## 1-piece fixing ties with arrowhead, with disc

1-piece fixing ties with arrowhead, with disc, for round holes

With a diverse range of fixing possibilities these ties are ideal for use in many different industries, including automotive, aerospace, white goods manufacture and panel building. This fastening solution is used to secure cable harnesses. We offer a variety of panel thicknesses and hole sizes to suit all kinds of application.

## **Features and benefits**

- · Easy to install without the need for a tool
- · Arrowhead simply locks into place
- Disc adjusts tie for pressures from various directions and minimises ingress of dust and dirt
- Cable tie head always situated in a defined position



T30SOS-AS-SFT6.5x4E, 1 piece fixing tie with AntiSlip engraving and for an round hole 6.5 mm or an square hole 6.5x4 mm.



Material specification please see page 26.



\* AS Anti-Slip Ties inhibit sideways movement on the bundle.

ТҮРЕ	Hole Ø (FH)	Panel Thickness	Width (W)	Length (L)	Bundle Ø max.	$\langle z \rangle$	Disc Ø	Material	Colour	Tools	Article-No.
T30SOSASSFT6.5x4.0E*	6.5, 6.5 x 4.0	2.4 - 3.0	3.5	126.7	25.0	200	16	PA66HS	BK	2;5-6	126-00341

All dimensions in mm. Subject to technical changes.

Recommended Tools							
	2	5	6				
	MK20	MK3PNSP2	EVO7				
	549	550	552				

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)		Corrosion resistant     Antimagnetic	RoHS
Chloroprene Rubber	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 impact	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 resistance	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 +130 °C, (+150 °C, 5000 h; +195 °C, 500 h)	Natural (NA), Grey (GY)	UL 94 V2	Resistance to high temperatures     Very moisture sensitive     Low smoke sensitivity	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	-40 °C to +105 °C	Black (BK)	UL 94 HB	Good resistance to lubricants, fuels, salt water and solvents	HF RoHS
Polyamide 6.6, heat and UV-stabilised	PA66HSUV	-40 °C to +105 °C	Black (BK)	UL 94 V2	High yield strength     Modified elevated maximum 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 maximum 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
<b>Polyamide 6.6,</b> high impact modified, heat and UV-stabilised	PA66HIRHSUV	-40 °C to +110 °C	Black (BK)	UL 94 HB	Limited brittleness sensitivity     Higher flexibility at low temperature     Modified elevated maximum 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 maximum temperature	RoHS
<b>Polyamide 6.6,</b> high impact modified, scan black)	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)		UV resistant     Good chemical resistance to most acids, bases 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, oxidising agents	HF LFH RoHS
Polyethylene	PE	-40 °C to +50 °C	Black (BK), Grey (GY)	UL 94 HB	Low moisture absorption     Good chemical resistance to most acids, bases, alcohol, 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 acids, bases and solvents	HF RoHS
Polypropylene, Ethylene Propylene Diene Terpolymer rubber free of Nitrosamine	PP, EPDM	-20 °C to +95 °C	Black (BK)	UL 94 HB	Good resistance to high temperature     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, bases, salts, alcohol, oils	RoHS
Stainless Steel, Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)	non-burning	Corrosion resistant     Antimagnetic     Weather resistant     Chemical resistance     SS316 also resistant against seawater, salt spray and anorganic acids	HF LFH RoHS
Thermoplastic Polyurethane	TPU	-40 °C to +85 °C	Black (BK)	UL 94 HB	High elasticity     Good chemical resistance to acids, bases and oxidising agents	HF RoHS

 $\label{eq:Tefel} \textit{Tefzel}^{\textcircled{\texttt{B}}} \ \text{is a registered trademark of DuPont. General linguistic usage for cable ties made from raw material \textit{E/TFE}} \ \text{is Tefzel}^{\textcircled{\texttt{B}}} \text{-Tie. In addition to Tefzel}^{\textcircled{\texttt{B}}} \ \text{from DuPont HellermannTyton also uses}$ equivalent E/TFE raw material from other suppliers.





LFH = Limited Fire Hazard

RoHS = Restriction of Hazardous Substances



<sup>\*\*</sup>Further colours available on request.

<sup>\*</sup>These details are only guide values. They should not be regarded as a exhaustive material specification and are no substitute for suitability tests. Please see our datasheets for further details.