



## 1-piece fixing ties with arrowhead, with disc in the strap

### for round holes

These fixing ties are ideal for use in many different industries, including automotive, aerospace, rail and panel building.

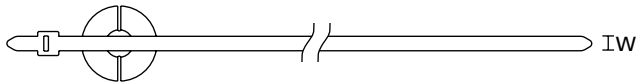
#### Features and benefits

- Easy to assemble without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressures from various directions and minimises access of dust and dirt
- Cable tie head always situated in defined position
- Bundle runs directly across fixing point
- Simple assembly due to tab at the end of the head



The 'tab' on the head of the tie makes it easy to locate and lift the head for assembly.

Material information on page 22.



T80RSFT with flexible disc.

| TYPE    | Drawing | Hole Ø (FH) | Panel Thickness | Width (W) | Length (L) | Bundle Ø max. | N   | Material | Colour | Tools      | Article-No. |
|---------|---------|-------------|-----------------|-----------|------------|---------------|-----|----------|--------|------------|-------------|
| T50RSP  |         | 6.0 - 6.4   | 0.7 - 1.3       | 4.6       | 190.0      | 45.0          | 225 | PA66     | BK     | 1-2;4-7;25 | 126-01300   |
| T80RSFT |         | 5.7 - 6.3   | 1.0 - 3.5       | 4.6       | 190.0      | 45.0          | 355 | PA66HS   | BK     | 1-2;4-7;25 | 150-15493   |

Recommended Tools: 1=MK10-SB, 2=MK20, 4=MK3PNSP2, 5=EVO7i, 6=MK7P, 7=EVO9i, 25=EVOcut. For more information on toolings please refer to the Application Tooling chapter on page 346.

All dimensions in mm. Subject to technical changes.



Material Specification Overview

| MATERIAL                                                          | Material<br>Shortcut | Operating<br>Temperature                                   | Colour**                    | Flammability | Material Properties*                                                                                                                                                                                                                        | Material<br>Specifications |
|-------------------------------------------------------------------|----------------------|------------------------------------------------------------|-----------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Aluminium alloy                                                   | AL                   | -40 °C to +180 °C                                          | Natural (NA)                |              | <ul style="list-style-type: none"><li>Corrosion resistant</li><li>Antimagnetic</li></ul>                                                                                                                                                    | RoHS                       |
| Chloroprene Rubber                                                | CR                   | -20 °C to +80 °C                                           | Black (BK)                  |              | <ul style="list-style-type: none"><li>Weather resistant</li><li>High yield strength</li></ul>                                                                                                                                               | RoHS                       |
| Ethylene<br>Tetrafluoroethylene<br>(Tefzel®)                      | E/TFE                | -80 °C to +170 °C                                          | Blue (BU)                   | UL 94 V0     | <ul style="list-style-type: none"><li>Resistance to radioactivity</li><li>UV resistant, not moisture sensitive</li><li>Good chemical resistance to acids, bases, oxidizing agents</li></ul>                                                 | RoHS                       |
| Polyacetal                                                        | POM                  | -40 °C to +90 °C,<br>(+110 °C, 500 h)                      | Natural (NA)                | UL 94 HB     | <ul style="list-style-type: none"><li>Limited brittleness sensitivity</li><li>Flexible at low temperature</li><li>Not moisture sensitive</li><li>Robust on impact</li></ul>                                                                 | RoHS                       |
| Polyamide 11                                                      | PA11                 | -40 °C to +85 °C,<br>(+105 °C, 500 h)                      | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Bio-plastic, derived from vegetable oil</li><li>Strong impact resistance at low temperature</li><li>Very low moisture absorption</li><li>Weather resistant</li><li>Good chemical resistance</li></ul> | HF<br>RoHS                 |
| Polyamide 12                                                      | PA12                 | -40 °C to +85 °C,<br>(+105 °C, 500 h)                      | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Good chemical resistance to acids, bases, oxidizing agents</li><li>UV resistant</li></ul>                                                                                                             | HF<br>RoHS                 |
| Polyamide 4.6                                                     | PA46                 | -40 °C to +130 °C,<br>(+150 °C, 5000 h;<br>+195 °C, 500 h) | Natural (NA),<br>Grey (GY)  | UL 94 V2     | <ul style="list-style-type: none"><li>Resistance to high temperatures</li><li>Very moisture sensitive</li><li>Low smoke sensitivity</li></ul>                                                                                               | HF<br>LFH<br>RoHS          |
| Polyamide 6                                                       | PA6                  | -40 °C to +80 °C                                           | Black (BK)                  | UL 94 V2     | <ul style="list-style-type: none"><li>High yield strength</li></ul>                                                                                                                                                                         | RoHS                       |
| Polyamide 6,<br>high impact modified                              | PA6HIR               | -40 °C to +80 °C                                           | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Limited brittleness sensitivity</li><li>Higher flexibility at low temperature</li></ul>                                                                                                               | RoHS                       |
| Polyamide 6.6                                                     | PA66                 | -40 °C to +85 °C,<br>(+105 °C, 500 h)                      | Black (BK),<br>Natural (NA) | UL 94 V2     | <ul style="list-style-type: none"><li>High yield strength</li></ul>                                                                                                                                                                         | HF<br>RoHS                 |
| Polyamide 6.6,<br>glass-fibre reinforced                          | PA66GF13             | -40 °C to +105 °C                                          | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Good resistance to lubricants, fuels, salt water and solvents</li></ul>                                                                                                                               | HF<br>RoHS                 |
| Polyamide 6.6,<br>heat and UV-stabilised                          | PA66HSUV             | -40 °C to +105 °C                                          | Black (BK)                  | UL 94 V2     | <ul style="list-style-type: none"><li>High yield strength</li><li>Modified elevated maximum temperature</li><li>UV resistant</li></ul>                                                                                                      | HF<br>RoHS                 |
| Polyamide 6.6,<br>heat stabilised                                 | PA66HS               | -40 °C to +105 °C                                          | Black (BK),<br>Natural (NA) | UL 94 V2     | <ul style="list-style-type: none"><li>High yield strength</li><li>Modified elevated maximum temperature</li></ul>                                                                                                                           | HF<br>RoHS                 |
| Polyamide 6.6,<br>high impact modified                            | PA66HIR              | -40 °C to +80 °C,<br>(+105 °C, 500 h)                      | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Limited brittleness sensitivity</li><li>Higher flexibility at low temperature</li></ul>                                                                                                               | RoHS                       |
| Polyamide 6.6,<br>high impact modified,<br>heat and UV-stabilised | PA66HIRHSUV          | -40 °C to +110 °C                                          | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Limited brittleness sensitivity</li><li>Higher flexibility at low temperature</li><li>Modified elevated maximum temperature</li><li>High yield strength, UV resistant</li></ul>                       | RoHS                       |
| Polyamide 6.6,<br>high impact modified,<br>heat stabilised        | PA66HIRHS            | -40 °C to +105 °C                                          | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Limited brittleness sensitivity</li><li>Higher flexibility at low temperature</li><li>Modified elevated maximum temperature</li></ul>                                                                 | RoHS                       |
| Polyamide 6.6,<br>high impact modified,<br>scan black)            | PA66HIR(S)           | -40 °C to +80 °C,<br>(+105 °C, 500 h)                      | Black (BK)                  | UL 94 HB     | <ul style="list-style-type: none"><li>Limited brittleness sensitivity</li><li>Higher flexibility at low temperature</li></ul>                                                                                                               | HF<br>RoHS                 |
| Polyamide 6.6,<br>UV-resistant                                    | PA66W                | -40 °C to +85 °C,<br>(+105 °C, 500 h)                      | Black (BK)                  | UL 94 V2     | <ul style="list-style-type: none"><li>High yield strength</li><li>UV resistant</li></ul>                                                                                                                                                    | HF<br>RoHS                 |

| MATERIAL                                                                                        | Material Shortcut | Operating Temperature                 | Colour**                    | Flammability        | Material Properties*                                                                                                                                                                                                               | Material Specifications                |
|-------------------------------------------------------------------------------------------------|-------------------|---------------------------------------|-----------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Polyamide 6.6,</b><br>with metal particles                                                   | PA66MP            | -40 °C to +85 °C,<br>(+105 °C, 500 h) | Blue (BU)                   | UL 94 HB            | <ul style="list-style-type: none"> <li>High yield strength</li> <li>Metal and X-Ray detectable</li> </ul>                                                                                                                          | <b>HF</b><br><b>RoHS</b>               |
| <b>Polyamide 6.6,</b><br>with metal particles                                                   | PA66MP+           | -40 °C to +85 °C                      | Blue (BU)                   | not flame-retardant | <ul style="list-style-type: none"> <li>High yield strength</li> <li>Metal and X-Ray detectable</li> </ul>                                                                                                                          | <b>HF</b><br><b>RoHS</b>               |
| <b>Polyamide 6.6 V0</b>                                                                         | PA66V0            | -40 °C to +85 °C                      | White (WH)                  | UL 94 V0            | <ul style="list-style-type: none"> <li>High yield strength</li> <li>Low smoke emission</li> </ul>                                                                                                                                  | <b>HF</b><br><b>LFH</b><br><b>RoHS</b> |
| <b>Polyester</b>                                                                                | SP                | -50 °C to +150 °C                     | Black (BK)                  |                     | <ul style="list-style-type: none"> <li>UV resistant</li> <li>Good chemical resistance to most acids, bases and oils</li> </ul>                                                                                                     | <b>HF</b><br><b>LFH</b><br><b>RoHS</b> |
| <b>Polyetheretherketone</b>                                                                     | PEEK              | -55 °C to +240 °C                     | Beige (BGE)                 | UL 94 V2            | <ul style="list-style-type: none"> <li>Resistance to radioactivity</li> <li>Not moisture sensitive</li> <li>Good chemical resistance to acids, bases, oxidising agents</li> </ul>                                                  | <b>HF</b><br><b>LFH</b><br><b>RoHS</b> |
| <b>Polyethylene</b>                                                                             | PE                | -40 °C to +50 °C                      | Black (BK),<br>Grey (GY)    | UL 94 HB            | <ul style="list-style-type: none"> <li>Low moisture absorption</li> <li>Good chemical resistance to most acids, bases, alcohol, oils</li> </ul>                                                                                    | <b>HF</b><br><b>RoHS</b>               |
| <b>Polyolefin</b>                                                                               | PO                | -40 °C to +90 °C                      | Black (BK)                  | UL 94 V0            | <ul style="list-style-type: none"> <li>Low smoke emissions</li> </ul>                                                                                                                                                              | <b>HF</b><br><b>LFH</b><br><b>RoHS</b> |
| <b>Polypropylene</b>                                                                            | PP                | -40 °C to +115 °C                     | Black (BK),<br>Natural (NA) | UL 94 HB            | <ul style="list-style-type: none"> <li>Floats in water</li> <li>Moderate yield strength</li> <li>Good chemical resistance to acids, bases and solvents</li> </ul>                                                                  | <b>HF</b><br><b>RoHS</b>               |
| <b>Polypropylene,<br/>Ethylene Propylene<br/>Diene Terpolymer</b><br>rubber free of Nitrosamine | PP, EPDM          | -20 °C to +95 °C                      | Black (BK)                  | UL 94 HB            | <ul style="list-style-type: none"> <li>Good resistance to high temperature</li> <li>Good chemical and abrasion resistance</li> </ul>                                                                                               | <b>HF</b><br><b>RoHS</b>               |
| <b>Polypropylene</b><br>with metal particles                                                    | PPMP              | -40 °C to +115 °C                     | Blue (BU)                   | UL 94 HB            | <ul style="list-style-type: none"> <li>Metal and X-Ray detectable</li> <li>Heat resistant</li> <li>Moderate yield strength</li> <li>Good chemical resistance</li> </ul>                                                            | <b>RoHS</b>                            |
| <b>Polypropylene</b><br>with metal particles                                                    | PPMP+             | -40 °C to +85 °C                      | Blue (BU)                   | not flame-retardant | <ul style="list-style-type: none"> <li>High yield strength</li> <li>Metal and X-Ray detectable</li> </ul>                                                                                                                          | <b>HF</b><br><b>RoHS</b>               |
| <b>Polyvinylchloride</b>                                                                        | PVC               | -10 °C to +70 °C                      | Black (BK),<br>Natural (NA) | UL 94 V0            | <ul style="list-style-type: none"> <li>Low moisture absorption</li> <li>Good chemical resistance to acids, bases, salts, alcohol, oils</li> </ul>                                                                                  | <b>RoHS</b>                            |
| <b>Stainless Steel,<br/>Stainless Steel</b>                                                     | SS304, SS316      | -80 °C to +538 °C                     | Natural (NA)                | non-burning         | <ul style="list-style-type: none"> <li>Corrosion resistant</li> <li>Antimagnetic</li> <li>Weather resistant</li> <li>Chemical resistance</li> <li>SS316 also resistant against seawater, salt spray and anorganic acids</li> </ul> | <b>HF</b><br><b>LFH</b><br><b>RoHS</b> |
| <b>Thermoplastic<br/>Polyurethane</b>                                                           | TPU               | -40 °C to +85 °C                      | Black (BK)                  | UL 94 HB            | <ul style="list-style-type: none"> <li>High elasticity</li> <li>Good chemical resistance to acids, bases and oxidising agents</li> </ul>                                                                                           | <b>HF</b><br><b>RoHS</b>               |

Tefzel® is a registered trademark of DuPont. General linguistic usage for cable ties made from raw material E/TFE is Tefzel®-Tie. In addition to Tefzel® from DuPont HellermannTyton also uses equivalent E/TFE raw material from other suppliers.

\*These details are only guide values. They should not be regarded as an exhaustive material specification and are no substitute for suitability tests. Please see our datasheets for further details.

**HF** = Halogen Free

**LFH** = Limited Fire Hazard

**RoHS** = Restriction of Hazardous Substances

\*\*Further colours available on request.



= Minimum Loop Tensile Strength  
for Cable Ties (newton)

**For more material information  
please visit our website.**