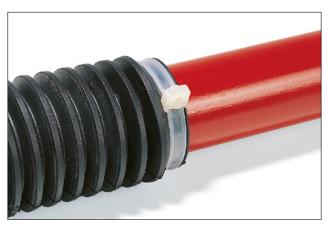
## Cable Tie locked by glass fibre pin

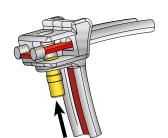
In addition to offering a secure method of bundling cables, the design of the KR ties makes them ideal for use as a method of securing bellows on steering racks, water hoses and vacuum lines.

#### **Features and Benefits**

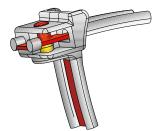
- Patented cable tie system
- Smooth strap which is locked into place with a glass-fibre reinforced pin
- For assembly a special KR-tool is needed
- Very secure and vibration resistant fixing
- KR-ties up to 426 mm are made as one piece
- Available in various materials, including PA12 which is less hygroscopic



The KR8/33 has been repeatedly proven in High Vibration applications.



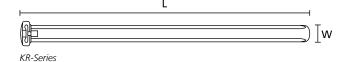
The unlocked head of a KR-tie.



The cable tie (red) is locked into place with the pin.



KR Series is available in different sizes.



Application tools please see page 442.

#### • KR-Series, 1-Piece

TYPE	Width (W)	Length (L)	Bundle Ø max.	ζ <sub>N</sub>	Material	Colour	Pack Cont.	Article-No.
	6.0	360.0	93.0	490	PA66	Natural (NA)	50	121-63519
KR6/35	6.0	360.0	93.0	490	PA66HS	Natural (NA)	50	121-63555
	6.0	360.0	93.0	490	PA66W	Black (BK)	50	121-63560
	8.0	210.0	47.0	785	PA66HS	Natural (NA)	50	121-82155
KR8/21	8.0	210.0	47.0	785	PA66	Natural (NA)	50	121-82119
	8.0	210.0	47.0	785	PA66W	Black (BK)	50	121-82160

All dimensions in mm. Subject to technical changes.

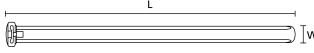
 $\label{thm:minimum order Quantity (MOQ) may differ from package content. Other packaging options may also be available.$ 



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



# Cable Tie locked by glass fibre pin



Material specification please see page 30.

KR-Series

#### • KR-Series, 1-Piece

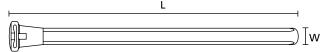
ТҮРЕ	Width (W)	Length (L)	Bundle Ø max.	ζ <sub>N</sub>	Material	Colour	Pack Cont.	Article-No.
	8.0	337.0	86.0	390	PA12	Black (BK)	50	121-83380
	8.0	337.0	86.0	785	PA66	Natural (NA)	50	121-83319
KR8/33	8.0	337.0	86.0	785	PA46	Grey (GY)	50	121-83378
	8.0	337.0	86.0	785	PA66HS	Natural (NA)	50	121-83355
	8.0	337.0	86.0	785	PA66W	Black (BK)	50	121-83360
VD0/43	8.0	426.0	105.0	785	PA66HS	Black (BK)	50	121-74360
KR8/43	8.0	426.0	105.0	785	PA66HS	Natural (NA)	50	121-74359

All dimensions in mm. Subject to technical changes.

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



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Other dimensions are available on request.

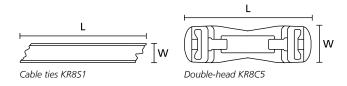
KR-Series, ultrasonic welded

## • KR-Series, ultrasonic welded

TYPE	Width (W)	Length (L)	Bundle Ø max.	ζ <sub>N</sub>	Material	Colour	Pack Cont.	Article-No.
KR8/50	8.0	500.0	152.0	785	PA66	Natural (NA)	50	121-05019
KR8/60	8.0	600.0	184.0	785	PA66W	Black (BK)	50	121-06060

All dimensions in mm. Subject to technical changes.

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



## • KR-Series, endless

TYPE	Width (W)	Length (L)	N N	Material	Colour	Pack Cont.	Article-No.
KR8/S1	8.0	50.0 m	720	PA66HS	Natural (NA)	50.0 m	121-98151
KNO/31	8.0	50.0 m	785	PA66W	Black (BK)	50.0 m	121-98160
KR8/C5	11.7	38.0	-	PA66HS	Natural (NA)	200	121-58551
NNO/C5	11.7	38.0	-	PA66W	Black (BK)	200	121-58560

All dimensions in mm. Subject to technical changes.

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

# Cable Ties and Fixings Material Information

# **Material Specification Overview**

Material	Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	
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
Ethylenterafluori- neethylen	E/TFE	-80 °C to +170 °C	Blue (BU)	UL94 V0	<ul> <li>Resistance to radioactivity</li> <li>UV- resistant, not moisture sentitive</li> <li>Good chemical resistance to:</li> <li>acids, bases, oxidizing agents</li> </ul>	RoHS
Polyacetal	POM	-40 °C to +90 °C, (+110 °C, 500 h)	Natural (NA)	UL94 HB	<ul> <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	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	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><li>Resistance to high temperatures</li><li>Very moisture sensitive</li><li>Low smoke sensitive</li></ul>	RoHS HF LFH
Polyamide 6	PA6	-40 °C to +80 °C	Black (BK)	UL94 V2	High yield strength	RoHS
Polyamide 6.6	PA66	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK), Natural (NA)	UL94 V2	High yield strength	RoHS HF
<b>Polyamide 6.6,</b> Glassfibre reinforced	PA66GF13, PA66GF15	-40 °C to +105 °C	Black (BK)	UL94 HB	Good resistance to: lubricants, vehicle fuel, salt water and many solvents	RoHS HF
Polyamide 6.6 heat and UV sta- bilised	PA66HSW	-40 °C to +105 °C	Black (BK)	UL94 V2	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	High yield strength     Modified elevated max. temperature	RoHS HF
<b>Polyamide 6.6</b> High Imp. Mod., Heat Stab.	PA66HIRHS	-40 °C to +105 °C	Black (BK)	UL94 HB	Limited brittleness sensitivity     Higher flexibility at low temperature     Modified elevated max. temperature	RoHS
<b>Polyamide 6.6</b> High Imp. Mod. scan black	PA66HIR(S)	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL94 HB	Limited brittleness sensitivity     Higher flexibility at low temperature	RoHS HF
<b>Polyamide 6.6</b> High Impact Modified	PA66HIR	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL94 HB	Limited brittleness sensitivity     Higher flexibility at low temperature	RoHS
Polyamide 6.6 high impact modified, heat and UV stabilised	PA66- HIRHSW	-40 °C to +110 °C	Black (BK)	UL94 HB	<ul> <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>	RoHS HF

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.





<sup>\*</sup>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.

# **Material Specification Overview**

Material	Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	
<b>Polyamide 6.6</b> UV Resistant	PA66W	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL94 V2	<ul><li> High yield strength</li><li> UV-resistant</li></ul>	RoHS HF
Polyamide 6.6 V0	PA66V0	-40 °C to +85 °C	White (WH)	UL94 V0	<ul><li> High yield strength</li><li> Low smoke emission</li></ul>	RoHS HF LFH
Polyamide 6.6 V0 High Oxygen Index	PA66V0-HOI	-40 °C to +85 °C, (+105 °C, 500 h)	White (WH)	UL94 V0	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	High yield strength	RoHS HF
Polyamide 6 high impact mo- dified	PA6HIR	-40 °C to +80 °C	Black (BK)	UL94 HB	Limited brittleness sensitivity     Higher flexibility at low temperature	RoHS
Polyester	SP	-50 °C to +150 °C	Black (BK)		UV-resistant Good chemical resistance to: most acids, alkalis and oils	RoHS HF LFH
Polyetheretherke- tone	PEEK	-55 °C to +240 °C	Beige (BGE)	UL94 V0	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	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	Low smoke emissions	RoHS HF LFH
Polypropylene	PP	-40 °C to +115 °C	Black (BK), Natural (NA)	UL94 HB	<ul><li>Floats in water</li><li>Moderate yield strength</li><li>Good chemical resistance to: organic acids</li></ul>	RoHS HF
Polypropylene, Ethylene-Propyle- ne-Dien-Terpoly- mere-rubber free of Nitrosamine	PP, EPDM	-20 °C to +95 °C	Black (BK)	UL94 HB	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	Low moisture absorption     Good chemical resistance to: acids, ethanol, oil	RoHS
Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)		Corrosion resistant     Antimagnetic	RoHS HF LFH
Thermoplastic Polyurethane	TPU	-40 °C to +85 °C	Black (BK)	UL94 HB	<ul><li> High elastic</li><li> Good chemical resistance to:</li><li> acids, bases, oxidizing agents</li></ul>	RoHS HF

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<sup>\*\*</sup>More colours on request.





<sup>\*</sup>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.