



1-Piece Fixing Ties with Fir Tree, with Disc

1-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

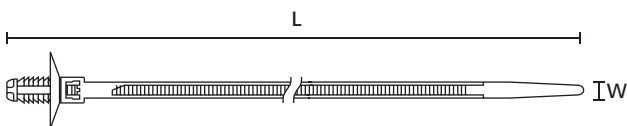
Primarily designed for fixing cable harnesses in the automotive industry, their simplicity and ease of use has resulted in these parts being used in other industries, for example aviation, switch gear and white goods manufacturing.

Features and benefits

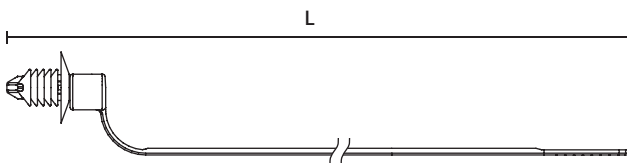
- Cable tie head always situated in defined position
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises ingress of dust, dirt and water
- Fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded holes



Material specification
please see page 26.



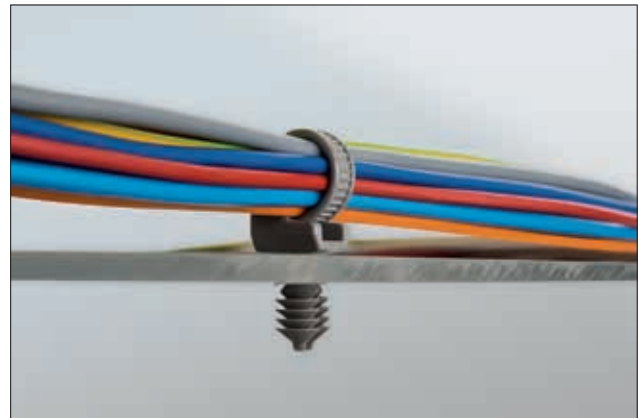
One piece fixing tie with fir tree mount, standard design



Special design without a gap between head and bundle; FT220DP7



Fir tree foot parts can be used for a variety of panel thicknesses.



T50SOSFT6D10E - One piece fixing tie with fir tree foot part.

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Width (W)	Bundle Ø max.	N	Disc Ø	Material	Colour	Tools	Article-No.
T50SOSFT6D10E		5.8 - 6.2	0.8 - 5.5	4.6	32.0	225	9.8	PA46	Grey (GY)	2-10	157-00028
		5.8 - 6.2	0.8 - 5.5	4.6	32.0	225	9.8	PA66HS	Black (BK)	2-10	157-00045
T50SOSFT6-E2		6.3 - 7.0	0.6 - 4.2	4.6	35.0	180	16.0	PA66HS	Black (BK)	2-10	157-00085
		6.3 - 7.0	0.6 - 4.2	4.6	35.0	180	16.0	PA66HS	Grey (GY)	2-10	157-00198
T50SOSFT6LGE		6.3 - 7.0	0.7 - 7.0	4.6	35.0	180	16.0	PA66HS	Black (BK)	2-10	157-00228
T50SOSFT8E		8.0 - 8.5	0.6 - 6.0	4.6	35.0	225	16.0	PA46	Grey (GY)	2-10	157-00115
		8.0 - 8.5	0.6 - 6.0	4.6	35.0	225	16.0	PA66HS	Black (BK)	2-10	157-00072
T18RDP5		4.9 - 5.1	3.0 - 4.0	2.5	20.0	80	13.0	PA66	Black (BK)	2;4-6	150-55610

All dimensions in mm. Subject to technical changes.

Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	545	545	546	546	548	549	550	551	549	549	552

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



1-Piece Fixing Ties with Fir Tree, with Disc

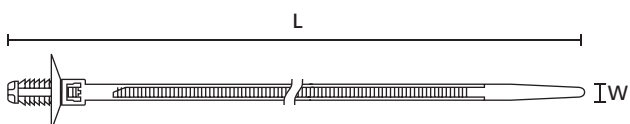
1-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Width (W)	Bundle Ø max.	N	Disc Ø	Material	Colour	Tools	Article-No.
FT220DP7		6.8 - 7.2	0.8 - 5.0	4.7	40.0	225	16.0	PA66	Black (BK)	2-12	150-01700
OS160FT6HEX		6.35 (hexagonal)	0.7 - 5.0	5.3	30.0	200	16.0	PA66	Black (BK)	3;9-12	157-00080
		6.5	0.7 - 5.0	5.3	30.0	200	16.0	PA66HS	Black (BK)	3;9-12	157-00081
OS170-FT7-LH		6.8 - 7.2	0.6 - 4.5	5.3	30.0	147	16.0	PA66	Black (BK)	3;9-12	157-00019
T30SOS-AS-FT6-E		6.3 - 6.7	0.6 - 4.0	3.5	25.0	200	16	PA66HS	Black (BK)	2;4-6	157-00243
T50ROSFTQM6		6.1	0.6 - 7.0	5.1	50.0	225	7.9	PA66HIRHSUV	Black (BK)	2-10	157-00112
T50SOSFT6-E3		6.1 - 6.9	0.7 - 3.5	4.7	35.0	150	16	PA66HIRHS	Black (BK)	2-10	157-00241
T50SOSFT6E1		6.3 - 7.0	0.7 - 3.0	4.7	35.0	150	16.0	PA66HIRHS	Black (BK)	2-10	157-00033
		6.3 - 7.0	0.7 - 3.0	4.7	35.0	225	16.0	PA46	Grey (GY)	2-10	157-00059
T50SOSFT6LG-E2		6.1 - 6.9, 6.1 - 6.6 (hexagonal)	0.6 - 8.3	4.6	35.0	180	16.0	PA66HIRHS	Black (BK)	2-10	157-00242
T50SOSFT6LG-E4		6.3 - 7.0	0.8 - 7.0	4.9	31.0	200	22.0	PA66HS	Black (BK)	2-10	157-00237
OS180FT7LH		6.5 - 7.0, 6.35	0.6 - 4.5	5.3	30.0	200	16.0	PA66	Black (BK)	3;9-12	157-00070
		6.5 - 7.0, 6.35	0.6 - 4.5	5.3	30.0	200	16.0	PA66	Grey (GY)	3;9-12	157-00068
T50ROSFT6LGU		6.5 - 7.2	0.6 - 8.5	5.1	50.0	225	15.9	PA66HS	Black (BK)	2-10	157-00052

All dimensions in mm. Subject to technical changes.

1-Piece Fixing Ties with Fir Tree, with Disc

1-Piece Fixing Ties with Fir Tree, with Disc, releasable, for round holes



One piece fixing tie with fir tree mount, standard design



Material specification please see page 26.

TYPE	Hole Ø (FH)	Panel Thickness	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Material	Colour	Tools	Article-No.
REL30SDP6	6.3 - 7.1	3.0 - 7.0	5.0	170.0	31.0	135	22.0	PA66	Black (BK)	2;4-6	150-55500

All dimensions in mm. Subject to technical changes.

Recommended Tools

	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	545	545	546	546	548	549	550	551	549	549	552

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)		- Corrosion resistant - Antimagnetic	RoHS
Chloroprene rubber	CR	-20 °C to +80 °C	Black (BK)		- Weather resistant - High yield strength	RoHS
Ethylene Tetrafluoroethylene (Tefzel®)	E/TFE	-80 °C to +170 °C	Blue (BU)	UL 94 V0	- 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)	UL 94 HB	- Limited brittleness sensitivity - Flexible at low temperature - Not moisture sensitive - Robust on impact	RoHS
Polyamide 11	PA11	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	- 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)	UL 94 HB	- Good chemical resistance to acids, bases, oxidizing agents - UV resistant	HF 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	- Resistance to high temperatures - Very moisture sensitive - Low smoke sensitivity	HF LFH RoHS
Polyamide 6	PA6	-40 °C to +80 °C	Black (BK)	UL 94 V2	High yield strength	RoHS
Polyamide 6 high impact modified	PA6HIR	-40 °C to +80 °C	Black (BK)	UL 94 HB	- 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)	UL 94 V2	High yield strength	HF RoHS
Polyamide 6.6 glass-fibre reinforced	PA66GF13, PA66GF15	-40 °C to +105 °C	Black (BK)	UL 94 HB	Good resistance to lubricants, fuels, salt water and solvents	HF RoHS
Polyamide 6.6 heat and UV stabilised	PA66HSW	-40 °C to +105 °C	Black (BK)	UL 94 V2	- High yield strength - Modified elevated maximum temperature - UV resistant	HF RoHS
Polyamide 6.6 heat stabilised	PA66HS	-40 °C to +105 °C	Black (BK), Natural (NA)	UL 94 V2	- High yield strength - Modified elevated maximum temperature	HF RoHS
Polyamide 6.6 high impact modified	PA66HIR	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	- 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)	UL 94 HB	- Limited brittleness sensitivity - Higher flexibility at low temperature - Modified elevated maximum temperature - High yield strength, UV resistant	RoHS
Polyamide 6.6 high impact modified, heat stabilised	PA66HIRHS	-40 °C to +105 °C	Black (BK)	UL 94 HB	- Limited brittleness sensitivity - Higher flexibility at low temperature - Modified elevated maximum temperature	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	- Limited brittleness sensitivity - Higher flexibility at low temperature	RoHS
Polyamide 6.6 UV resistant	PA66W	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 V2	- High yield strength - UV resistant	HF RoHS

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)	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 (BGE)	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	• Floats 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 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