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# PRODUCT DATASHEET

## COMPOSITE PANEL FASTENER

### Product Details

Designed for: *Fixing cladding/roofing applications to hot/cold purlins/rails. Fastening liner panels and general components to steel.*

Head style: *Hexagonal*

Drive bit: *5/16" hexagonal*

Thread form: *Coarse thread*

Shank material: *Carbon steel*

Material grade: *AISI C1022*

Coating: *500hr Evoshield®*



### Composite panel fastener range – for light steel

Product Code	Size	Washer	Insulation Thickness Range	Drilling Capacity	Recommended  drill speed
TSBWHT5.5-80-3	5.5x80mm	16mm	10 – 65mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT5.5-105-3	5.5x105mm	16mm	30 – 90mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT5.5-115-3	5.5x115mm	16mm	40 – 100mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT5.5-135-3	5.5x135mm	16mm	60 – 120mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT5.5-150-3	5.5x150mm	16mm	75 – 135mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT16-5.5-185-3	5.5x185mm	16mm	115 – 170mm	1.2 – 3.5mm	1500 – 2500 RPM

Product Code	Size	Washer	Insulation Thickness Range	Drilling Capacity	Recommended  drill speed
TSBWHT19-5.5-80-3	5.5x80mm	19mm	10 – 65mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-105-3	5.5x105mm	19mm	30 – 90mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-135-3	5.5x135mm	19mm	60 – 120mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-150-3	5.5x150mm	19mm	75 – 135mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-185-3	5.5x185mm	19mm	115 – 170mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-225-3	5.5x225mm	19mm	150 – 210mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-240-3	5.5x240mm	19mm	165 – 225mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-275-3	5.5x275mm	19mm	200 – 260mm	1.2 – 3.5mm	1500 – 2500 RPM
TSBWHT19-5.5-300-3	5.5x300mm	19mm	225 – 285mm	1.2 – 3.5mm	1500 – 2500 RPM

**NOTE:** The results expressed in the datasheet are taken as mean loads from a range of empirical tests and are ultimate unfactored loads. Each specifier or end user should make his/ her own decision on what safety factors to use relevant to their design application (such as BS 5950, EN 1991, etc).

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## Technical Data

Ultimate pull out values							
Diameter	Drill point	Steel Thickness					
		1.2mm	1.6mm	2.0mm	2.5mm	3.0mm	4.0mm
5.5mm	Tek 3	1.7kN	2.1kN	2.7kN	4.6kN	4.8kN	5.5kN

Hardness Rating (Vickers scale)			Ultimate Mechanical Performance			Pullover Performance		
Diameter	Surface Hardness	Core Hardness	Diameter	Tensile Strength	Shear Strength	Diameter	In 0.6mm steel	In 1.2mm steel
5.5mm	550.0HV	465.0HV	5.5mm	16.5kN	10.3kN	5.5mm	3.1kN	6.0kN

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# ABOUT OUR TESTING



All test results were derived from empirical testing performed by ETAS (Evolution Testing & Analytical Services), a UKAS (United Kingdom Accreditation Service) accredited testing laboratory (Accreditation No. 7485). The following tests were performed to the following standards.



7485

## Testing Procedures

Test/ Parameter	Standard/ Method/ Procedure
Ultimate Tensile	<b>ISO 6892-1: 2009</b> <i>"Metallic materials – tensile testing – Part 1: Method of test at room temperature".</i>
Ultimate Shear	<b>MIL-STD-1312-13</b> <i>"Military Standard: Fastener test method (Method 13) Double shear test".</i>
Pull Out (Withdrawal Force)	<b>EN 14566: 2009</b> <i>"Mechanical fasteners for gypsum plasterboard systems. Definitions, requirements and test methods".</i>
Pull Over	<b>EN 14592: 2008</b> <i>"Timber structures. Dowel type fasteners. Requirements".</i>
Hardness	<b>ISO 650 7-1: 2005</b> <i>"Metallic materials – Vickers hardness test – Part 1: Test method".</i>
Corrosion Resistance	<b>EN ISO 9227: 2012</b> <i>"Corrosion tests in artificial atmospheres. Salt spray tests".</i>
Drilling Time Test	<b>EN 14566: 2009</b> <i>"Mechanical fasteners for gypsum plasterboard systems. Definitions, requirements and test methods".</i>

## Laboratory Contact Details

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