

# Raychem

Raychem HFT5000 products are made of very flexible heat-shrinkable fabric material. Heated above 110°C, they shrink and fit snugly and securely around the underlying substrate. Designed primarily to provide mechanical abrasion protection for components such as rubber hoses, plastic pipes, and harness wiring

- · Highly flexible woven fabric tubing
- Polyethylene/polyester construction for excellent abrasion resistance
- · Low shrink temperature
- · Halogen free
- 2:1 shrink ratio

# HFT5000

### Heat-shrinkable fabric tubing

bundles, they are also suitable for other applications, such as noise and rattle suppression.

Woven from heat-shrinkable circumferential polyolefin filaments and non-shrinking longitudinal polyester fibers, the product is halogen free. The woven construction makes HFT5000

extremely flexible and resistant to trapping water, heat and humidity. It provides outstanding abrasion, chafing and cutting protection, even at high temperatures. HFT5000 product is easy to install and can be cut with standard industrial cutting equipment.



Heat-shrinkable materials grip substrates without additional fixing.

Highly flexible woven construction allows easy, compliant installation onto awkward substrates such as bent hoses.

Features/Benefits

- Heat-shrinkable, to grip substrates tightly 
  Outstanding abrasion resistance over a 
  Easily cut with standard industrial without additional fixing.
- 2:1 shrink ratio for easy installation onto Resistance to harsh environments. different substrate diameters and sizes.
- Highly flexible woven construction for easy, compliant installation onto awkward substrates such as bent hoses.
- wide temperature range.
- Multifilament construction that ensures soft, safe handling.
- cutting equipment.
- Low shrink temperature for safe • installation onto heat sensitive substrates

Woven fabric tubing with 2:1 shrink ratio for easy installation.

# HFT5000

### Ordering information

Polyester Warp (longitudinal member non heat-shrinkable)



#### Standard sizes

|  | Inside diameter (mm/ <i>in</i> ) |                                     |    |                                   |     |        |  |
|--|----------------------------------|-------------------------------------|----|-----------------------------------|-----|--------|--|
| Product description D (min.) expanded<br>as supplied |                                  | d (max.) recovered<br>after heating |    | Spool quantity<br>(m/ <i>ft</i> ) |     |        |  |
| HFT5000-12/6-0-SP                                    | 12                               | (0.47)                              | 6  | (0.24)                            | 500 | (1640) |  |
| HFT5000-20/10-0-SP                                   | 20                               | (0.79)                              | 10 | (0.39)                            | 400 | (1312) |  |
| HFT5000-30/15-0-SP                                   | 30                               | (1.18)                              | 15 | (0.59)                            | 400 | (1312) |  |
| HFT5000-40/20-0-SP                                   | 40                               | (1.57)                              | 20 | (0.79)                            | 300 | (984)  |  |
| HFT5000-50/25-0-SP                                   | 50                               | (1.97)                              | 25 | (0.98)                            | 200 | (656)  |  |
| HFT5000-60/30-0-SP                                   | 60                               | (2.36)                              | 30 | (1.18)                            | 200 | (656)  |  |
| HFT5000-70/35-0-SP                                   | 70                               | (2.76)                              | 35 | (1.38)                            | 150 | (492)  |  |

#### Non-standard high volume sizes

| Inside diameter (mm/ <i>in</i> ) |                     |                     |                      |                    |                             |        |  |
|----------------------------------|---------------------|---------------------|----------------------|--------------------|-----------------------------|--------|--|
| Product description              | D (min.)<br>as supp | ) expanded<br>llied | d (max.)<br>after he | recovered<br>ating | Spool qu<br>(m/ <i>ft</i> ) | antity |  |
| HFT5000-25/12-0-SP               | 25                  | (0.98)              | 12                   | (0.47)             | 400                         | (1312) |  |
| HFT5000-34/17-0-SP               | 34                  | (1.34)              | 17                   | (0.67)             | 350                         | (1148) |  |
| HFT5000-80/40-0-SP               | 80                  | (3.15)              | 40                   | (1.57)             | 100                         | (328)  |  |

#### Standard colours

| Colour             | Black           |
|--------------------|-----------------|
| Standard packaging | 1 spool per box |

Note: • Fully recoverable fabric wall thickness: Approximately 1 mm (0.039 in).

Longitudinal change on full recovery is –10% to –20%.

• 0 = Black

#### Temperature rating

| Operating temperature range (3000 hours): | -40°C to 125°C  |
|---|---|
| Operating temperature range (1000 hours): | -40°C to 150°C  |
| Minimum recovery temperature:             | 110°C (recommended recovery temperature 140°C to 190°C) |
| Maximum storage temperature:              | 60°C  |

#### Material(s) Description

| Warp material | Polyester                       |
|---------------|---------------------------------|
| Weft material | Irradiated, modified polyolefin |
| Coating       | Modified polyolefin             |

## HFT5000

#### Specifications

| Raychem Specification      | RW2060.               |  |
|----------------------------|-----------------------|--|
| Material Safety Data Sheet | Available on request. |  |
| Installation instructions  | Available on request. |  |

#### Typical HFT5000 Performance

| Property  | Test condition(s)                      | Performance*                                    |
|---|--|---|
| Abrasion resistance   | 23°C                                   | No wear to underlying rubber hose               |
| (200g load, 0.3mm radius metal blade,<br>10Hz, 10mm stroke, 144 000 cycles) | 80°C                                   | No wear to underlying rubber hose               |
| · · · · · · · · · · · · · · · · · · ·                                       | 135°C                                  | No wear to underlying rubber hose               |
| Thermal ageing  | 3000 hrs at 125 °C                     | No deterioration in abrasion resistance at 80°C |
|   | 1000 hrs at 150°C                      | No deterioration in abrasion resistance at 80°C |
| Flammability  | MVSS302                                | Pass  |
| Low temperature flexibility   | 4 hours at -40°C, 10X diameter mandrel | No cracking                                     |
| Cold impact   | 200g weight from 100mm at -40°C        | No cracking                                     |
| Temperature/humidity cycling  | See RW2060 for details                 | No deterioration in abrasion resistance at 80°C |
| Thermal shock   | 100 cycles between -40°C and 125°C     | No deterioration in abrasion resistance at 80°C |
| Fluid resistance  | 24 hr immersion at 23°C                | No deterioration in abrasion resistance at 80°C |
| Antifreeze (50% ethylene glyc   | ol)                                    |   |
| Engine oil (SAE 10w/30)   |  |   |
| Mineral hydraulic fluid   |  |   |
| Detergent (1% Teepol)   |  |   |
| Brake fluid (DOT 4)   |  |   |
| Unleaded gasoline   |  |   |
| Diesel fuel   |  |   |
| Battery acid (1.25 SG H <sub>2</sub> SO <sub>4</sub> )                      |  |   |
| *For full performance details consult Raychem Specification                 | RW2060.                                |   |

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