



### Cable ties with ball-lock and coating

#### MBT-FC-Series, stainless steel 316

The MBT range of stainless steel cable ties can be used in the most arduous of conditions or where the additional security, strength and fire resistance of a metal fixing is required. Used in all industries from mass transit, ship building, oil rigs, mining and chemical industry, theatres and exhibition halls. In the event of a fire, cables will remain securely held in place and will not fall to block emergency exits. Fully coated ties can also be used to avoid any reflection. An important consideration for instance in the defence industry.

#### Features and benefits

- Fully coated MBT, made from type 316 stainless steel with polyester coating
- Non-releasable locking feature
- Coated cable tie with smooth edges
- Comfortable handling and installation
- Eliminates contact corrosion between dissimilar materials during application



The MBT-Series (up to 7.9 mm) can be used in combination with the stainless steel P-Mount. The mount is simple to install with a screw or bolt and ensures a durable fixing solution. Please see page 156.



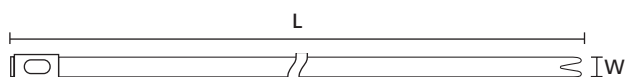
Material specification please see page 26.



Stainless steel cable ties, coated, MBT\_SFC, MBT\_HFC.



Stainless steel cable ties, coated, MBT\_XHFC.



MBT-Series 4.6 mm and 7.9 mm width

| TYPE     | Width (W) | Length (L) | Bundle Ø min. | Bundle Ø max. |       | Material  | Pack Cont. | Tools | Article-No. |
|----------|-----------|------------|---------------|---------------|-------|-----------|------------|-------|-------------|
| MBT5SFC  | 4.6       | 127.0      | 15.0          | 25.0          | 540   | SS316, SP | 100 pcs.   | 15-18 | 111-00288   |
| MBT8SFC  | 4.6       | 201.0      | 17.0          | 50.0          | 540   | SS316, SP | 100 pcs.   | 15-18 | 111-00289   |
| MBT14SFC | 4.6       | 362.0      | 17.0          | 102.0         | 540   | SS316, SP | 100 pcs.   | 15-18 | 111-00290   |
| MBT20SFC | 4.6       | 521.0      | 17.0          | 152.0         | 540   | SS316, SP | 100 pcs.   | 15-18 | 111-00291   |
| MBT27SFC | 4.6       | 681.0      | 17.0          | 203.0         | 540   | SS316, SP | 100 pcs.   | 15-18 | 111-00292   |
| MBT33SFC | 4.6       | 838.0      | 17.0          | 254.0         | 540   | SS316, SP | 100 pcs.   | 15-18 | 111-00293   |
| MBT8HFC  | 7.9       | 201.0      | 17.0          | 50.0          | 1,020 | SS316, SP | 50 pcs.    | 15-18 | 111-00294   |
| MBT14HFC | 7.9       | 362.0      | 17.0          | 102.0         | 1,020 | SS316, SP | 50 pcs.    | 15-18 | 111-00295   |
| MBT20HFC | 7.9       | 521.0      | 17.0          | 152.0         | 1,020 | SS316, SP | 50 pcs.    | 15-18 | 111-00296   |

All dimensions in mm. Subject to technical changes.

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

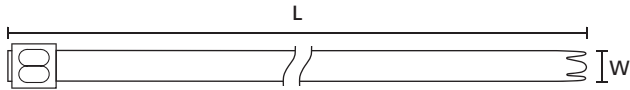
| Recommended Tools |        |         |       |            |
|-------------------|--------|---------|-------|------------|
|                   | 15     | 16      | 17    | 18         |
|                   | MK9SST | MK9PSST | HDT16 | KST-STG200 |
|                   | 554    | 554     | 555   | 555        |

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

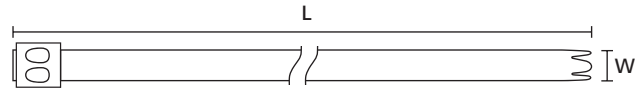


## Cable ties with ball-lock and coating

## MBT-FC-Series, stainless steel 316



MBT-Series 12.3 mm width



MBT-Series 16.0 mm width

| TYPE      | Width (W) | Length (L) | Bundle Ø min. | Bundle Ø max. |       | Material  | Pack Cont. | Tools | Article-No. |
|-----------|-----------|------------|---------------|---------------|-------|-----------|------------|-------|-------------|
| MBT27HFC  | 7.9       | 681.0      | 17.0          | 203.0         | 1,020 | SS316, SP | 50 pcs.    | 15-18 | 111-00297   |
| MBT33HFC  | 7.9       | 838.0      | 17.0          | 254.0         | 1,020 | SS316, SP | 50 pcs.    | 15-18 | 111-00298   |
| MBT14XHFC | 12.3      | 362.0      | 17.0          | 102.0         | 1,620 | SS316, SP | 50 pcs.    | 15-18 | 111-00299   |
| MBT17XHFC | 12.3      | 434.0      | 17.0          | 125.0         | 1,620 | SS316, SP | 50 pcs.    | 15-18 | 111-01500   |
| MBT20XHFC | 12.3      | 521.0      | 17.0          | 152.0         | 1,620 | SS316, SP | 50 pcs.    | 15-18 | 111-00300   |
| MBT23XHFC | 12.3      | 575.0      | 17.0          | 168.0         | 1,620 | SS316, SP | 50 pcs.    | 15-18 | 111-01501   |
| MBT27XHFC | 12.3      | 681.0      | 17.0          | 203.0         | 1,620 | SS316, SP | 50 pcs.    | 15-18 | 111-00301   |
| MBT30XHFC | 12.3      | 754.0      | 17.0          | 225.0         | 1,620 | SS316, SP | 50 pcs.    | 15-18 | 111-01502   |
| MBT33XHFC | 12.3      | 838.0      | 17.0          | 254.0         | 1,620 | SS316, SP | 50 pcs.    | 15-18 | 111-00302   |
| MBT43XHFC | 12.3      | 1,092.0    | 17.0          | 330.0         | 1,620 | SS316, SP | 25 pcs.    | 15-18 | 111-01503   |
| MBT49XHFC | 12.3      | 1,245.0    | 17.0          | 380.0         | 1,620 | SS316, SP | 25 pcs.    | 15-18 | 111-01504   |
| MBT14UHFC | 16.0      | 362.0      | 25.0          | 102.0         | 2,500 | SS316, SP | 50 pcs.    | 15;17 | 111-01512   |
| MBT17UHFC | 16.0      | 434.0      | 25.0          | 125.0         | 2,500 | SS316, SP | 50 pcs.    | 15;17 | 111-01513   |
| MBT20UHFC | 16.0      | 521.0      | 25.0          | 152.0         | 2,500 | SS316, SP | 50 pcs.    | 15;17 | 111-01514   |
| MBT23UHFC | 16.0      | 575.0      | 25.0          | 168.0         | 2,500 | SS316, SP | 50 pcs.    | 15;17 | 111-01515   |
| MBT27UHFC | 16.0      | 681.0      | 25.0          | 203.0         | 2,500 | SS316, SP | 50 pcs.    | 15;17 | 111-01516   |
| MBT30UHFC | 16.0      | 754.0      | 25.0          | 225.0         | 2,500 | SS316, SP | 50 pcs.    | 15;17 | 111-01517   |
| MBT33UHFC | 16.0      | 838.0      | 25.0          | 254.0         | 2,500 | SS316, SP | 50 pcs.    | 15;17 | 111-01518   |
| MBT43UHFC | 16.0      | 1,092.0    | 25.0          | 330.0         | 2,500 | SS316, SP | 25 pcs.    | 15;17 | 111-01519   |
| MBT49UHFC | 16.0      | 1,245.0    | 25.0          | 380.0         | 2,500 | SS316, SP | 25 pcs.    | 15;17 | 111-01520   |

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 |        |         |       |            |
|-------------------|--------|---------|-------|------------|
|                   | 15     | 16      | 17    | 18         |
|                   | MK9SST | MK9PSST | HDT16 | KST-STG200 |
|                   | 554    | 554     | 555   | 555        |

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

## 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 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 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 impact</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 +130 °C, (+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 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 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, fuels, salt water and solvents</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 maximum 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 maximum 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 maximum 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 maximum temperature</li> </ul>                                                                   | 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     | <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<br>Shortcut | Operating<br>Temperature              | Colour**                    | Flammability           | Material Properties*                                                                                                                                                     | Material<br>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               | • High yield strength<br>• Metal and X-Ray detectable                                                                                                                    | HF<br>RoHS                 |
| <b>Polyamide 6.6</b><br>with metal particles                                                    | PA66MP+              | -40 °C to +85 °C                      | Blue (BU)                   | not flame<br>retardant | • High yield strength<br>• Metal and X-Ray detectable                                                                                                                    | HF<br>RoHS                 |
| <b>Polyamide 6.6 V0</b>                                                                         | PA66V0               | -40 °C to +85 °C                      | White (WH)                  | UL 94 V0               | • High yield strength<br>• Low smoke emission                                                                                                                            | HF<br>LFH<br>RoHS          |
| <b>Polyester</b>                                                                                | SP                   | -50 °C to +150 °C                     | Black (BK)                  |                        | • UV resistant<br>• Good chemical resistance to most<br>acids, bases and oils                                                                                            | HF<br>LFH<br>RoHS          |
| <b>Polyetheretherketone</b>                                                                     | PEEK                 | -55 °C to +240 °C                     | Beige (BGE)                 | UL 94 V0               | • Resistance to radioactivity<br>• Not moisture sensitive<br>• Good chemical resistance to acids,<br>bases, oxidising agents                                             | HF<br>LFH<br>RoHS          |
| <b>Polyethylene</b>                                                                             | PE                   | -40 °C to +50 °C                      | Black (BK),<br>Grey (GY)    | UL 94 HB               | • Low moisture absorption<br>• Good chemical resistance to most<br>acids, bases, alcohol, oils                                                                           | HF<br>RoHS                 |
| <b>Polyolefin</b>                                                                               | PO                   | -40 °C to +90 °C                      | Black (BK)                  | UL 94 V0               | • Low smoke emissions                                                                                                                                                    | HF<br>LFH<br>RoHS          |
| <b>Polypropylene</b>                                                                            | PP                   | -40 °C to +115 °C                     | Black (BK),<br>Natural (NA) | UL 94 HB               | • Floats in water<br>• Moderate yield strength<br>• Good chemical resistance to acids,<br>bases and solvents                                                             | HF<br>RoHS                 |
| <b>Polypropylene, Ethylene<br/>Propylene Diene<br/>Terpolymer rubber</b><br>free of Nitrosamine | PP, EPDM             | -20 °C to +95 °C                      | Black (BK)                  | UL 94 HB               | • Good resistance to high<br>temperature<br>• Good chemical and abrasion<br>resistance                                                                                   | HF<br>RoHS                 |
| <b>Polypropylene</b><br>with metal particles                                                    | PPMP                 | -40 °C to +115 °C                     | Blue (BU)                   | UL 94 HB               | • Metal and X-Ray detectable<br>• Heat resistant<br>• Moderate yield strength<br>• Good chemical resistance                                                              | RoHS                       |
| <b>Polypropylene</b><br>with metal particles                                                    | PPMP+                | -40 °C to +85 °C                      | Blue (BU)                   | not flame<br>retardant | • High yield strength<br>• Metal and X-Ray detectable                                                                                                                    | HF<br>RoHS                 |
| <b>Polyvinylchloride</b>                                                                        | PVC                  | -10 °C to +70 °C                      | Black (BK),<br>Natural (NA) | UL 94 V0               | • Low moisture absorption<br>• Good chemical resistance to acids,<br>bases, salts, alcohol, oils                                                                         | RoHS                       |
| <b>Stainless Steel,<br/>Stainless Steel</b>                                                     | SS304,<br>SS316      | -80 °C to +538 °C                     | Natural (NA)                | Non burning            | • Corrosion resistant<br>• Antimagnetic<br>• Weather resistant<br>• Chemical resistance<br>• SS316 also resistant against<br>seawater, salt spray and anorganic<br>acids | HF<br>LFH<br>RoHS          |
| <b>Thermoplastic<br/>Polyurethane</b>                                                           | TPU                  | -40 °C to +85 °C                      | Black (BK)                  | UL 94 HB               | • High elasticity<br>• Good chemical resistance to acids,<br>bases and oxidising agents                                                                                  | HF<br>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 an exhaustive material specification and are no substitute for suitability tests. Please see our datasheets for further details.



**Minimum Loop Tensile Strength  
for Cable Ties (Newton)**

HF = Halogenfree

LFH = Limited Fire Hazard

RoHS = Restriction of Hazardous Substances