

| Conversion from imperial to metrics |       |       |       |       |        |        |       |      |       |
|-------------------------------------|-------|-------|-------|-------|--------|--------|-------|------|-------|
| Zoll                                | 1/32" | 3/64" | 1/16" | 5/64" | 3/32"  | 1/8"   | 3/16" | 1/4" | 3/8"  |
| mm                                  | 0.8   | 1.2   | 1.6   | 2.0   | 2.4    | 3.2    | 4.8   | 6.4  | 9.5   |
| Zoll                                | 1/2"  | 5/8"  | 3/4"  | 1"    | 1 1/4" | 1 1/2" | 2"    | 3"   | 4"    |
| mm                                  | 12.7  | 15.9  | 19.1  | 25.4  | 31.8   | 38.1   | 50.8  | 76.2 | 101.6 |

## The right heat shrink tube

The 80:20 rule means that a heat shrink tube should shrink by a maximum of 80% and a minimum of 20%. For example: A cable with a diameter of 5 mm is to be wrapped in heat shrinkable tubing. In theory both sizes 6/2 and 12/4 would be suitable since the required diameter of 5 mm lies within the shrink range of both tube sizes.

Maximum shrink (100%)



Maximum shrinkage = 4 mm

Optimum shrink max. (80%)



Shrinkage of 3.2 mm

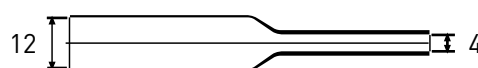
Optimum shrink min. (20%)



Shrinkage of 0.8 mm

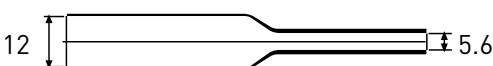
Size 6/2 has a range of application of between 2.8 mm and 5.2 mm and is therefore suitable for the cable diameter of 5 mm.

Maximum shrink (100%)



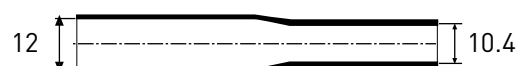
Maximum shrinkage = 8 mm

Optimum shrink max. (80%)



Shrinkage of 6.4 mm

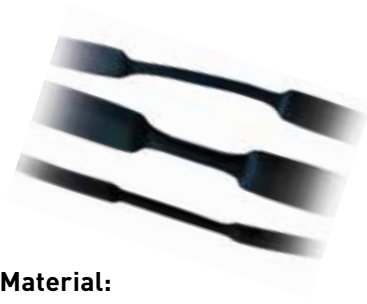
Optimum shrink min. (20%)



Shrinkage of 1.6 mm

The smallest application diameter of size 12/4 is 5.6 mm. This size is therefore unsuitable for a cable diameter of 5 mm.

## ShrinkTech® high shrink ratio tubing without adhesive



Suitable for electronics and automotive industry, where components are of irregular sizes and shapes. Provides both insulation and sealing for protected articles. Recommended for open air use as well since it is UV stabilised.

- **Material:**  
modified polyolefin
- **Colour:**  
black, other colors available on request
- **Packaging:**  
spool
- Without adhesive
- UL 224, 125 °C, VW-1
- Flexible
- Flame retardant
- Environmental friendly, free from toxic heavy metal compounds



| Property                         | Method of test               | Value                   |
|----------------------------------|------------------------------|-------------------------|
| Tensile strength                 | ASTM D 638                   | 14 MPa                  |
| Elongation at break              | ASTM D 638                   | 400%                    |
| Elongation at break after ageing | ASTM D 638 (175°C / 168 hrs) | 300 %                   |
| Flammability                     | UL 224 VW-1                  | Pass                    |
| Heat shock (250°C / 4 hrs)       | ASTM D 2671                  | No cracking or dropping |
| Cold bendt (-55°C / 4 hrs)       | ASTM D 2671                  | No cracking             |
| Dielectric strength              | ASTM D 150                   | 22kV/mm                 |
| Volume resistance                | ASTM D 876                   | >10 <sup>14</sup> Ω.cm  |
| Copper stability                 | UL 224                       | Pass                    |
| Water absorption                 | ASTM D 570                   | 0.15%                   |
| Fluid resistance                 | SAE-AMS-DTL-23053/5          | Pass                    |
| Longitudinal shrinkage           | UL 224                       | 0± 5%                   |
| Eccentricity                     | UL 224                       | 30%                     |

| Article No. | Internal diameter (mm) |                      | Wall thickness fully recovered (mm) | Spools (m) | Shape |
|-------------|------------------------|----------------------|-------------------------------------|------------|-------|
|             | Min.as supplied        | Max. fully recovered |                                     |            |       |
| ST3X-015    | 1.5                    | 0.5                  | 0.4                                 | 200        | O     |
| ST3X-024    | 2.4                    | 0.8                  | 0.5                                 | 150        | O     |
| ST3X-030    | 3.0                    | 1.0                  | 0.5                                 | 150        | O     |
| ST3X-048    | 4.8                    | 1.6                  | 0.5                                 | 75         | O     |
| ST3X-060    | 6.0                    | 2.0                  | 0.5                                 | 75         | O     |
| ST3X-090    | 9.0                    | 3.0                  | 0.6                                 | 75         | O     |
| ST3X-120    | 12.0                   | 4.0                  | 0.6                                 | 50         | F     |
| ST3X-180    | 18.0                   | 6.0                  | 0.6                                 | 50         | F     |
| ST3X-240    | 24.0                   | 8.0                  | 0.6                                 | 30         | F     |
| ST3X-390    | 39.0                   | 13.0                 | 0.8                                 | 30         | F     |