



Cable ties with low profile head

- **Robusto-Series**

Robusto cable ties have many technical features which make them suitable for use in many applications for fixing and supporting cables, pipes and other elements. The polyamide 11 used to manufacture these ties offers excellent resistance to chemicals in even the most challenging environments such as offshore, oil rigs, construction vehicles, trucks and trailers.

These cable ties have excellent UV resistance as well as being highly resistant to chemicals like chlorides: recommended for use on galvanised steel, especially on solar panel installations.

In addition, the material has a high impact resistance to low temperatures which enables Robusto ties to be used in areas where it is cold, for example at high altitudes or Nordic countries.



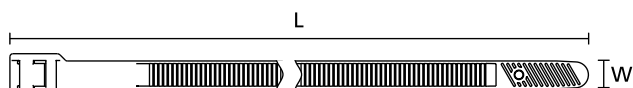
Low profile head cable tie, Robusto-Series.

Features and Benefits

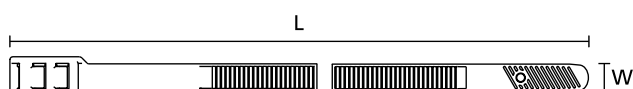
- Made of polyamide 11, a completely sustainable bioplastic derived from vegetable oil
- Outside serrated with a round, innovative head and one or two flexible stop pawls
- Low insertion force for manual, tool-free application
- High tensile strength
- Soft material for easy handling without damaging cables
- 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
- Pre-locking feature



One Step to the Web!



LPH942



LPH962/LPH992

Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Article-No.
LPH942	9.0	180.0	42.0	360	PA11	Black (BK)	100	112-00011
LPH962	9.0	260.0	62.0	530	PA11	Black (BK)	100	112-00012
LPH992	9.0	355.0	92.0	530	PA11	Black (BK)	100	112-00013

All dimensions in mm. Subject to technical changes.

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

Material Specification Overview

Material	Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	
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
Ethylenterafluorineethylen	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 	RoHS HF
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 	RoHS HF
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 	RoHS HF LFH
Polyamide 6	PA6	-40 °C to +80 °C	Black (BK)	UL94 V2	<ul style="list-style-type: none"> High yield strength 	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 	RoHS HF
Polyamide 6.6, Glassfibre 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 	RoHS HF
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 	RoHS HF
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 	RoHS HF
Polyamide 6.6 High Imp. Mod., Heat Stab.	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 Imp. Mod. 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 	RoHS HF
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

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.

**More colours on request.

*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.

= Minimum Tensile Strength

Material Specification Overview

Material	Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	RoHS	HF	LFH
Polyamide 6.6 high impact modified, heat and UV stabilised	PA66-HIRHSW	-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 	RoHS	HF	
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 	RoHS	HF	
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 	RoHS	HF	LFH
Polyamide 6.6 V0 High Oxygen Index	PA66-V0-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 	RoHS	HF	LFH
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 	RoHS	HF	
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		
Polyester	SP	-50 °C to +150 °C	Black (BK)		<ul style="list-style-type: none"> UV-resistant Good chemical resistance to: most acids, alkalis and oils 	RoHS	HF	LFH
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 	RoHS	HF	LFH
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 	RoHS	HF	
Polyolefin	PO	-40 °C to +90 °C	Black (BK)	UL94 V0	<ul style="list-style-type: none"> Low smoke emissions 	RoHS	HF	LFH
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 	RoHS	HF	
Polypropylene, Ethylene-Propylene-Dien-Terpolymer-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 	RoHS	HF	
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, oil 	RoHS		
Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)		<ul style="list-style-type: none"> Corrosion resistant Antimagnetic 	RoHS	HF	LFH
Thermoplastic Polyurethane	TPU	-40 °C to +85 °C	Black (BK)	UL94 HB	<ul style="list-style-type: none"> High elastic Good chemical resistance to: acids, bases, oxidizing agents 	RoHS	HF	

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