



## Cable Ties Polyamide 6.6 standard

### T-Series in PA66 natural and black

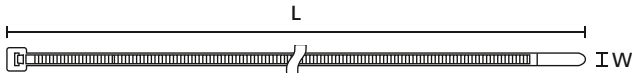
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

#### Features and Benefits

- Natural and black cable ties available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simple to insert due to the ergonomically bent tail



T-Series.



T-Series



Material specification  
please see page 24.

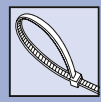
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18S	2.3	83.0	16.0	80	PA66	Natural (NA)	1,000 pcs.	2;4-6	111-02809
T18R	2.5	100.0	22.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-01919
	2.5	100.0	22.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-01910
T18I	2.5	145.0	35.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-02370
	2.5	145.0	35.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-02319
T18L	2.5	205.0	55.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-02119
	2.5	205.0	55.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-02110
T25L	2.8	240.0	65.0	110	PA66	Black (BK)	100 pcs.	2;4-6	111-02500
	2.8	240.0	65.0	110	PA66	Natural (NA)	100 pcs.	2;4-6	111-02519
T25LL	2.8	330.0	95.0	110	PA66	Natural (NA)	100 pcs.	2;4-6	111-02619
T30R	3.5	150.0	35.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03219
	3.5	150.0	35.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03210
T30L	3.5	198.0	50.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03419
	3.5	198.0	50.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03410
T30LL	3.5	290.0	80.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03500
	3.5	290.0	80.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03529
T40R	4.0	175.0	40.0	180	PA66	Natural (NA)	100 pcs.	2;4-8	111-01626
T50S	4.6	150.0	35.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05810
	4.6	150.0	35.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05819
T50R	4.6	200.0	50.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05000
	4.6	200.0	50.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05013
T50M	4.6	245.0	65.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-06201
	4.6	245.0	65.0	225	PA66	Black (BK)	100 pcs.	2-10	111-06200
T50I	4.6	300.0	85.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05210
	4.6	300.0	85.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05219
T50L	4.6	390.0	110.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05409
	4.6	390.0	110.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05400
T50LL	4.6	445.0	130.0	225	PA66	Black (BK)	500 pcs.	2-10	111-06002
T80R	4.7	210.0	55.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-05019
	4.7	210.0	55.0	355	PA66	Black (BK)	100 pcs.	2-12	111-08010

All dimensions in mm. Subject to technical changes.

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

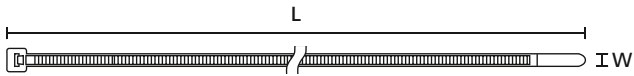


For product specific approvals and specifications please refer to the Appendix.



### Cable Ties Polyamide 6.6 standard

#### T-Series in PA66 natural and black



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T80I	4.7	300.0	85.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-08229
	4.7	300.0	85.0	355	PA66	Black (BK)	100 pcs.	2-12	111-08210
T80L	4.7	390.0	110.0	355	PA66	Black (BK)	100 pcs.	2-12	111-05410
	4.7	390.0	110.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-05419
T120S	7.6	225.0	55.0	535	PA66	Natural (NA)	50 pcs.	3;9-12	111-12829
T120I	7.6	300.0	80.0	535	PA66	Black (BK)	100 pcs.	3;9-12	111-12210
	7.6	300.0	80.0	535	PA66	Natural (NA)	100 pcs.	3;9-12	111-12219
T150R	7.6	365.0	100.0	670	PA66	Black (BK)	100 pcs.	3;9-12	111-14810
	7.6	365.0	100.0	670	PA66	Natural (NA)	100 pcs.	3;9-12	111-14819
T120R(E)	7.6	387.0	100.0	535	PA66	Black (BK)	100 pcs.	3;9-12	111-12010
	7.6	387.0	100.0	535	PA66	Natural (NA)	100 pcs.	3;9-12	111-12019
T120M	7.6	460.0	125.0	535	PA66	Black (BK)	100 pcs.	3;9-12	111-12610
	7.6	460.0	125.0	535	PA66	Natural (NA)	100 pcs.	3;9-12	111-12619
T120XM	7.6	600.0	175.0	535	PA66	Black (BK)	50 pcs.	3;9-12	111-12701
	7.6	600.0	175.0	535	PA66	Natural (NA)	50 pcs.	3;9-12	111-12704
T120L	7.6	760.0	225.0	535	PA66	Black (BK)	50 pcs.	3;9-12	111-12403
	7.6	760.0	225.0	535	PA66	Natural (NA)	50 pcs.	3;9-12	111-12429
T150L	8.8	820.0	245.0	780	PA66	Black (BK)	25 pcs.	9-12	111-15405
	8.8	820.0	245.0	780	PA66	Natural (NA)	25 pcs.	9-12	111-15419
T150M	8.9	530.0	150.0	780	PA66	Black (BK)	25 pcs.	9-12	111-00124
	8.9	530.0	150.0	780	PA66	Natural (NA)	25 pcs.	9-12	111-15619
T150XL	8.9	1,095.0	330.0	780	PA66	Black (BK)	25 pcs.	9-12	111-15500
	8.9	1,095.0	330.0	780	PA66	Natural (NA)	25 pcs.	9-12	111-15519
T150XLL	8.9	1,325.0	405.0	780	PA66	Black (BK)	25 pcs.	9-12	111-15300
	8.9	1,325.0	405.0	780	PA66	Natural (NA)	25 pcs.	9-12	111-15304
T250S	12.5	225.0	55.0	1,115	PA66	Natural (NA)	100 pcs.	11-12	111-24705
T250X	12.5	370.0	100.0	1,115	PA66	Black (BK)	100 pcs.	11-12	111-25102
T250R	12.5	515.0	125.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-24803
T250M	12.5	565.3	150.0	1,115	PA66	Black (BK)	25 pcs.	11-12	111-25001
	12.5	565.3	150.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-25002
T250I	12.5	730.0	203.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-25219
T250L	12.5	880.0	254.0	1,115	PA66	Black (BK)	25 pcs.	11-12	111-24601
T250XL	12.5	1,030.0	305.0	1,115	PA66	Black (BK)	25 pcs.	11-12	111-25200
	12.5	1,030.0	305.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-00466

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	MK3PNP2	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.



### Cable Ties Polyamide 6.6 standard

#### T-Series in PA66 coloured

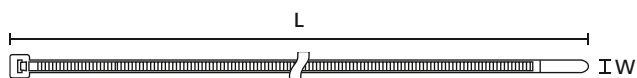
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

#### Features and Benefits

- Coloured cable ties available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simply to insert due to the ergonomically bent tail
- Other colours are available on request



T-Series.



T-Series



**Material specification  
please see page 24.**

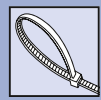
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66	Blue (BU)	100 pcs.	2;4-6	116-01816
	2.5	100.0	22.0	80	PA66	Green (GN)	100 pcs.	2;4-6	116-01815
	2.5	100.0	22.0	80	PA66	Red (RD)	100 pcs.	2;4-6	116-01812
	2.5	100.0	22.0	80	PA66	Yellow (YE)	100 pcs.	2;4-6	116-01814
T30R	3.5	150.0	35.0	135	PA66	Blue (BU)	100 pcs.	2;4-6	111-03008
	3.5	150.0	35.0	135	PA66	Green (GN)	100 pcs.	2;4-6	111-03014
	3.5	150.0	35.0	135	PA66	Red (RD)	100 pcs.	2;4-6	111-03004
	3.5	150.0	35.0	135	PA66	Yellow (YE)	100 pcs.	2;4-6	111-03006
T50R	4.6	200.0	50.0	225	PA66	Blue (BU)	100 pcs.	2-10	111-04800
	4.6	200.0	50.0	225	PA66	Green (GN)	100 pcs.	2-10	111-04801
	4.6	200.0	50.0	225	PA66	Red (RD)	100 pcs.	2-10	111-04804
	4.6	200.0	50.0	225	PA66	Yellow (YE)	100 pcs.	2-10	111-04805
T50L	4.6	390.0	110.0	225	PA66	Blue (BU)	100 pcs.	2-10	111-05404
	4.6	390.0	110.0	225	PA66	Green (GN)	100 pcs.	2-10	111-05402
	4.6	390.0	110.0	225	PA66	Red (RD)	100 pcs.	2-10	111-05406
	4.6	390.0	110.0	225	PA66	Yellow (YE)	100 pcs.	2-10	111-05428
T80R	4.7	210.0	55.0	355	PA66	Blue (BU)	100 pcs.	2-12	116-08016
	4.7	210.0	55.0	355	PA66	Green (GN)	100 pcs.	2-12	116-08015
	4.7	210.0	55.0	355	PA66	Red (RD)	100 pcs.	2-12	116-08012
	4.7	210.0	55.0	355	PA66	Yellow (YE)	100 pcs.	2-12	116-08014

All dimensions in mm. Subject to technical changes.

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

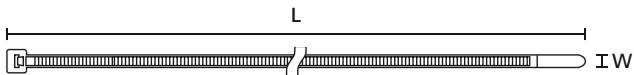


For product specific approvals and specifications please refer to the Appendix.



### Cable Ties Polyamide 6.6 standard

#### T-Series in PA66 coloured



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
<b>T80L</b>	4.7	390.0	110.0	355	PA66	Blue (BU)	100 pcs.	2-12	116-05416
	4.7	390.0	110.0	355	PA66	Green (GN)	100 pcs.	2-12	116-05415
	4.7	390.0	110.0	355	PA66	Red (RD)	100 pcs.	2-12	116-05412
	4.7	390.0	110.0	355	PA66	Yellow (YE)	100 pcs.	2-12	116-05414
<b>T150R(H)</b>	7.6	365.0	100.0	670	PA66	Blue (BU)	100 pcs.	3;9-12	116-15016
	7.6	365.0	100.0	670	PA66	Red (RD)	100 pcs.	3;9-12	116-15012
	7.6	365.0	100.0	670	PA66	Yellow (YE)	100 pcs.	3;9-12	116-15014
<b>T120R(E)</b>	7.6	387.0	100.0	535	PA66	Green (GN)	100 pcs.	3;9-12	111-12001
	7.6	387.0	100.0	535	PA66	Red (RD)	100 pcs.	3;9-12	111-12002

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.



### Cable Ties for outdoor use (UV-resistant)

#### T-Series in PA66W black

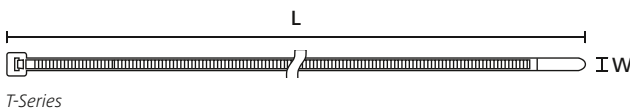
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

#### Features and Benefits

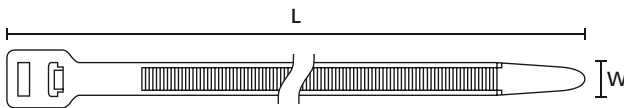
- Weather-resistant black cable tie available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simply to insert due to the ergonomically bent tail
- UV-resistant



T-Series.



T-Series



T250-series



**Material specification please see page 24.**

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-01960
T18I	2.5	145.0	35.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-02360
T18L	2.5	205.0	55.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-02160
T25LL	2.8	330.0	95.0	110	PA66W	Black (BK)	100 pcs.	2;4-6	111-02660
T30R	3.5	150.0	35.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-03260
T30L	3.5	198.0	50.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-03460
T30LL	3.5	290.0	80.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-03570
T40R	4.0	175.0	40.0	180	PA66W	Black (BK)	100 pcs.	2;4-8	111-01625
T50S	4.6	150.0	35.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-05860
T50R	4.6	200.0	50.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-04889
T50M	4.6	245.0	65.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-06206
T50I	4.6	300.0	85.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-05260
T50L	4.6	390.0	110.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-05440
T50LL	4.6	445.0	130.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-06000
T80R	4.7	210.0	55.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-05060
T80I	4.7	300.0	85.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-08290
T80L	4.7	390.0	110.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-05460
T120S	7.6	225.0	55.0	535	PA66W	Black (BK)	50 pcs.	3;9-12	111-12830
T120I	7.6	300.0	80.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	111-12230
T150R(H)	7.6	365.0	100.0	670	PA66W	Black (BK)	100 pcs.	3;9-12	111-14860
T120R(E)	7.6	387.0	100.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	111-12060
T120M	7.6	460.0	125.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	111-12660

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

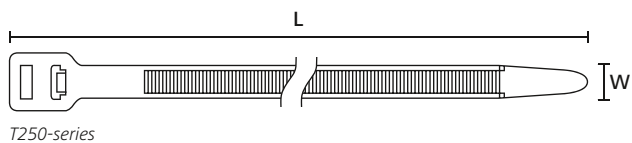
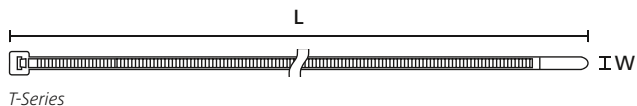


For product specific approvals and specifications please refer to the Appendix.



### Cable Ties for outdoor use (UV-resistant)

#### T-Series in PA66W black



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T120L	7.6	760.0	225.0	535	PA66W	Black (BK)	50 pcs.	3;9-12	111-12430
T150L	8.8	820.0	245.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15460
T150M	8.9	530.0	150.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15660
T150XL	8.9	1,095.0	330.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15502
T150XLL	8.9	1,325.0	405.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15305
T250R	12.5	515.0	125.0	1,115	PA66HIRHSUV	Black (BK)	25 pcs.	11-12	111-24805

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.



### Cable Ties for temperatures up to +105 °C (heat stabilised)

#### T-Series in PA66HS natural and black

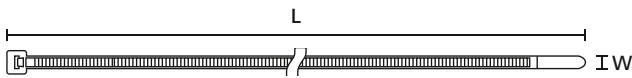
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

#### Features and Benefits

- Heat stabilised cable tie available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simple to insert due to the ergonomically bent tail
- Higher temperature resistance up to +105 °C



T-Series.



T-Series



Material specification please see page 24.

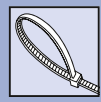
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	111-01950
	2.5	100.0	22.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-01959
T18I	2.5	145.0	35.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	111-02358
	2.5	145.0	35.0	80	PA66HS	Natural (NA)	1,000 pcs.	2;4-6	111-02359
T18L	2.5	205.0	55.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	111-02049
	2.5	205.0	55.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-02159
T30R	3.5	150.0	35.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-03259
	3.5	150.0	35.0	135	PA66HS	Black (BK)	100 pcs.	2;4-6	111-03050
T30L	3.5	198.0	50.0	135	PA66HS	Black (BK)	100 pcs.	2;4-6	111-03450
	3.5	198.0	50.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-03459
T30LL	3.5	290.0	80.0	135	PA66HS	Black (BK)	1,000 pcs.	2;4-6	111-03660
	3.5	290.0	80.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-03569
T40R	4.0	175.0	40.0	180	PA66HS	Black (BK)	100 pcs.	2;4-8	111-01623
	4.0	175.0	40.0	180	PA66HS	Natural (NA)	100 pcs.	2;4-8	111-01627
T50S	4.6	150.0	35.0	225	PA66HS	Natural (NA)	100 pcs.	2-10	111-05859
	4.6	150.0	35.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-05850
T50R	4.6	200.0	50.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-04950
T50I	4.6	300.0	85.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-05250
	4.6	300.0	85.0	225	PA66HS	Natural (NA)	100 pcs.	2-10	111-05259
T50L	4.6	390.0	110.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-05450
	4.6	390.0	110.0	225	PA66HS	Natural (NA)	100 pcs.	2-10	111-05436
T80R	4.7	210.0	55.0	355	PA66HS	Black (BK)	1,000 pcs.	2-12	117-08070
	4.7	210.0	55.0	355	PA66HS	Natural (NA)	100 pcs.	2-12	111-05059
T80I	4.7	300.0	85.0	355	PA66HS	Black (BK)	100 pcs.	2-12	111-08250
	4.7	300.0	85.0	355	PA66HS	Natural (NA)	100 pcs.	2-12	111-08259

All dimensions in mm. Subject to technical changes.

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

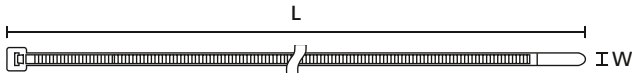


For product specific approvals and specifications please refer to the Appendix.



### Cable Ties for temperatures up to +105 °C (heat stabilised)

#### T-Series in PA66HS natural and black



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T80L	4.7	390.0	110.0	355	PA66HS	Black (BK)	100 pcs.	2-12	111-00388
	4.7	390.0	110.0	355	PA66HS	Natural (NA)	100 pcs.	2-12	111-05459
T120S	7.6	225.0	55.0	535	PA66HS	Black (BK)	50 pcs.	3;9-12	111-12850
	7.6	225.0	55.0	535	PA66HS	Natural (NA)	50 pcs.	3;9-12	111-12824
T150R(H)	7.6	365.0	100.0	670	PA66HS	Black (BK)	100 pcs.	3;9-12	111-15050
	7.6	365.0	100.0	670	PA66HS	Natural (NA)	100 pcs.	3;9-12	111-15069
T120R(E)	7.6	387.0	100.0	535	PA66HS	Black (BK)	100 pcs.	3;9-12	111-12050
	7.6	387.0	100.0	535	PA66HS	Natural (NA)	100 pcs.	3;9-12	111-12059
T120M	7.6	460.0	125.0	535	PA66HS	Black (BK)	100 pcs.	3;9-12	111-00153
T120XM	7.6	600.0	175.0	535	PA66HS	Black (BK)	50 pcs.	3;9-12	111-12700
	7.6	600.0	175.0	535	PA66HS	Natural (NA)	50 pcs.	3;9-12	111-12719
T120L	7.6	760.0	225.0	535	PA66HS	Black (BK)	50 pcs.	3;9-12	111-12440
	7.6	760.0	225.0	535	PA66HS	Natural (NA)	50 pcs.	3;9-12	111-12449
T150L	8.8	820.0	245.0	780	PA66HS	Black (BK)	25 pcs.	9-12	111-15410
T150M	8.9	530.0	150.0	780	PA66HS	Black (BK)	25 pcs.	9-12	111-15609
T150XL	8.9	1,095.0	330.0	780	PA66HS	Black (BK)	25 pcs.	9-12	111-15510

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.





## Cable Ties for higher impact resistant Polyamide 6.6 ScanBlack

### T-Series in PA66HIR(S) black

T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

#### Features and Benefits

- Impact resistant black cable tie available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simple to insert due to the ergonomically bent tail
- Higher flexibility in cold environments



T-Series.



T-Series



Material specification please see page 24.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T50R	4.6	200.0	50.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2-10	111-04890
T50I	4.6	300.0	85.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2-10	111-00222
T50L	4.6	390.0	110.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2-10	111-05441
T120I	7.6	300.0	80.0	535	PA66HIR(S)	Black (BK)	100 pcs.	3;9-12	111-12203
T120R(E)	7.6	387.0	100.0	535	PA66HIR(S)	Black (BK)	100 pcs.	3;9-12	111-12032
T120L	7.6	760.0	225.0	535	PA66HIR(S)	Black (BK)	50 pcs.	3;9-12	111-12402

All dimensions in mm. Subject to technical changes.

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

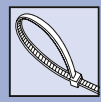
#### Recommended Tools

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.



### Cable Ties for higher fire-protection

#### T-Series in PA66V0 white

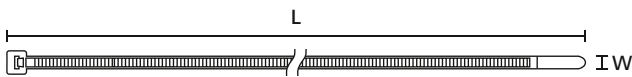
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of applications, especially where safety regulations are high, e.g. the reduction of smoke and dangerous gases.

#### Features and Benefits

- White cable tie for higher fire-protection, available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simple to insert due to the ergonomically bent tail
- High safety rating due to low fire hazard



T-Series.



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66V0	White (WH)	100 pcs.	2;4-6	111-91819
T18L	2.5	205.0	55.0	80	PA66V0	White (WH)	1,000 pcs.	2;4-6	111-02043
T30R	3.5	150.0	35.0	135	PA66V0	White (WH)	100 pcs.	2;4-6	111-93019
T50R	4.6	200.0	50.0	225	PA66V0	White (WH)	100 pcs.	2-10	111-95019
T50I	4.6	300.0	85.0	225	PA66V0	White (WH)	100 pcs.	2-10	111-00317
T120R(E)	7.6	387.0	100.0	535	PA66V0	White (WH)	100 pcs.	3;9-12	111-91210

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.



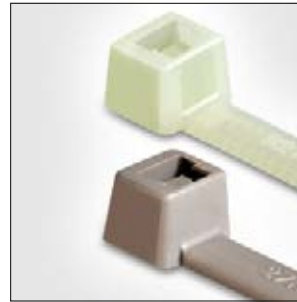
## Cable Ties for temperatures up to +150 °C in Polyamide 4.6

### T-Series in PA46 natural and grey

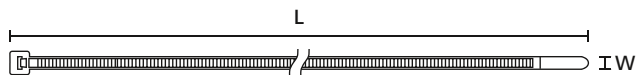
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

#### Features and Benefits

- Higher temperature cable tie available in a wide range sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simple to insert due to the ergonomically bent tail
- Higher temperature resistance up to +150 °C



T-Series.



T-Series



Material specification please see page 24.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA46	Natural (NA)	1,000 pcs.	2;4-6	114-01879
T30R	3.5	150.0	35.0	135	PA46	Natural (NA)	100 pcs.	2;4-6	114-03079
T50R	4.6	200.0	50.0	225	PA46	Grey (GY)	100 pcs.	2-10	111-00824
	4.6	200.0	50.0	225	PA46	Natural (NA)	100 pcs.	2-10	111-00525
T50I	4.6	300.0	85.0	225	PA46	Natural (NA)	100 pcs.	2-10	111-05220
T50L	4.6	390.0	110.0	225	PA46	Natural (NA)	100 pcs.	2-10	111-00526
T120R(E)	7.6	387.0	100.0	535	PA46	Natural (NA)	100 pcs.	3;9-12	114-12179

All dimensions in mm. Subject to technical changes.

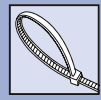
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

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.



### Cable Ties for higher chemical resistance and for temperatures up to +170 °C in Ethylene Tetrafluoroethylene

#### T-Series in E/TFE (Tefzel®) blue

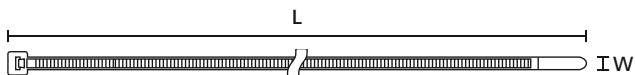
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application, especially when a high chemical resistance is required.

#### Features and Benefits

- High chemical resistance cable tie available in a wide range sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold onto bundles
- Easy application either manually or with a processing tool
- Simple to insert due to bent tail
- High temperature resistance
- No moisture absorption



T-Series.



T-Series



For more information on E/TFE mounts please refer to KR-Series on page 138.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	E/TFE	Blue (BU)	100 pcs.	2;4-6	111-00659
T30R	3.5	150.0	36.0	133	E/TFE	Blue (BU)	100 pcs.	2;4-6	111-00698
T50R	4.7	201.0	50.0	222	E/TFE	Blue (BU)	100 pcs.	2-10	111-00732
T50L	4.7	382.0	105.0	222	E/TFE	Blue (BU)	100 pcs.	2-10	111-00718
T120R	7.4	387.0	105.0	535	E/TFE	Blue (BU)	50 pcs.	3;9-12	111-01125

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										
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.



## Cable Ties for higher chemical resistance for temperatures up to +115 °C in Polypropylene

### T-Series in PP natural and black

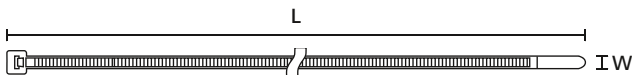
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

#### Features and Benefits

- Higher chemical resistant cable tie available in a wide range sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simple to insert due to the ergonomically bent tail
- Floats in water
- High chemical resistance



T-Series.



T-Series



Material specification please see page 24.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	36	PP	Black (BK)	100 pcs.	2;4-6	111-01917
	2.5	100.0	22.0	36	PP	Natural (NA)	1,000 pcs.	2;4-6	111-01922
T30R	3.6	148.0	32.0	89	PP	Natural (NA)	100 pcs.	2;4-6	111-03017
T50R	4.8	202.0	44.5	111	PP	Black (BK)	100 pcs.	2-10	111-04928
	4.8	202.0	44.5	111	PP	Natural (NA)	100 pcs.	2-10	111-04931
T120S	7.6	225.0	55.0	267	PP	Black (BK)	500 pcs.	3;9-12	111-12827
T120R	7.6	390.0	105.0	267	PP	Black (BK)	500 pcs.	3;9-12	111-12066

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	MK3PNP2	EVO7	MK7HT	MK7P	MK6	MK9	MK9HT	MK9P

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



### Cable Ties made from sustainable bioplastic in Polyamide 11

#### T-Series in PA11 black

T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost all types of applications.

#### Features and Benefits

- Made of polyamide 11, a completely sustainable bioplastic derived from vegetable oil
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- High UV- resistance for long-term outdoor application
- Stable technical performance even at very low temperatures
- High resistance to chemicals, including chlorides
- Low water absorption rate for consistent technical performance and high durability



T-Series.



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA11	Black (BK)	100 pcs.	2;4-6	111-01718
T30R	3.5	150.0	35.0	130	PA11	Black (BK)	100 pcs.	2;4-6	111-01719
T50S	4.6	150.0	35.0	170	PA11	Black (BK)	100 pcs.	2-10	111-01720
T50R	4.6	200.0	50.0	170	PA11	Black (BK)	100 pcs.	2-10	111-01721

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	
MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	MK9	

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"> <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	E/TFE	-80 °C to +170 °C	Blue (BU)	UL94 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)	UL94 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)	UL94 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 RoHS
Polyamide 12	PA12	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL94 HB	<ul style="list-style-type: none"> <li>Good chemical resistance to: acids, bases, oxidizing agents</li> <li>UV-resistant</li> </ul>	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"> <li>Resistance to high temperatures</li> <li>Very moisture sensitive</li> <li>Low smoke sensitive</li> </ul>	HF LFH RoHS
Polyamide 6	PA6	-40 °C to +80 °C	Black (BK)	UL94 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)	UL94 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)	UL94 V2	<ul style="list-style-type: none"> <li>High yield strength</li> </ul>	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"> <li>Good resistance to: lubricants, vehicle fuel, salt water and many solvents</li> </ul>	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"> <li>High yield strength</li> <li>Modified elevated max. temperature</li> <li>UV-resistant</li> </ul>	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"> <li>High yield strength</li> <li>Modified elevated max. temperature</li> </ul>	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"> <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)	UL94 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>	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"> <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, scan black	PA66HIR(S)	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL94 HB	<ul style="list-style-type: none"> <li>Limited brittleness sensitivity</li> <li>Higher flexibility at low temperature</li> </ul>	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"> <li>High yield strength</li> <li>UV-resistant</li> </ul>	HF RoHS

Tefzel® is a registered trademark of DuPont. General linguistic usage for cable ties made from raw material E/TFE is Tefzel®-Tie. \*\*More colours on request.

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.



**N = 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
<b>Polyamide 6.6</b> , with metal particles	PA66MP	-40 °C to +85 °C, (+105 °C, 500 h)	Blue (BU)	UL94 HB	<ul style="list-style-type: none"> <li>High yield strength</li> <li>Metal and X-Ray detectable</li> </ul>	<b>HF</b> <b>RoHS</b>
<b>Polyamide 6.6 V0</b>	PA66V0	-40 °C to +85 °C	White (WH)	UL94 V0	<ul style="list-style-type: none"> <li>High yield strength</li> <li>Low smoke emission</li> </ul>	<b>HF</b> <b>LFH</b> <b>RoHS</b>
<b>Polyamide 6.6 V0</b> , High Oxygen Index	PA66V0-HOI	-40 °C to +85 °C, (+105 °C, 500 h)	White (WH)	UL94 V0	<ul style="list-style-type: none"> <li>High yield strength</li> <li>Low smoke emissions</li> </ul>	<b>HF</b> <b>LFH</b> <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> <b>LFH</b> <b>RoHS</b>
<b>Polyetheretherketone</b>	PEEK	-55 °C to +240 °C	Beige (BGE)	UL94 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> <b>LFH</b> <b>RoHS</b>
<b>Polyethylene</b>	PE	-40 °C to +50 °C	Black (BK), Grey (GY)	UL94 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> <b>RoHS</b>
<b>Polyolefin</b>	PO	-40 °C to +90 °C	Black (BK)	UL94 V0	<ul style="list-style-type: none"> <li>Low smoke emissions</li> </ul>	<b>HF</b> <b>LFH</b> <b>RoHS</b>
<b>Polypropylene</b>	PP	-40 °C to +115 °C	Black (BK), Natural (NA)	UL94 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> <b>RoHS</b>
<b>Polypropylene, Ethylene- Propylene-Dien- Terpolymere-rubber</b> free of Nitrosamine	PP, EPDM	-20 °C to +95 °C	Black (BK)	UL94 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> <b>RoHS</b>
<b>Polypropylene</b> with metal particles	PPMP	-40 °C to +115 °C	Blue (BU)	UL94 HB	<ul style="list-style-type: none"> <li>Floats in certain liquids</li> <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>Polyvinylchloride</b>	PVC	-10 °C to +70 °C	Black (BK), Natural (NA)	UL94 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, Stainless Steel</b>	SS304, 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> <b>LFH</b> <b>RoHS</b>
<b>Thermoplastic Polyurethane</b>	TPU	-40 °C to +85 °C	Black (BK)	UL94 HB	<ul style="list-style-type: none"> <li>High elasticity</li> <li>Good chemical resistance to: acids, bases and oxidizing agents</li> </ul>	<b>HF</b> <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**



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