## Cable ties for food industry, detectable

The Metal Content Tie is a cable tie specifically designed for use in the food and pharmaceutical processing industries. A unique manufacturing process, involving the inclusion of a metallic pigment, enables even small 'cut-off' sections of the tie to be detected by standard metaldetecting equipment. Ideally suited for the installaton of cabling in and around the manufacturing process.

## Features and benefits

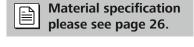
- · Total metal dispersion throughout the tie
- · Can support quality assurance in the production of food stuffs, for example HACCP
- Blue colour for easy visual detection
- Greatly reduces risk of contamination
- Magnetic and X-Ray detectable (detection level depending on specific application and equipment)



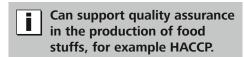
Our detectable MCT(S) cable ties used in the food and pharmaceutical industry.



One Step to the Web!







TYPE	Width (W)	Length (L)	Bundle Ø max.	KZ	Material	Colour	Pack Cont.	Tools	Article-No.
MCT18R	2.5	100.0	22.0	80	PA66MP	Blue (BU)	100 pcs.	2;4-6	111-01225
MCT30R	3.5	150.0	35.0	135	PA66MP	Blue (BU)	100 pcs.	2;4-6	111-00829
MCT50R	4.6	202.0	50.0	225	PA66MP	Blue (BU)	100 pcs.	2-10	111-00830
MCT50L	4.7	380.0	110.0	225	PA66MP	Blue (BU)	100 pcs.	2-12	111-00831
MCT120R	7.6	387.0	100.0	535	PA66MP	Blue (BU)	100 pcs.	3;9-12	111-01136

All dimensions in mm. Subject to technical changes.

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

Rec	Recommended Tools										
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

## MCT-Series releasable, PA66MP

TYPE	Width (W)	Length (L)	Bundle Ø max.	ΚZ	Material	Colour	Pack Cont.	Article-No.
MCTRELK2M	4.6	250.0	65.0	225	PA66MP	Blue (BU)	100 pcs.	111-00937

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	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 <sup>®</sup> )	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
<b>Polyamide 6,</b> 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
<b>Polyamide 6.6,</b> 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
<b>Polyamide 6.6,</b> 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
<b>Polyamide 6.6,</b> 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
<b>Polyamide 6.6,</b> 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
<b>Polyamide 6.6,</b> 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
<b>Polyamide 6.6,</b> 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
<b>Polyamide 6.6,</b> UV-resistant	PA66W	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 V2	High yield strength     UV-resistant	HF RoHS

26

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
<b>Polyamide 6.6,</b> 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	РО	-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
<b>Polypropylene</b> with metal particles	PPMP	-40 °C to +115 °C	Blue (BU)	UL 94 HB	<ul><li>Metal and X-Ray detectable</li><li>Heat resistant</li><li>Moderate yield strength</li><li>Good chemical resistance</li></ul>	RoHS
<b>Polypropylene</b> 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 Tefzel® is a registered trademark of	TPU	-40 °C to +85 °C	Black (BK)	UL 94 HB	High elastic     Good chemical resistance to: acids, bases and oxidizing agents     **More colours on request.	HF RoHS

Tefzel<sup>®</sup> is a registered trademark of DuPont. General linguistic usage for cable ties made from raw material E/TFE is Tefzel<sup>®</sup>-Tie. In addition to Tefzel<sup>®</sup> 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 \*\*More colours on request.

