



### Cable Ties for thin-walled bundles

#### OS-Series

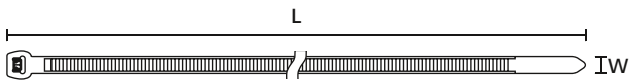
OS-Series cable ties are used in many areas where thin-walled or soft insulation wires and cable are being installed, for instance automotive and aircraft industry. OS ties manufactured from PA66V0 material are suitable for applications where safety regulations require reduction of smoke and dangerous gases.

#### Features and benefits

- Outside serrated cable tie with smooth surface to the bundle
- Tie follows the contours of the cable bundle perfectly
- Takes up less space due to curved head design
- Easy insertion combined with high tensile strength
- PA46 material for higher temperatures up to +150 °C
- PA66V0 cable ties fulfill Limited Fire Hazard requirements
- Easy application either manually or with a processing tool



Outside serrated OS-Series cable tie with smooth surface to the bundle.



OS-Series



The curved head design of the OS-Series



**Material specification please see page 26.**

| TYPE    | Width (W) | Length (L) | Bundle Ø min. | Bundle Ø max. | N   | Material | Colour       | Pack Cont. | Tools  | Article-No. |
|---------|-----------|------------|---------------|---------------|-----|----------|--------------|------------|--------|-------------|
| T18ROS  | 2.5       | 100.0      | 1.6           | 20.0          | 80  | PA66HS   | Black (BK)   | 500 pcs.   | 2;4-6  | 118-04701   |
|         | 2.5       | 100.0      | 1.6           | 20.0          | 80  | PA66HS   | Natural (NA) | 1,000 pcs. | 2;4-6  | 118-00035   |
|         | 2.5       | 100.0      | 1.6           | 20.0          | 80  | PA66V0   | White (WH)   | 100 pcs.   | 2;4-6  | 118-00079   |
|         | 2.5       | 100.0      | 1.6           | 20.0          | 80  | PA66W    | Black (BK)   | 100 pcs.   | 2;4-6  | 118-00125   |
| T30ROS  | 3.4       | 145.0      | 1.6           | 35.0          | 135 | PA66HS   | Natural (NA) | 100 pcs.   | 2;4-6  | 118-00064   |
|         | 3.4       | 145.0      | 1.6           | 35.0          | 135 | PA66HS   | Black (BK)   | 100 pcs.   | 2;4-6  | 118-04800   |
| T30LOS  | 3.4       | 200.0      | 1.6           | 50.0          | 135 | PA66HS   | Natural (NA) | 100 pcs.   | 2;4-6  | 118-00044   |
|         | 3.4       | 200.0      | 1.6           | 50.0          | 135 | PA66V0   | White (WH)   | 100 pcs.   | 2;4-6  | 118-00080   |
|         | 3.4       | 200.0      | 1.6           | 50.0          | 135 | PA66W    | Black (BK)   | 100 pcs.   | 2;4-6  | 118-00126   |
|         | 3.4       | 200.0      | 1.6           | 50.0          | 135 | PA66HS   | Black (BK)   | 100 pcs.   | 2;4-6  | 118-04900   |
| T50SOS  | 4.6       | 150.0      | 1.6           | 35.0          | 225 | PA66HS   | Black (BK)   | 100 pcs.   | 2;4-8  | 118-05850   |
| T50ROS  | 4.6       | 200.0      | 1.6           | 50.0          | 225 | PA46     | Grey (GY)    | 500 pcs.   | 2;4-8  | 118-05078   |
|         | 4.6       | 200.0      | 1.6           | 50.0          | 225 | PA66HS   | Black (BK)   | 500 pcs.   | 2;4-8  | 118-05040   |
|         | 4.6       | 200.0      | 1.6           | 50.0          | 225 | PA66HS   | Natural (NA) | 100 pcs.   | 2;4-8  | 118-05059   |
|         | 4.6       | 200.0      | 1.6           | 50.0          | 225 | PA66V0   | White (WH)   | 100 pcs.   | 2;4-8  | 118-00065   |
|         | 4.6       | 200.0      | 1.6           | 50.0          | 225 | PA66W    | Black (BK)   | 100 pcs.   | 2;4-8  | 118-00127   |
| T50MOS  | 4.6       | 245.0      | 1.6           | 66.0          | 225 | PA66HS   | Black (BK)   | 100 pcs.   | 2;4-8  | 118-00018   |
|         | 4.6       | 245.0      | 1.6           | 66.0          | 225 | PA66HS   | Natural (NA) | 100 pcs.   | 2;4-8  | 118-00055   |
|         | 4.6       | 245.0      | 1.6           | 66.0          | 225 | PA66V0   | White (WH)   | 100 pcs.   | 2;4-8  | 118-00081   |
|         | 4.6       | 245.0      | 1.6           | 66.0          | 225 | PA66W    | Black (BK)   | 100 pcs.   | 2;4-8  | 118-00128   |
| T50LOS  | 4.6       | 384.0      | 1.6           | 110.0         | 225 | PA66HS   | Black (BK)   | 100 pcs.   | 2;4-8  | 118-05900   |
| T120ROS | 7.6       | 385.0      | 5.0           | 105.0         | 535 | PA66HS   | Black (BK)   | 100 pcs.   | 3;9-12 | 118-00066   |
|         | 7.6       | 385.0      | 5.0           | 105.0         | 535 | PA66HS   | Natural (NA) | 100 pcs.   | 3;9-12 | 118-00067   |
|         | 7.6       | 385.0      | 5.0           | 105.0         | 535 | PA66V0   | White (WH)   | 100 pcs.   | 3;9-12 | 118-00082   |
|         | 7.6       | 385.0      | 5.0           | 105.0         | 535 | PA66W    | Black (BK)   | 100 pcs.   | 3;9-12 | 118-00130   |

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

**EN 45545-2**

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

## Material Specification Overview

| MATERIAL  | Material Shortcut  | Operating Temperature                       | Colour**                 | Flammability | Material Properties*  | Material 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   | 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 Tetrafluoroethylene (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, (+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 impacts</li> </ul>   | RoHS                    |
| Polyamide 11  | PA11               | -40 °C to +85 °C, (+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, (+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 +150 °C (5000 h), +195 °C (500 h) | Natural (NA), 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 sensitiv</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, 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, (+105 °C, 500 h)          | Black (BK), Natural (NA) | UL 94 V2     | <ul style="list-style-type: none"> <li>High yield strength</li> </ul>   | HF<br>RoHS              |
| Polyamide 6.6, glass-fibre reinforced                       | PA66GF13, PA66GF15 | -40 °C to +105 °C                           | Black (BK)               | UL 94 HB     | <ul style="list-style-type: none"> <li>Good resistance to: lubricants, vehicle fuel, salt water and a lot of solvent</li> </ul>   | HF<br>RoHS              |
| Polyamide 6.6, heat and UV stabilised                       | PA66HSW            | -40 °C to +105 °C                           | Black (BK)               | UL 94 V2     | <ul style="list-style-type: none"> <li>High yield strength</li> <li>Modified elevated max. temperature</li> <li>UV-resistant</li> </ul>   | HF<br>RoHS              |
| Polyamide 6.6, heat stabilised                              | PA66HS             | -40 °C to +105 °C                           | Black (BK), Natural (NA) | UL 94 V2     | <ul style="list-style-type: none"> <li>High yield strength</li> <li>Modified elevated max. temperature</li> </ul>   | HF<br>RoHS              |
| Polyamide 6.6, high impact modified                         | PA66HIR            | -40 °C to +80 °C, (+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, high impact modified, heat and UV stabilised | PA66HIRHSW         | -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 max. temperature</li> <li>High yield strength, UV-resistant</li> </ul>                           | RoHS                    |
| Polyamide 6.6, high impact modified, 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 max. temperature</li> </ul>  | RoHS                    |
| Polyamide 6.6, high impact modified, ScanBlack              | PA66HIR(S)         | -40 °C to +80 °C, (+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, UV-resistant                                 | PA66W              | -40 °C to +85 °C, (+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)                  | halogen free        | <ul style="list-style-type: none"> <li>UV-resistant</li> <li>Good chemical resistance to: most acids, alkalis 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 V0            | <ul style="list-style-type: none"> <li>Resistance to radioactivity</li> <li>Not moisture sensitive</li> <li>Good chemical resistance to: acids, bases, oxidizing 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, alcohol and 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: organic acids</li> </ul>                             | <b>HF</b><br><b>RoHS</b>               |
| <b>Polypropylene,<br/>Ethylene-Propylene-<br/>Dien-Terpolymere-<br/>rubber</b><br>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 temperatures</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, ethanol and oil</li> </ul>   | <b>RoHS</b>                            |
| <b>Stainless Steel</b>  | SS304,<br>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>Outstanding chemical resistance</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 elastic</li> <li>Good chemical resistance to: acids, bases and oxidizing 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 is also using equivalent E/TFE raw material from other suppliers. \*These details are only rough guide values. They should not be regarded as a material specification and are no substitute for a suitability test. Please see our datasheets for further details.

\*\*More colours on request.

 = Minimum Loop Tensile Strength for Cable Ties (Newton)

**HF** = Halogenfree

**LFH** = Limited Fire Hazard

**RoHS** = Restriction of Hazardous Substances