Cable Ties for high temperature applications up to +240 °C

PEEK Ties have been designed for use in hazardous environments. Their suitability for high temperature applications makes them ideal for use in the drilling industry, railway, offshore or automotive industry. The excellent chemical and radium ray resistance is predestined for applications in medical engineering, chemical industry and power stations. Within the aerospace industry, PEEK ties are suitable due to their good ratio weight to tensile strength. Because of this combination of different properties, PEEK ties can replace metal solutions.

Features and benefits
- For high temperature applications from -55 °C up to +240 °C
- Outside serrated cable tie with smooth surface to the bundle
- Close fit to the cable bundle due to the deepening head shape
- Easy insertion combined with high tensile strength
- Takes up less space due to curved head design
- Combines the performance of a metal tie with the ease of use of a polyamide cable tie
- Manual and/or pneumatic tools available for greater process reliability

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

Cable Ties for high temperature applications up to +240 °C

The contoured head takes up less space, gives a low insertion force and offers high strength.

Please find more PEEK products for your system solutions: Foot Part P1SFT65, see page 104. Screw Mount CTAM, see page 145.

Cable Ties Outside Serrated

PEEK Ties have been designed for use in hazardous environments. Their suitability for high temperature applications makes them ideal for use in the drilling industry, railway, offshore or automotive industry. The excellent chemical and radium ray resistance is predestined for applications in medical engineering, chemical industry and power stations. Within the aerospace industry, PEEK ties are suitable due to their good ratio weight to tensile strength. Because of this combination of different properties, PEEK ties can replace metal solutions.

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PEEK Ties, outside serrated

--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
PT2A | 3.4 | 145.0 | 4.0 | 35.0 | Beige (BGE) | PEEK | 100 pcs. | 6-8 | 118-00032
PT3B | 4.7 | 250.0 | 4.0 | 65.0 | Beige (BGE) | PEEK | 100 pcs. | 6-8 | 118-00116

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

PEEK Ties, inside serrated

**TYPE** | Width (W) | Length (L) | Bundle Ø min. | Bundle Ø max. | Material | Colour | Pack Cont. | Tools | Article-No.
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
PT220 | 4.7 | 220.0 | 8.0 | 56.0 | PEEK | Beige (BGE) | 100 pcs. | 8;12;15 | 111-01235

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools

<table>
<thead>
<tr>
<th>EVO7</th>
<th>MK7HT</th>
<th>MK7P</th>
<th>MK9P</th>
<th>MK9SST</th>
</tr>
</thead>
<tbody>
<tr>
<td>548</td>
<td>549</td>
<td>550</td>
<td>552</td>
<td>554</td>
</tr>
</tbody>
</table>

For more information on toolings please refer to the Application Tooling chapter.

For product specific approvals and specifications please refer to the Appendix.
## Material Specification Overview

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>Material Shortcut</th>
<th>Operating Temperature</th>
<th>Colour**</th>
<th>Flammability</th>
<th>Material Properties*</th>
<th>Material Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium alloy</td>
<td>AL</td>
<td>-40 °C to +180 °C</td>
<td>Natural (NA)</td>
<td>• Corrosion resistant  • Antimagnetic</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Chloroprene rubber</td>
<td>CR</td>
<td>-20 °C to +80 °C</td>
<td>Black (BK)</td>
<td>• Weather resistant  • High yield strength</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Ethylene Tetrafluoroethylene (Tefzel®)</td>
<td>E/TFE</td>
<td>-80 °C to +170 °C</td>
<td>Blue (BU) UL 94 V0</td>
<td>• Resistance to radioactivity  • UV resistant, not moisture sensitive  • Good chemical resistance to acids, bases, oxidizing agents</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polycarbonate</td>
<td>POM</td>
<td>-40 °C to +90 °C, (+110 °C, 500 h)</td>
<td>Natural (NA) UL 94 HB</td>
<td>• Limited brittleness sensitivity  • Flexible at low temperature  • Not moisture sensitive  • Robust on impact</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 11</td>
<td>PA11</td>
<td>-40 °C to +85 °C, (+105 °C, 500 h)</td>
<td>Black (BK) UL 94 HB</td>
<td>• Good chemical resistance to acids, bases, oxidizing agents  • UV resistant</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 12</td>
<td>PA12</td>
<td>-40 °C to +85 °C, (+105 °C, 500 h)</td>
<td>Black (BK) UL 94 HB</td>
<td>• Resistance to high temperatures  • Very moisture sensitive  • Low smoke sensitivity</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 4.6</td>
<td>PA46</td>
<td>-40 °C to +130 °C, (+150 °C, 5000 h; +195 °C, 500 h)</td>
<td>Natural (NA), Grey (GY) UL 94 V2</td>
<td>• Bio-plastic, derived from vegetable oil  • Strong impact resistance at low temperature  • Very low moisture absorption  • Weather resistant  • Good chemical resistance</td>
<td></td>
<td>LFH</td>
</tr>
<tr>
<td>Polyamide 6 high impact modified</td>
<td>PA6HIR</td>
<td>-40 °C to +80 °C</td>
<td>Black (BK) UL 94 HB</td>
<td>• Limited brittleness sensitivity  • Higher flexibility at low temperature</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 high impact modified</td>
<td>PA66HIR</td>
<td>-40 °C to +85 °C, (+105 °C, 500 h)</td>
<td>Black (BK), Natural (NA) UL 94 V2</td>
<td>• High yield strength</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 glass-fibre reinforced</td>
<td>PA66GF13, PA66GF15</td>
<td>-40 °C to +105 °C</td>
<td>Black (BK) UL 94 HB</td>
<td>• Good resistance to lubricants, fuels, salt water and solvents</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 heat and UV stabilised</td>
<td>PA66HSVW</td>
<td>-40 °C to +105 °C</td>
<td>Black (BK) UL 94 V2</td>
<td>• High yield strength  • Modified elevated maximum temperature  • UV resistant</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 heat stabilised</td>
<td>PA66HS</td>
<td>-40 °C to +105 °C</td>
<td>Black (BK), Natural (NA) UL 94 V2</td>
<td>• High yield strength  • Modified elevated maximum temperature</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 high impact modified</td>
<td>PA66HIR</td>
<td>-40 °C to +80 °C, (+105 °C, 500 h)</td>
<td>Black (BK) UL 94 HB</td>
<td>• Limited brittleness sensitivity  • Higher flexibility at low temperature</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 high impact modified, heat and UV stabilised</td>
<td>PA66HIRHSW</td>
<td>-40 °C to +110 °C</td>
<td>Black (BK) UL 94 HB</td>
<td>• Limited brittleness sensitivity  • Higher flexibility at low temperature  • Modified elevated maximum temperature  • High yield strength, UV resistant</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 high impact modified, heat stabilised</td>
<td>PA66HIRHS</td>
<td>-40 °C to +105 °C</td>
<td>Black (BK) UL 94 HB</td>
<td>• Limited brittleness sensitivity  • Higher flexibility at low temperature  • Modified elevated maximum temperature</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 high impact modified, scan black</td>
<td>PA66HIR(S)</td>
<td>-40 °C to +80 °C, (+105 °C, 500 h)</td>
<td>Black (BK) UL 94 HB</td>
<td>• Limited brittleness sensitivity  • Higher flexibility at low temperature</td>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td>Polyamide 6.6 UV resistant</td>
<td>PA66W</td>
<td>-40 °C to +85 °C, (+105 °C, 500 h)</td>
<td>Black (BK) UL 94 V2</td>
<td>• High yield strength  • UV resistant</td>
<td></td>
<td>RoHS</td>
</tr>
</tbody>
</table>
### Material Information

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</tr>
</thead>
</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 (BG) | 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 | • Float 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 | 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.

**Further colours available on request.

*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.

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