

## PRODUCT TECHNICAL SPECIFICATONS

| Part Numbers | Description | Product Dimensions | | | | Supplied |
|---|---|---|---|---|---|---|
| | | Length P a m (ft) | Width Q b mm (inch) | W1 b mm (inch) | W2 a mm (inch) | |
| 244249-000 | HVIS-05-(B3)-(NS) | 0.5 (1.6) | 660 (26) | 1.5 (0.06) | 2.4 (0.1) | Sheets |
| 175849-000 | HVIS-10-(B1)-(NS) | 10 (32.8) | 660 (26) | 1.5 (0.06) | 2.4 (0.1) | Roll |

Note: a = as supplied b = after free recovery.
Longitudinal and transverse change after free recovery: -25 % ±10%.
When required, typically one piece of sealing mastic, S1085, is applied on each leg of the joint and one or two pieces of void filling mastic, S1061, are used to cover uneven shapes.




## PRODUCT PERFOMANCE

| Physical | Test Method | Test Requirement |
|---|---|---|
| Tensile Strength | ASTM D638 | 12 MPa (psi) |
| Ultimate Elongation | ASTM D638 | 500% |
| Thermal Endurance | IEC 60216 | 105°C min. |
| UV Weathering (5000 hrs) | ASTM G154 | 200% |
| Tracking and Eronson Resistance | ASTM D2303 | No tracking or erossion to the top surface or flame failure after:<br>1 hr at 2.50 kV<br>1 hr at 2.75 kV<br>1 hr at 3.00 kV |
| Accelerate Ageing - 168 hrs at 150°C (302°F) | ASTM D2671<br>ASTM D638 | 12 MPa (psi)<br>500% |
| **Electrical** | **Test Method** | **Test Requirement** |
| Dielectric Strength (2.5 mm) | ASTM D149 | 16 kV/mm |
| Volume Resistance | ASTM D257 | 1E+13 Ωcm |
| Flame Retardancy | ANSI C37.20c | Pass |
| AC Withstand | IEEE Std. 4 | Up to 75 kV |
| DC Withstand | IEEE Std. 4 | Up to 144 kV |
| Impulse | IEEE Std. 4 | Up to 175 kV |

## TEST REPORTS AND INSTALLATION INSTRUCTIONS

| Document Reference | Description |
|---|---|
| EDR-5175 | Performance Test Report |
| PPR-3326 | Material Test Report |
| EPP-0623 | Installation Instruction |

## TOOLING INFORMATION

| Description | Information |
|---|---|
| HVIS-TOOLS-01 | Spring Clamps (12x), Flat-steel Bar 350 x 20 mm (2x), Right Angle Steel Bar 120 x 120 mm (8x) |
| HVIS-TOOLS-02 | Spring Clamps (24x), Flat-steel Bars 350 x 20 mm (2x), Right Angle Steel Bars 120 x 120 mm and 160 x 160 mm (8 each), Turning Pair Steel Bars 200 x 40 mm (1x), Vice-grip Wrench (1x), Hose clamps Ø 125 and Ø 160 mm (2 each) |
| S1061 | Void Filling Mastic |
| S1085 | Environmental Sealing Mastic |

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