Cable ties with low profile head

Robusto-Series

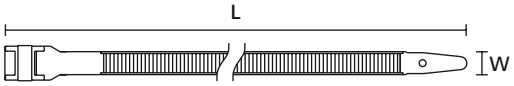
Robusto cable ties manufactured from PA11 have many technical features making them suitable for use in a variety of applications to fix and support cables, pipes and other elements. They offer an excellent resistance to chemicals in most challenging environments like offshore or on oil rigs and construction vehicles. In addition the very good UV resistance makes it a perfect choice for solar panel cable installations.

Flat head cable tie from sustainable bioplastic, Robusto-Series.

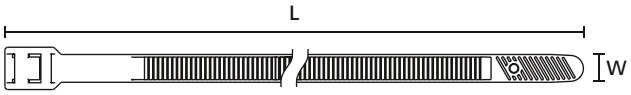
Features and benefits

- Made of Polyamide 11 – a sustainable bioplastic from vegetable oil
- Outside serrated cable tie with an innovative rounded head design
- Low insertion force for tool-free application
- High tensile strength with a single or a double bridged head
- Soft material for easy handling without damaging cables
- Very good UV resistance and durability in outdoor applications
- 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
- Prelocking function by simply pushing the strap through the eyelet provided

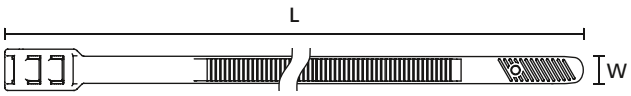
Application video: Robusto



Robusto (LPH922)



Robusto (LPH942)



Robusto (LPH962, LPH992)

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
Robusto (LPH922)	9.0	123.0	22.0	310	PA11	Black (BK)	100 pcs.	1;3;9-12	112-00025
Robusto (LPH942)	9.0	180.0	42.0	360	PA11	Black (BK)	100 pcs.	1;3;9-12	112-00011
Robusto (LPH962)	9.0	260.0	62.0	530	PA11	Black (BK)	100 pcs.	1;3;9-12	112-00012
Robusto (LPH992)	9.0	355.0	92.0	530	PA11	Black (BK)	100 pcs.	1;3;9-12	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.

Recommended Tools						
	1	3	9	10	11	12
	MK10-SB	MK21	MK6	EVO9	EVO9HT	MK9P
	551	551	557	554	554	558

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

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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	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 impacts	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 resistanc	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 +150 °C (5000 h), +195 °C (500 h)	Natural (NA), Grey (GY)	UL 94 V2	• Resistance to high temperatures • Very moisture sensitive • Low smoke sensitiv	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, vehicle fuel, salt water and a lot of solvent	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 max. 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 max. 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 max. 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 max. temperature	RoHS
Polyamide 6.6, high impact modified, ScanBlack	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

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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)	halogen free	• UV-resistant • Good chemical resistance to: most acids, alkaliks 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, oxidizing agents	HF LFH RoHS
Polyethylene	PE	-40 °C to +50 °C	Black (BK), Grey (GY)	UL 94 HB	• Low moisture absorption • Good chemical oilsresistance to: most acids, alcohol and 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: organic acids	HF RoHS
Polypropylene, Ethylene-Propylene-Dien-Terpolymere-rubber free of Nitrosamine	PP, EPDM	-20 °C to +95 °C	Black (BK)	UL 94 HB	• Good resistance to high temperatures • 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, ethanol and oil	RoHS
Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)	non-burning	• Corrosion resistant • Antimagnetic • Weather resistant • Outstanding chemical resistance	HF LFH RoHS
Thermoplastic Polyurethane	TPU	-40 °C to +85 °C	Black (BK)	UL 94 HB	• High elastic • Good chemical resistance to: acids, bases and oxidizing 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 additon 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.

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

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

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