

1-Piece Fixing Ties with rivet, releasable

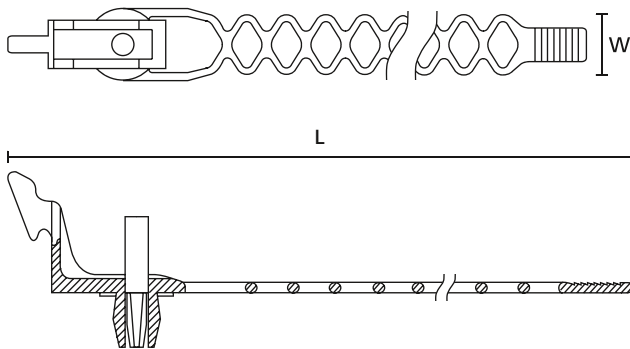
Offering a very secure fixing, particularly in applications suffering from vibration, these rivet fixing ties are simple and quick to install. Designed originally for the automotive industry they are now widely used in many industries as diverse as agriculture and ship building.

Features and Benefits

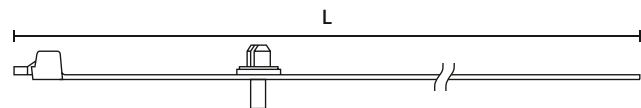
- Simple to install with wings to lock ties firmly in place
- Releasable and reusable
- RELF and RI ranges are conventional 'serrated' cable ties
- FBR range has a 'ladder-type' design for a very flexible strap



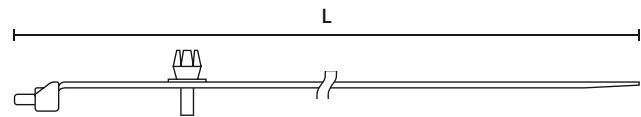
Fixing ties with rivet for especially safe fixing.



Fixing ties type FBR



Fixing ties type RELF



Fixing ties type RI

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
RI 80	7.0	80.0	16.0	265	6.9 - 7.1	0.8 - 2.2	PA12	Black (BK)	2-12	131-14080
RELF170	8.0	180.0	44.0	225	6.3	2.5 - 2.5	PA66HIR	Black (BK)	9-12	115-40902
RI 120	9.0	120.0	28.0	265	6.9 - 7.1	0.8 - 2.2	PA12	Black (BK)	3;9-12	131-14120
RI 160	9.0	160.0	41.0	265	6.9 - 7.1	0.8 - 2.2	PA12	Black (BK)	11-12	131-14160
FBR6/140	12.0	158.0	42.0	-	6.2 - 6.5	0.8 - 2.5	PA66	Black (BK)	11-12	150-27140

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	MK9	MK9HT	MK9P

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"> 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 not be regarded as a material specification and are no substitute for a suitability test. Please see our datasheets for further details.

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



= Minimum Loop Tensile Strength
for Cable Ties (Newton)

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 	<div>HF</div> <div>RoHS</div>
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 	<div>HF</div> <div>LFH</div> <div>RoHS</div>
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 	<div>HF</div> <div>LFH</div> <div>RoHS</div>
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 	<div>HF</div> <div>LFH</div> <div>RoHS</div>
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 	<div>HF</div> <div>LFH</div> <div>RoHS</div>
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 	<div>HF</div> <div>RoHS</div>
Polyolefin	PO	-40 °C to +90 °C	Black (BK)	UL94 V0	<ul style="list-style-type: none"> Low smoke emissions 	<div>HF</div> <div>LFH</div> <div>RoHS</div>
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 	<div>HF</div> <div>RoHS</div>
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 	<div>HF</div> <div>RoHS</div>
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 	<div>RoHS</div>
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 	<div>RoHS</div>
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 	<div>HF</div> <div>LFH</div> <div>RoHS</div>
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 	<div>HF</div> <div>RoHS</div>

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**More colours on request.



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