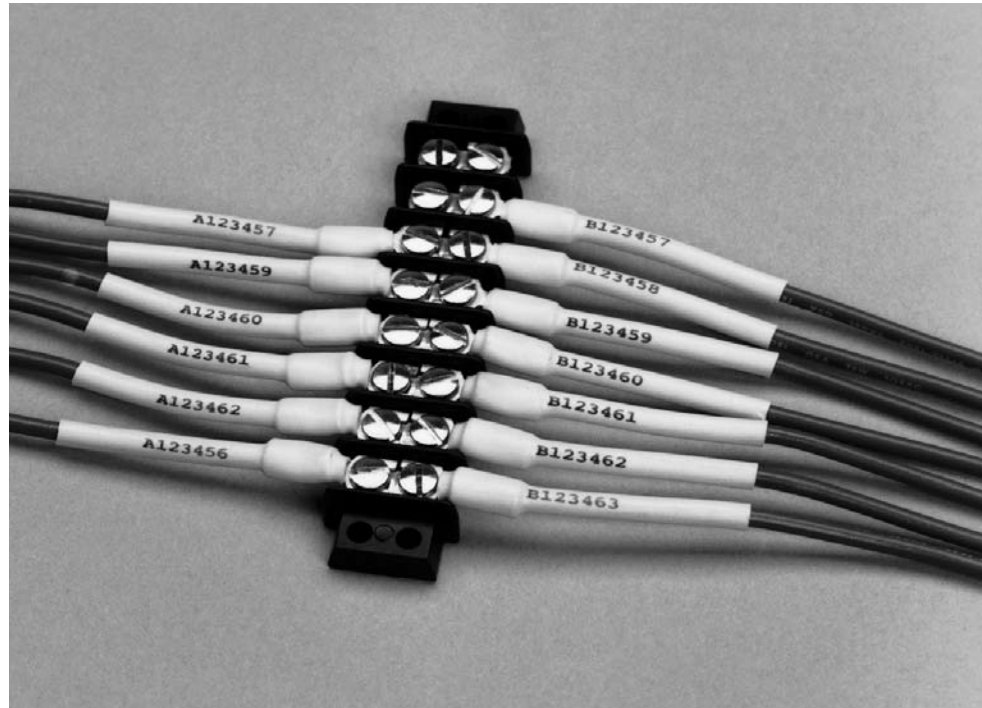


## RNF-100

**Flexible, Flame-Retardant, General Purpose, Polyolefin Tubing**

### Product Facts

- 2:1 shrink ratio
- Superior abrasion and solvent resistance when compared with that of many flexible, general purpose polyolefin tubings
- Excellent physical, chemical, and electrical properties that meet or exceed industrial and military standards for highly reliable, general purpose tubing
- Flexible; conforms to irregular shapes
- Flame-retardant (colors only)
- Wide range of sizes and colors
- RoHS compliant



### Applications

Designed to provide superior mechanical (abrasion, cut-through, and strain relief), thermal, and fluid-resistance performance in demanding environments. Widely used to provide insulation and strain relief of wire terminations and connections. Used for jacketing wire bundles and light-duty harnesses where superior abrasion resistance is a plus. Also used to identify and color-code electrical connections and wire bundles.

### Installation

Minimum shrink temperature: 95°C [203°F]  
Minimum full recovery temperature: 121°C [250°F]

### Operating Temperature Range

-55°C to 135°C  
[-67°F to 275°F]

### Specifications/Approvals

| Series                  | UL                     | CSA                     | Military   | Industry                         | Raychem                   |
|-------------------------|------------------------|-------------------------|--|----------------------------------|---------------------------|
| RNF-100 Type 1 (colors) | E35586<br>600 V, 125°C | LR31929<br>600 V, 125°C | AMS-DTL-23053/5*,<br>Class 1<br>Def. Stan. 59-97 Type 2B | VDE 0341 Pt 9005<br>Type A and B | RT-350, Type 1<br>RK-6001 |
| RNF-100 Type 2 (clear)  | —                      | —                       | AMS-DTL-23053/5*,<br>Class 2<br>VG 95343 Pt 5 Type B     | —                                | RT-350, Type 2<br>RK-6001 |

\*Formerly MIL-I-23053/5 and MIL-DTL-23053/5.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
|               | ■        | ■      | ■            |

**RNF-100** (Continued)

**Product Dimensions**

| Size  | Inside Diameter              |                                 | Recovered Wall Thickness**  |
|-------|------------------------------|---------------------------------|-----------------------------|
|       | Minimum Expanded as Supplied | Maximum Recovered After Heating | After Heating               |
| 3/64  | 1.2 [0.046]                  | 0.6 [0.023]                     | 0.40 ± 0.08 [0.016 ± 0.003] |
| 1/16  | 1.6 [0.063]                  | 0.8 [0.031]                     | 0.43 ± 0.08 [0.017 ± 0.003] |
| 3/32  | 2.4 [0.093]                  | 1.2 [0.046]                     | 0.51 ± 0.08 [0.020 ± 0.003] |
| 1/8   | 3.2 [0.125]                  | 1.6 [0.062]                     | 0.51 ± 0.08 [0.020 ± 0.003] |
| 3/16  | 4.8 [0.187]                  | 2.4 [0.093]                     | 0.51 ± 0.08 [0.020 ± 0.003] |
| 1/4   | 6.4 [0.250]                  | 3.2 [0.125]                     | 0.64 ± 0.08 [0.025 ± 0.003] |
| 3/8   | 9.5 [0.375]                  | 4.8 [0.187]                     | 0.64 ± 0.08 [0.025 ± 0.003] |
| 1/2   | 12.7 [0.500]                 | 6.4 [0.250]                     | 0.64 ± 0.08 [0.025 ± 0.003] |
| 3/4   | 19.1 [0.750]                 | 9.5 [0.375]                     | 0.76 ± 0.08 [0.030 ± 0.003] |
| 1     | 25.4 [1.000]                 | 12.7 [0.500]                    | 0.89 ± 0.12 [0.035 ± 0.005] |
| 1 1/4 | 31.8 [1.250]                 | 15.9 [0.625]                    | 1.02 ± 0.15 [0.040 ± 0.006] |
| 1 1/2 | 38.1 [1.500]                 | 19.1 [0.750]                    | 1.02 ± 0.15 [0.040 ± 0.006] |
| 2     | 50.8 [2.000]                 | 25.4 [1.000]                    | 1.14 ± 0.16 [0.045 ± 0.007] |
| 3     | 76.2 [3.000]                 | 38.1 [1.500]                    | 1.27 ± 0.20 [0.050 ± 0.008] |
| 4     | 101.6 [4.000]                | 50.8 [2.000]                    | 1.40 ± 0.23 [0.055 ± 0.009] |
| 5     | 127.0 [5.000]                | 63.5 [2.500]                    | 1.52 ± 0.23 [0.060 ± 0.009] |

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

**Ordering Information**

|                           |  |  |
|---------------------------|--|--|
| Color                     | Standard***  | Black (-0, BK), white (-9, WH), red (-2, RD), blue (-6, BU), yellow (-4, YO), green (-5, GN), clear (-X, CL) |
|                           | Nonstandard  | Brown (-1, BN), orange (-3, OR), violet (-7, VT), gray (-8, GY)  |
| Size selection            | Always order the largest size that will shrink snugly over the component to be covered. Special order sizes are available upon request |  |
| Standard packaging****    | On spools or in 1.2-meter [4-foot] lengths.  |  |
| Ordering description***** | Specify product name, size and color (for example, RNF-100 1/4-0 [Europe] or RNF-100 1/4-BK [Americas]).                               |  |

\*\*\*Green (-5, GN) is nonstandard in all sizes in Europe, and nonstandard in sizes 1-1/4 through 5-inches in Americas.

\*\*\*\*Available in the convenient Mini-Spool packaging/dispensing system, for sizes 3/64" up to 1".

\*\*\*\*\*Europe only. For supply to MIL, Def Stan and BS add -MS, -DS or -BS to ordering description.

Flexible, flame-retardant, high performance, polyolefin heat-shrinkable tubing

RNF-100 tubing is a high-quality, heat-shrinkable product for a wide variety of uses. It has become the industry standard for insulation, strain relief, wire bundling, and color-coding in both commercial and military applications. RNF-100 tubing meets the requirements of AMS-DTL-23053/5, Class 1 (colors) and Class 2 (clear).

It is also UL-recognized and CSA-certified at 125°C, 600 V.

Made from flame-retardant polyolefin, RNF-100 tubing has excellent physical, chemical, and electrical properties that meet industrial and military requirements for a highly reliable, general-purpose tubing. It sets itself apart in that it offers



a higher level of performance at elevated temperature, including mechanical abrasion and fluid resistance, than many heat-shrinkable polyolefin tubings available in the marketplace today.

Only a few sizes of RNF-100 tubing are required to cover many substrate diameters.

**Temperature rating**

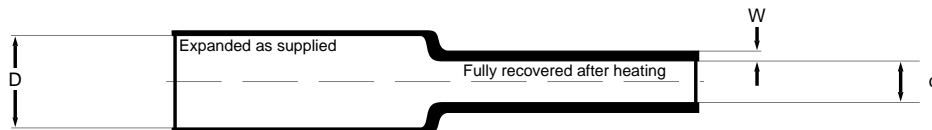
|                                   |                |
|-----------------------------------|----------------|
| Minimum shrink temperature:       | 121°C          |
| Continuous operating temperature: | -55°C to 135°C |

**Specifications\***

| Type                    | Raychem       | Military               | UL  | CSA  |
|-------------------------|---------------|------------------------|--|---|
| RNF-100 Type 1 (colors) | RT-350 Type 1 | AMS-DTL-23053/5, Cl. 1 | E35586   | LR31929   |
| RNF-100 Type 2 (clear)  | RT-350 Type 2 | AMS-DTL-23053/5, Cl. 2 |  |   |

\*When ordering, always specify latest issue.

**Dimensions (millimeters/inches)**



| Size | Inside diameter               |                                  | Wall thickness             |                                  | Size        | Inside diameter               |                                  | Wall thickness             |       |      |       |             |               |
|------|-------------------------------|----------------------------------|----------------------------|----------------------------------|-------------|-------------------------------|----------------------------------|----------------------------|-------|------|-------|-------------|---------------|
|      | D (min.) Expanded as supplied | d (max.) Recovered after heating | W Recovered after heating* | d (max.) Recovered after heating |             | D (min.) Expanded as supplied | d (max.) Recovered after heating | W Recovered after heating* |       |      |       |             |               |
| 3/64 | 1.2                           | 0.046                            | 0.6                        | 0.023                            | 0.40 ± 0.08 | 0.016 ± 0.003                 | 3/4                              | 19.1                       | 0.750 | 9.5  | 0.375 | 0.77 ± 0.08 | 0.030 ± 0.003 |
| 1/16 | 1.6                           | 0.063                            | 0.8                        | 0.031                            | 0.43 ± 0.08 | 0.017 ± 0.003                 | 1                                | 25.4                       | 1.000 | 12.7 | 0.500 | 0.89 ± 0.12 | 0.035 ± 0.005 |
| 3/32 | 2.4                           | 0.093                            | 1.2                        | 0.046                            | 0.51 ± 0.08 | 0.020 ± 0.003                 | 1 1/4                            | 31.7                       | 1.250 | 15.9 | 0.625 | 1.02 ± 0.15 | 0.040 ± 0.006 |
| 1/8  | 3.2                           | 0.125                            | 1.6                        | 0.062                            | 0.51 ± 0.08 | 0.020 ± 0.003                 | 1 1/2                            | 38.1                       | 1.500 | 19.1 | 0.750 | 1.02 ± 0.15 | 0.040 ± 0.006 |
| 3/16 | 4.7                           | 0.187                            | 2.4                        | 0.093                            | 0.51 ± 0.08 | 0.020 ± 0.003                 | 2                                | 50.8                       | 2.000 | 25.4 | 1.000 | 1.14 ± 0.16 | 0.045 ± 0.007 |
| 1/4  | 6.4                           | 0.250                            | 3.2                        | 0.125                            | 0.64 ± 0.08 | 0.025 ± 0.003                 | 3                                | 76.2                       | 3.000 | 38.1 | 1.500 | 1.27 ± 0.20 | 0.050 ± 0.008 |
| 3/8  | 9.5                           | 0.375                            | 4.8                        | 0.187                            | 0.64 ± 0.08 | 0.025 ± 0.003                 | 4                                | 101.6                      | 4.000 | 50.8 | 2.000 | 1.40 ± 0.23 | 0.055 ± 0.009 |
| 1/2  | 12.7                          | 0.500                            | 6.4                        | 0.250                            | 0.64 ± 0.08 | 0.025 ± 0.003                 | 5                                | 127.0                      | 5.000 | 63.5 | 2.500 | 1.53 ± 0.23 | 0.060 ± 0.009 |

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

**Ordering information**

|                      |   |  |
|----------------------|---|--|
| Colors               | <b>Standard</b>   | Black (all sizes); clear, white, red, blue, green, and yellow (3/64" through 3")             |
|                      | <b>Nonstandard</b>  | Clear, white, red, blue, and yellow (4" and 5"); brown, orange, violet, and gray (all sizes) |
| Size selection       | Always order the largest size that will shrink snugly over the component being covered. |  |
| Standard packaging   | On spools or in 4 foot lengths  |  |
| Ordering description | Specify product name, size, and color; for example, RNF-100-1/4-BK (BK=Black).          |  |