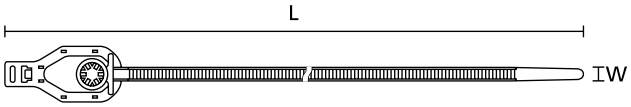
## 1-Piece Fixing Ties for Weld Studs in the strap

**Features and Benefits**

- For 5 mm studs or 5 mm ISO threaded studs
- Soft-push versions for easy assembly, without tool
- Eyelet allows excess tail to be tucked neatly away

*With the RT50RS5 and the SB14/172 you can mount pipes or cables to a weld stud.*




*T50RS5, RT50RS*

| TYPE | Width (W) | Length (L) | Height (H2) | Bundle Ø max. | N | Material | Colour | Article-No. |
|---|---|---|---|---|---|---|---|---|
| **T50RS5** | 4.6 | 190.0 | 14.5 | 40.0 | 222 | PA66 | Black (BK) | 111-07110 |

All dimensions in mm. Subject to technical changes.

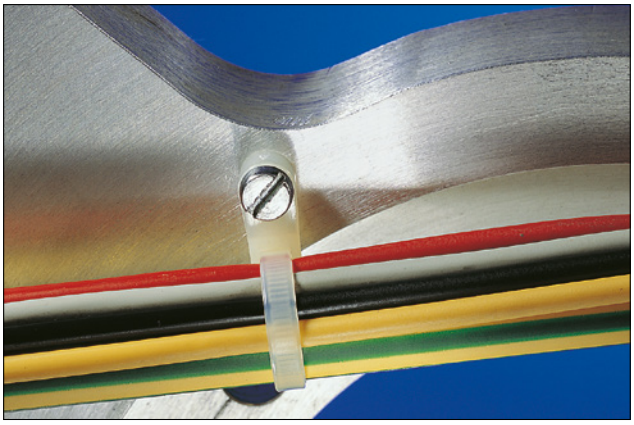
## 1-Piece Fixing Ties with Mounting Head for Screws

This range of one piece cable ties have a built in mounting hole and once fastened around the cables it can be simply secured to the panel with a screw or bolt.

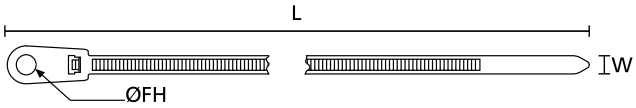
The tie is first fitted to the panel and then the cables can be added.

**Features and Benefits**

- One-piece bundling and fixing tie
- Quick and easy installation



*The mounting head ties can be easily screwed onto a panel.*




| TYPE | Width (W) | Length (L) | Bundle Ø max. | N | Hole Ø (FH) | Material | Colour | Article-No. |
|---|---|---|---|---|---|---|---|---|
| **T18MR** | 2.5 | 110.0 | 20.0 | 80 | 3.1 | PA66 | Black (BK) | 113-01810 |
| | 2.5 | 110.0 | 20.0 | 80 | 3.1 | PA66 | Natural (NA) | 113-01819 |
| **T30MR9** | 3.5 | 160.0 | 32.0 | 135 | 4.3 | PA66 | Natural (NA) | 113-03019 |
| | 3.5 | 160.0 | 32.0 | 135 | 4.3 | PA66HS | Black (BK) | 113-03010 |
| **T50MS** | 4.6 | 165.0 | 32.0 | 225 | 5.3 | PA66 | Natural (NA) | 113-05819 |
| | 4.6 | 165.0 | 32.0 | 225 | 5.3 | PA66 | Black (BK) | 113-05820 |
| **T50MR** | 4.7 | 215.0 | 45.0 | 225 | 5.4 | PA66W | Black (BK) | 113-05060 |
| | 4.7 | 215.0 | 45.0 | 225 | 5.4 | PA66 | Natural (NA) | 113-05019 |
| | 4.7 | 215.0 | 45.0 | 225 | 5.4 | PA66 | Black (BK) | 113-05010 |
| **T50ML** | 4.7 | 390.0 | 100.0 | 225 | 5.5 | PA66 | Natural (NA) | 113-05419 |
| **T120MR** | 7.6 | 395.0 | 102.0 | 535 | 6.5 | PA66HIRHSUV | Black (BK) | 113-12060 |
| | 7.6 | 395.0 | 102.0 | 535 | 6.5 | PA66HS | Black (BK) | 113-12020 |
| | 7.6 | 395.0 | 102.0 | 535 | 6.5 | PA66 | Natural (NA) | 113-12029 |

All dimensions in mm. Subject to technical changes.

## Material Specification Overview

| Material | Shortcut | Operating Temperature | Colour** | Flammability | Material Properties* | | | |
|---|---|---|---|---|---|---|---|---|
| **Aluminium-alloy** | AL | -40 °C to +180 °C | Natural (NA) | | • Corrosion resistant<br>• Antimagnetic | RoHS | | |
| **Chloroprene** | CR | -20 °C to +80 °C | Black (BK) | | • Weather-resistant<br>• High yield strength | RoHS | | |
| **Ethylenterafluori-neethylen** | E/TFE | -80 °C to +170 °C | Blue (BU) | UL94 V0 | • Resistance to radioactivity<br>• UV- resistant, not moisture sentitive<br>• Good chemical resistance to:<br>• acids, bases, oxidizing agents | RoHS | | |
| **Polyacetal** | POM | -40 °C to +90 °C, (+110 °C, 500 h) | Natural (NA) | UL94 HB | • Limited brittleness sensitivity<br>• Flexible at low temperature<br>• Not moisture sensitive<br>• Robust on impacts | RoHS | | |
| **Polyamide 11** | PA11 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | • Bio-plastic, derived from vegetable oil<br>• Strong impact resistance at low temperature<br>• Very low moisture absorption<br>• Weather-resistant<br>• Good chemical resistance | RoHS | HF | |
| **Polyamide 12** | PA12 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | • Good chemical resistance to:<br>• acids, bases, oxidizing agents<br>• UV- resistant | RoHS | HF | |
| **Polyamide 4.6** | PA46 | -40 °C to +150 °C (5000 h), +195 °C (500 h) | Natural (NA), Grey (GY) | UL94 V2 | • Resistance to high temperatures<br>• Very moisture sensitive<br>• Low smoke sensitive | RoHS | HF | LFH |
| **Polyamide 6** | PA6 | -40 °C to +80 °C | Black (BK) | UL94 V2 | • High yield strength | RoHS | | |
| **Polyamide 6.6** | PA66 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK), Natural (NA) | UL94 V2 | • High yield strength | RoHS | HF | |
| **Polyamide 6.6,** Glassfibre reinforced | PA66GF13, PA66GF15 | -40 °C to +105 °C | Black (BK) | UL94 HB | • Good resistance to: lubricants, vehicle fuel, salt water and many solvents | RoHS | HF | |
| **Polyamide 6.6** heat and UV stabilised | PA66HSW | -40 °C to +105 °C | Black (BK) | UL94 V2 | • High yield strength<br>• Modified elevated max. temperature<br>• UV-resistant | RoHS | HF | |
| **Polyamide 6.6** Heat Stabilised | PA66HS | -40 °C to +105 °C | Black (BK), Natural (NA) | UL94 V2 | • High yield strength<br>• Modified elevated max. temperature | RoHS | HF | |
| **Polyamide 6.6** High Imp. Mod., Heat Stab. | PA66HIRHS | -40 °C to +105 °C | Black (BK) | UL94 HB | • Limited brittleness sensitivity<br>• Higher flexibility at low temperature<br>• Modified elevated max. temperature | RoHS | | |
| **Polyamide 6.6** High Imp. Mod. scan black | PA66HIR(S) | -40 °C to +80 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | • Limited brittleness sensitivity<br>• Higher flexibility at low temperature | RoHS | HF | |
| **Polyamide 6.6** High Impact Modified | PA66HIR | -40 °C to +80 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | • Limited brittleness sensitivity<br>• Higher flexibility at low temperature | RoHS | | |

Tefzel® is a registered trademark of DuPont.
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**More colours on request.

*These details are only rough guide values. They should be regarded as a material specification and are no substitute for a suitability test. Please see our datasheets for further details.

N = Minimum Tensile Strength

Date of issue: January 2014

## Material Specification Overview

| Material | Shortcut | Operating Temperature | Colour** | Flammability | Material Properties* | |
|---|---|---|---|---|---|---|
| **Polyamide 6.6** high impact modified, heat and UV stabilised | PA66-HIRHSW | -40 °C to +110 °C | Black (BK) | UL94 HB | • Limited brittleness sensitivity<br>• Higher flexibility at low temperature<br>• Modified elevated max. temperature<br>• High yield strength, UV-resistant | RoHS HF |
| **Polyamide 6.6** UV Resistant | PA66W | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) | UL94 V2 | • High yield strength<br>• UV-resistant | RoHS HF |
| **Polyamide 6.6 V0** | PA66V0 | -40 °C to +85 °C | White (WH) | UL94 V0 | • High yield strength<br>• Low smoke emission | RoHS HF LFH |
| **Polyamide 6.6 V0** High Oxygen Index | PA66-V0-HOI | -40 °C to +85 °C, (+105 °C, 500 h) | White (WH) | UL94 V0 | • High yield strength<br>• Low smoke emissions | RoHS HF LFH |
| **Polyamide 6.6** with metal particles | PA66MP | -40 °C to +85 °C, (+105 °C, 500 h) | Blue (BU) | UL94 HB | • High yield strength | RoHS HF |
| **Polyamide 6** high impact modified | PA6HIR | -40 °C to +80 °C | Black (BK) | UL94 HB | • Limited brittleness sensitivity<br>• Higher flexibility at low temperature | RoHS |
| **Polyester** | SP | -50 °C to +150 °C | Black (BK) | | • UV-resistant<br>• Good chemical resistance to: most acids, alkalis and oils | RoHS HF LFH |
| **Polyetheretherketone** | PEEK | -55 °C to +240 °C | Beige (BGE) | UL94 V0 | • Resistance to radioactivity<br>• Not moisture sensitive<br>• Good chemical resistance to: acids, bases, oxidizing agents | RoHS HF LFH |
| **Polyethylene** | PE | -40 °C to +50 °C | Black (BK), Grey (GY) | UL94 HB | • Low moisture absorption<br>• Good chemical resistance to: most acids, alcohol and oils | RoHS HF |
| **Polyolefin** | PO | -40 °C to +90 °C | Black (BK) | UL94 V0 | • Low smoke emissions | RoHS HF LFH |
| **Polypropylene** | PP | -40 °C to +115 °C | Black (BK), Natural (NA) | UL94 HB | • Floats in water<br>• Moderate yield strength<br>• Good chemical resistance to: organic acids | RoHS HF |
| **Polypropylene, Ethylene-Propylene-Dien-Terpolymere-rubber free of Nitrosamine** | PP, EPDM | -20 °C to +95 °C | Black (BK) | UL94 HB | • Good resistance to high temperatures<br>• Good chemical and abrasion resistance | RoHS HF |
| **Polyvinylchloride** | PVC | -10 °C to +70 °C | Black (BK), Natural (NA) | UL94 V0 | • Low moisture absorption<br>• Good chemical resistance to: acids, ethanol, oil | RoHS |
| **Stainless Steel** | SS304, SS316 | -80 °C to +538 °C | Natural (NA) | | • Corrosion resistant<br>• Antimagnetic | RoHS HF LFH |
| **Thermoplastic Polyurethane** | TPU | -40 °C to +85 °C | Black (BK) | UL94 HB | • High elastic<br>• Good chemical resistance to:<br>• acids, bases, oxidizing agents | RoHS HF |

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