

Cable Ties for hose and gaiter

CTT-Series natural and black

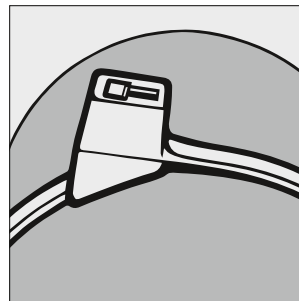
Designed to secure pipes, hoses and gaiters where low pressures are being secured. These ties can be used in many industries, including automotive, white goods manufacturing, medical and construction.

Features and Benefits

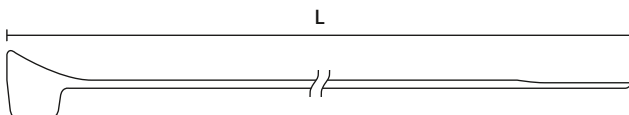
- Curved head design offers a good fit to the bundle
- Inside serration for a strong hold onto bundles
- Easy application either manually or with a processing tool



CTT ties installed on flexible gaiters.



For secure fixing of round and solid shapes.



CTT Hose Ties

| TYPE | Width (W) | Length (L) | Bundle Ø max. | N | Material | Colour | Pack Cont. | Tools | Article-No. |
|--------|-----------|------------|---------------|-----|----------|--------------|------------|-------|-------------|
| CTT20R | 2.5 | 101.6 | 13.0 | 90 | PA66 | Natural (NA) | 100 pcs. | 2;4-6 | 112-51919 |
| | 2.5 | 101.6 | 13.0 | 90 | PA66HS | Black (BK) | 1,000 pcs. | 2;4-6 | 112-51960 |
| CTT60R | 4.7 | 205.0 | 45.0 | 265 | PA66 | Black (BK) | 100 pcs. | 2-12 | 112-56019 |
| | 4.7 | 205.0 | 45.0 | 265 | PA66HS | Black (BK) | 100 pcs. | 2-12 | 112-52112 |

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 | | | | | | | | | | | |
|-------------------|------|-------|----------|------|-------|------|-----|-----|-------|------|--|
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| MK20 | MK21 | MK3SP | MK3PNSP2 | EVO7 | MK7HT | MK7P | MK6 | MK9 | MK9HT | MK9P | |

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

| 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"> Corrosion resistant Antimagnetic | RoHS |
| Chloroprene | CR | -20 °C to +80 °C | Black (BK) | | <ul style="list-style-type: none"> Weather-resistant High yield strength | RoHS |
| Ethylene Tetrafluoroethylene | E/TFE | -80 °C to +170 °C | Blue (BU) | UL94 V0 | <ul style="list-style-type: none"> 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) | UL94 HB | <ul style="list-style-type: none"> Limited brittleness sensitivity Flexible at low temperature Not moisture sensitive Robust on impacts | RoHS |
| Polyamide 11 | PA11 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Bio-plastic, derived from vegetable oil Strong impact resistance at low temperature Very low moisture absorption Weather-resistant Good chemical resistance | HF RoHS |
| Polyamide 12 | PA12 | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Good chemical resistance to: acids, bases, oxidizing agents UV-resistant | HF RoHS |
| Polyamide 4.6 | PA46 | -40 °C to +150 °C (5000 h), +195 °C (500 h) | Natural (NA), Grey (GY) | UL94 V2 | <ul style="list-style-type: none"> Resistance to high temperatures Very moisture sensitive Low smoke sensitive | HF LFH RoHS |
| Polyamide 6 | PA6 | -40 °C to +80 °C | Black (BK) | UL94 V2 | <ul style="list-style-type: none"> High yield strength | RoHS |
| Polyamide 6, high impact modified | PA6HIR | -40 °C to +80 °C | Black (BK) | UL94 HB | <ul style="list-style-type: none"> 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) | UL94 V2 | <ul style="list-style-type: none"> High yield strength | HF RoHS |
| Polyamide 6.6, glass-fibre reinforced | PA66GF13, PA66GF15 | -40 °C to +105 °C | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Good resistance to: lubricants, vehicle fuel, salt water and many solvents | HF RoHS |
| Polyamide 6.6, heat and UV stabilised | PA66HSW | -40 °C to +105 °C | Black (BK) | UL94 V2 | <ul style="list-style-type: none"> High yield strength Modified elevated max. temperature UV-resistant | HF RoHS |
| Polyamide 6.6, heat stabilised | PA66HS | -40 °C to +105 °C | Black (BK), Natural (NA) | UL94 V2 | <ul style="list-style-type: none"> High yield strength Modified elevated max. temperature | HF RoHS |
| Polyamide 6.6, high impact modified | PA66HIR | -40 °C to +80 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature | RoHS |
| Polyamide 6.6, high impact modified, heat and UV stabilised | PA66HIRHSW | -40 °C to +110 °C | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature Modified elevated max. temperature High yield strength, UV-resistant | HF RoHS |
| Polyamide 6.6, high impact modified, heat stabilised | PA66HIRHS | -40 °C to +105 °C | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature Modified elevated max. temperature | RoHS |
| Polyamide 6.6, high impact modified, scan black | PA66HIR(S) | -40 °C to +80 °C, (+105 °C, 500 h) | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature | HF RoHS |
| Polyamide 6.6, UV-resistant | PA66W | -40 °C to +85 °C, (+105 °C, 500 h) | Black (BK) | UL94 V2 | <ul style="list-style-type: none"> High yield strength UV-resistant | 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 is also using equivalent E/TFE raw material from other suppliers.

*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.

**More colours on request.



= Minimum Loop Tensile Strength for Cable Ties (Newton)

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

| MATERIAL | Material Shortcut | Operating Temperature | Colour** | Flammability | Material Properties* | Material Specifications |
|---|-------------------|---------------------------------------|--------------------------------|--------------|--|-------------------------|
| Polyamide 6.6 , with metal particles | PA66MP | -40 °C to +85 °C, (+105 °C, 500 h) | Blue (BU) | UL94 HB | <ul style="list-style-type: none"> High yield strength Metal and X-Ray detectable | HF RoHS |
| Polyamide 6.6 V0 | PA66V0 | -40 °C to +85 °C | White (WH) | UL94 V0 | <ul style="list-style-type: none"> High yield strength Low smoke emission | HF LFH RoHS |
| Polyamide 6.6 V0 , High Oxygen Index | PA66V0-HOI | -40 °C to +85 °C, (+105 °C, 500 h) | White (WH) | UL94 V0 | <ul style="list-style-type: none"> High yield strength Low smoke emissions | HF LFH RoHS |
| Polyester | SP | -50 °C to +150 °C | Black (BK) | Halogen free | <ul style="list-style-type: none"> UV-resistant Good chemical resistance to: most acids, alkalis and oils | HF LFH RoHS |
| Polyetheretherketone | PEEK | -55 °C to +240 °C | Beige (BGE) | UL94 V0 | <ul style="list-style-type: none"> Resistance to radioactivity Not moisture sensitive Good chemical resistance to: acids, bases, oxidizing agents | HF LFH RoHS |
| Polyethylene | PE | -40 °C to +50 °C | Black (BK), Grey (GY) | UL94 HB | <ul style="list-style-type: none"> Low moisture absorption Good chemical resistance to: most acids, alcohol and oils | HF RoHS |
| Polyolefin | PO | -40 °C to +90 °C | Black (BK) | UL94 V0 | <ul style="list-style-type: none"> Low smoke emissions | HF LFH RoHS |
| Polypropylene | PP | -40 °C to +115 °C | Black (BK), Natural (NA) | UL94 HB | <ul style="list-style-type: none"> Floats in water Moderate yield strength Good chemical resistance to: organic acids | HF RoHS |
| Polypropylene, Ethylene- Propylene-Dien- Terpolymere-rubber free of Nitrosamine | PP, EPDM | -20 °C to +95 °C | Black (BK) | UL94 HB | <ul style="list-style-type: none"> Good resistance to high temperatures Good chemical and abrasion resistance | HF RoHS |
| Polypropylene with metal particles | PPMP | -40 °C to +115 °C | Blue (BU) | UL94 HB | <ul style="list-style-type: none"> Floats in certain liquids Metal and X-Ray detectable Heat resistant Moderate yield strength Good chemical resistance | RoHS |
| Polyvinylchloride | PVC | -10 °C to +70 °C | Black (BK), Natural (NA) | UL94 V0 | <ul style="list-style-type: none"> Low moisture absorption Good chemical resistance to: acids, ethanol and oil | RoHS |
| Stainless Steel, Stainless Steel | SS304, SS316 | -80 °C to +538 °C | Natural (NA) | Non burning | <ul style="list-style-type: none"> Corrosion resistant Antimagnetic Weather resistant Outstanding chemical resistance | HF LFH RoHS |
| Thermoplastic Polyurethane | TPU | -40 °C to +85 °C | Black (BK) | UL94 HB | <ul style="list-style-type: none"> High elasticity Good chemical resistance to: acids, bases and oxidizing agents | HF RoHS |

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