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PRODUCT DATASHEET

TEK SCREW HEX HEAD

Product Details

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

Head style: *Hexagonal*

Drive bit: *5/16" hexagonal*

Thread form: *Single, coarse thread (Tek 3)/fine thread (Tek 5)*

Shank material: *Carbon steel*

Material grade: *AISI C1022*

Coating: *500hr Evoshield®*

Tek 3 range – for light steel

| Product Code | Size | Drill point | Effective thread length | Drilling Capacity | Recommended drill speed |
|---------------|-----------|-------------|-------------------------|-------------------|-------------------------|
| TSHW4.8-16-3 | 4.8x16mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-25-3 | 5.5x25mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-32-3 | 5.5x32mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-38-3 | 5.5x38mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-50-3 | 5.5x50mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-60-3 | 5.5x60mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-75-3 | 5.5x75mm | Tek 3 | FULL | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-100-3 | 5.5x100mm | Tek 3 | 80mm | 1.2 – 3.5mm | 1500-2500 RPM |
| TSHW5.5-125-3 | 5.5x125mm | Tek 3 | 80mm | 1.2 – 3.5mm | 1500-2500 RPM |

Tek 5 range – for heavy steel

| Product Code | Size | Drill point | Effective thread length | Drilling Capacity | Recommended drill speed |
|---------------|-----------|-------------|-------------------------|-------------------|-------------------------|
| TSHW5.5-32-5 | 5.5x32mm | Tek 5 | FULL | 4.0 – 12.5mm | 1500-2500 RPM |
| TSHW5.5-38-5 | 5.5x38mm | Tek 5 | FULL | 4.0 – 12.5mm | 1500-2500 RPM |
| TSHW5.5-50-5 | 5.5x50mm | Tek 5 | FULL | 4.0 – 12.5mm | 1500-2500 RPM |
| TSHW5.5-75-5 | 5.5x75mm | Tek 5 | FULL | 4.0 – 12.5mm | 1500-2500 RPM |
| TSHW5.5-100-5 | 5.5x100mm | Tek 5 | FULL | 4.0 – 12.5mm | 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).

Errors and Omissions Excepted.



Technical Data

| Tek 3 range – Unfactored pull out values | | | | | | | |
|--|-------------|-----------------|-------|-------|-------|-------|-------|
| Diameter | Drill point | Steel Thickness | | | | | |
| | | 1.2mm | 1.6mm | 2.0mm | 2.5mm | 3.0mm | 4.0mm |
| 4.8mm | Tek 3 | 1.2kN | 1.6kN | 2.0kN | 3.0kN | 3.9kN | 4.5kN |
| 5.5mm | Tek 3 | 1.7kN | 1.9kN | 2.4kN | 4.6kN | 6.5kN | 7.6kN |

| Tek 5 range – Unfactored pull out values | | | | | | | |
|--|-------------|-----------------|-------|--------|--------|--------|--------|
| Diameter | Drill point | Steel Thickness | | | | | |
| | | 4.0mm | 5.0mm | 6.0mm | 8.0mm | 10.0mm | 12.5mm |
| 5.5mm | Tek 5 | 6.5kN | 7.8kN | 10.0kN | 11.5kN | 12.0kN | 13.5kN |

| 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 |
| 4.8mm | 630.0HV | 445.0HV | 4.8mm | 9.5kN | 13.8kN | 4.8mm | 2.8kN | 3.6kN |
| 5.5mm | 615.5HV | 440.0HV | 5.5mm | 15.9kN | 12.2kN | 5.5mm | 3.0kN | 4.4kN |

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.

Testing Procedures

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



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