Cable Ties and Fixings
Cable Ties Inside Serrated

1.1

Cable Ties for higher chemical resistance and temperatures up to +170 °C

T-Series in E/TFE (Tefzel®) blue

E/TFE or Tefzel® cable ties are used when higher chemical resistance and/or temperatures up to +170 °C are required. These ties are most likely chosen for challenging applications in industries like food and beverage, aerospace, automotive or railway.

Features and benefits

- Blue cable tie offering high chemical resistance
- Suitable for applications with temperatures up to 170 °C
- Resistant to radioactivity and UV light
- E/TFE is a non hydroscopic material, no moisture absorption
- Complying with UL94 V0 requirements

For more information on E/TFE mounts please refer to KR-Series on page 144.

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<tr>
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<tbody>
<tr>
<td>T18R</td>
<td>2.5</td>
<td>100.0</td>
<td>22.0</td>
<td>E/TFE</td>
<td>Blue (BU)</td>
<td>100 pcs.</td>
<td>2;6</td>
<td>111-00659</td>
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<td>T30R</td>
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<td>36.0</td>
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<td>2;4-6</td>
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<td>201.0</td>
<td>50.0</td>
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<td>Blue (BU)</td>
<td>100 pcs.</td>
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<td>T50L</td>
<td>4.7</td>
<td>382.0</td>
<td>105.0</td>
<td>E/TFE</td>
<td>Blue (BU)</td>
<td>100 pcs.</td>
<td>2;10</td>
<td>111-00718</td>
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<td>T120R</td>
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<td>387.0</td>
<td>105.0</td>
<td>E/TFE</td>
<td>Blue (BU)</td>
<td>50 pcs.</td>
<td>3;9-12</td>
<td>111-01125</td>
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</tbody>
</table>

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available. General linguistic usage for cable ties made from raw material E/TFE is Tefzel®. Tie. In addition to Tefzel® from DuPont HellermannTyton is also using equivalent E/TFE raw material from other suppliers.

Recommended Tools

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<th>4</th>
<th>5</th>
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<th>7</th>
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<tbody>
<tr>
<td>MK20</td>
<td>MK21</td>
<td>MK3SP</td>
<td>MK3PNSP2</td>
<td>EVO7</td>
<td>MK7HT</td>
<td>MK7P</td>
<td>MK6</td>
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For more information on toolings please refer to the Application Tooling chapter.

For product specific approvals and specifications please refer to the Appendix.

Further information at www.HellermannTyton.co.uk/fixtures
## Material Specification Overview

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<th>MATERIAL</th>
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<th>Colour**</th>
<th>Flammability</th>
<th>Material Properties*</th>
<th>Material Specifications</th>
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</thead>
</table>
| Aluminium alloy | AL | -40 °C to +180 °C | Natural (NA) |  | • Corrosion resistant  
• Antimagnetic | RoHS |
| Chloroprene rubber | CR | -20 °C to +80 °C | Black (BK) |  | • Weather resistant  
• High yield strength | RoHS |
| Ethylene Tetrafluoroethylene (Tefzel®) | E/TFE | -80 °C to +170 °C | Blue (BU) UL 94 V0 |  | • Resistance to radioactivity  
• UV resistant, not moisture sensitive  
• Good chemical resistance to acids, bases, oxidizing agents | RoHS |
| Polyacetal | POM | -40 °C to +90 °C, (+110 °C, 500 h) | Natural (NA) UL 94 HB |  | • Limited brittleness sensitivity  
• Flexible at low temperature  
• Not moisture sensitive  
• Robust on impact | RoHS |
| Polyamide 11 | PA11 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) UL 94 HB |  | • Good chemical resistance to acids, bases, oxidizing agents  
• UV resistant | HF, RoHS |
| Polyamide 12 | PA12 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) UL 94 HB |  | • Resistance to high temperatures  
• Very moisture sensitive  
• Low smoke sensitivity | HF, RoHS |
| Polyamide 4.6 | PA46 | -40 °C to +130 °C, (+150 °C, 5000 h; +195 °C, 500 h) | Natural (NA), Grey (GY) UL 94 V2 |  | • Resistance to radioactivity | HF, LFH, RoHS |
| Polyamide 6 | PA6 | -40 °C to +80 °C | Black (BK) UL 94 V2 |  | • High yield strength | RoHS |
| Polyamide 6 high impact modified | PA6HIR | -40 °C to +80 °C | Black (BK) UL 94 HB |  | • Limited brittleness sensitivity  
• Higher flexibility at low temperature | RoHS |
| Polyamide 6.6 | PA66 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK), Natural (NA) UL 94 V2 |  | • High yield strength | HF, RoHS |
| Polyamide 6.6 glass-fibre reinforced | PA66GF13, PA66GF15 | -40 °C to +105 °C | Black (BK) UL 94 HB |  | • Good resistance to lubricants, fuels, salt water and solvents | HF, RoHS |
| Polyamide 6.6 heat and UV stabilised | PA66HSW | -40 °C to +105 °C | Black (BK) UL 94 V2 |  | • High yield strength  
• Modified elevated maximum temperature  
• UV resistant | HF, RoHS |
| Polyamide 6.6 heat stabilised | PA66HS | -40 °C to +105 °C | Black (BK), Natural (NA) UL 94 V2 |  | • Limited brittleness sensitivity  
• Higher flexibility at low temperature | HF, RoHS |
| Polyamide 6.6 high impact modified | PA66HIR | -40 °C to +80 °C, (+105 °C, 500 h) | Black (BK) UL 94 HB |  | • Limited brittleness sensitivity  
• Higher flexibility at low temperature  
• Modified elevated maximum temperature  
• UV resistant | RoHS |
| Polyamide 6.6 high impact modified, heat and UV stabilised | PA66HIRHSW | -40 °C to +110 °C | Black (BK) UL 94 V2 |  | • Limited brittleness sensitivity  
• Higher flexibility at low temperature  
• Modified elevated maximum temperature  
• High yield strength, UV resistant | RoHS |
| Polyamide 6.6 high impact modified, heat stabilised | PA66HIRHS | -40 °C to +105 °C | Black (BK) UL 94 HB |  | • Limited brittleness sensitivity  
• Higher flexibility at low temperature  
• Modified elevated maximum temperature | RoHS |
| Polyamide 6.6 high impact modified, scan black | PA66HIR(S) | -40 °C to +80 °C, (+105 °C, 500 h) | Black (BK) UL 94 HB |  | • Limited brittleness sensitivity  
• Higher flexibility at low temperature | RoHS |
| Polyamide 6.6 UV resistant | PA66W | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) UL 94 V2 |  | • High yield strength  
• UV resistant | HF, RoHS |

** Colour: Natural (NA), Black (BK), Blue (BU) 
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</table>
| **Polyamide 6.6** with metal particles | PA66MP | -40 °C to +85 °C, (+105 °C, 500 h) | Blue (BU) | UL 94 HB | • High yield strength  
• Metal and X-Ray detectable | HF  
RoHS |
| **Polyamide 6.6** with metal particles | PA66MP+ | -40 °C to +85 °C | Blue (BU) | not flame retardant | • High yield strength  
• Metal and X-Ray detectable | HF  
RoHS |
| **Polyamide 6.6 V0** | PA66V0 | -40 °C to +85 °C | White (WH) | UL 94 V0 | • High yield strength  
• Low smoke emission | HF  
LFH  
RoHS |
| **Polyester** | SP | -50 °C to +150 °C | Black (BK) | | • UV resistant  
• Good chemical resistance to most acids, bases and oils | HF  
LFH  
RoHS |
| **Polyetheretherketone** | PEEK | -55 °C to +240 °C | Beige (BGE) | UL 94 V0 | • Resistance to radioactivity  
• Not moisture sensitive  
• Good chemical resistance to acids, bases, oxidising agents | HF  
LFH  
RoHS |
| **Polyethylene** | PE | -40 °C to +50 °C | Black (BK), Grey (GY) | UL 94 HB | • Low moisture absorption  
• Good chemical resistance to most acids, bases, alcohol, oils | HF  
RoHS |
| **Polyolefin** | PO | -40 °C to +90 °C | Black (BK) | UL 94 V0 | • Low smoke emissions | HF  
LFH  
RoHS |
| **Polypropylene** | PP | -40 °C to +115 °C | Black (BK), Natural (NA) | UL 94 HB | • Floats in water  
• Moderate yield strength  
• Good chemical resistance to acids, bases and solvents | HF  
RoHS |
| **Polypropylene, Ethylene Propylene Diene Terpolymer rubber free of Nitrosamine** | PP, EPDM | -20 °C to +95 °C | Black (BK) | UL 94 HB | • Good resistance to high temperature  
• Good chemical and abrasion resistance | HF  
RoHS |
| **Polypropylene with metal particles** | PPMP | -40 °C to +115 °C | Blue (BU) | UL 94 HB | • Metal and X-Ray detectable  
• Heat resistant  
• Moderate yield strength  
• Good chemical resistance | HF  
RoHS |
| **Polypropylene with metal particles** | PPMP+ | -40 °C to +85 °C | Blue (BU) | not flame retardant | • High yield strength  
• Metal and X-Ray detectable | HF  
RoHS |
| **Polyvinylchloride** | PVC | -10 °C to +70 °C | Black (BK), Natural (NA) | UL 94 V0 | • Low moisture absorption  
• Good chemical resistance to acids, bases, salts, alcohol, oils | RoHS |
| **Stainless Steel, Stainless Steel** | SS304, SS316 | -80 °C to +538 °C | Natural (NA) | Non burning | • Corrosion resistant  
• Antimagnetic  
• Weather resistant  
• Chemical resistance  
• SS316 also resistant against seawater, salt spray and anorganic acids | HF  
LFH  
RoHS |
| **Thermoplastic Polyurethane** | TPU | -40 °C to +85 °C | Black (BK) | UL 94 HB | • High elasticity  
• Good chemical resistance to acids, bases and oxidising agents | HF  
RoHS |

*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 a exhaustive material specification and are no substitute for suitability tests. Please see our datasheets for further details.

*Further colours available on request.

HF = Halogenfree  
LFH = Limited Fire Hazard  
RoHS = Restriction of Hazardous Substances

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Further information at [www.HellermannTyton.co.uk/fixings](http://www.HellermannTyton.co.uk/fixings)