

ICCONS® Gripshank™ SuperSharpy™ PINS - DESIGN PERFORMANCE SPECIFICATION DATA

ICCONS® is proud to offer a range of specialised, high quality, corrosion resistant Pins for the Australian steel construction marketplace. ICCONS® guarantees the Structural integrity of its Gripshank™ SuperSharpy™ Pins into a wide range of steel fixing applications in BlueScope® Truecore® or similar that meets min. AM150 coating and G550 tensile properties.



Fastener Description

Description	mm	mm	mm
Gripshank™ SuperSharpy™	22-65	2.5	6.4

Gripshank™ SuperSharpy™ Design Capacities

BMT	0.55mm (G550)	0.75mm (G550)	1.00mm (G550)	1.20mm (G500)	1.50mm (G500)	1.90mm (G450)	2.4mm (G450)
Pull-out¹	0.55 kN	0.85 kN	1.04 kN	1.42 kN	1.69 kN	1.99 kN*	2.34 kN*
Shear²	1.00 kN	1.85 kN	2.75 kN	2.75kN (min.)	2.75kN (min.)	2.75kN (min.)	2.75kN (min.)

* Pull-out testing has been carried out in ICCONS In-house laboratory.

Gripshank™ SuperSharpy™ Applications

Fixing Application	Suitable Substrate	Thickness Notes
Timber Flooring	0.75mm to 1.6mm BMT	Not suitable for CFC flooring. Refer to timber flooring manufacturer for approval of nail as substitute to regular fixing.
Lightweight Cladding	0.55mm to 1.6mm BMT (Shear) 0.75mm to 1.6mm BMT (Pull - out)	Ensure overall capacity equivalent to substituted screws. Refer to manufacturer for approval of nail as substitute to regular fixing. Pull - through testing not carried out.
Steel Lintel Plate	0.55mm to 1.6mm BMT (Shear) 0.75mm to 1.6mm BMT (Pull - out)	Ensure overall capacity equivalent to substituted screws
Strap Bracing	0.55mm to 1.6mm BMT (Shear)	Ensure overall capacity equivalent to substituted screws
Ceiling + Roof Battens	0.75mm to 1.6mm BMT (Pull - out)	Battens into 0.75mm Min Truss Chord Ensure overall capacity equivalent to substituted screws
Connector Brackets	0.55mm to 1.6mm BMT (Shear) 0.75mm to 1.6mm BMT (Pull - out)	Ensure overall capacity equivalent to substituted screws
Timber (direct fixed)	0.55mm to 1.6mm BMT (Shear) 0.75mm to 1.6mm BMT (Pull - out)	Ensure overall capacity equivalent to substituted screws

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Note: ICCONS® has taken extreme care in compiling the above information. ICCONS® believe the information is true and correct as at the date of this document.

1 Gripshank™ Supersharpy™ pull out testing has been carried out on 20 nail samples installed on two different C sections of each BMT material noted in the above table (10 tests on each section) as per section 8 of AS/NZS 4600:2018 standard which is in line with Nash standard part 1 (and technical note 4). A coefficient of variation of 20% has been selected which conservatively allows for variation in nails, substrate or installation. Kt values of 1.29 for minimum results and 1.7 for average results have been applied to arrive at design capacities.

2 Gripshank™ Supersharpy™ shear testing has been carried out on 10 nail samples of each 0.55, 0.75 & 0.95mm BMT material (G550) as per the Shear Test specified in section F4 of AS/NZS 4600:2018 standard which is in line with Nash standard part 1 (and technical note 4). A coefficient of variation of 20% has been selected which conservatively allows for variation in nails, substrate or installation. Kt values of 1.49 for minimum results and 1.77 for average results have been applied to arrive at design capacities.

Where Gripshank™ Supersharpy™ nails are used in accordance with above capacities and meet manufacturers specifications, the nails are capable of providing a resistance suitable for above applications. It is important for specifier to ensure the number of nails used provides an equivalent capacity to the screws noted in each products manual. Please note that no pull-through testing has been carried out in relation to external cladding systems at this time and it is important to refer to manufacturer for advice in relation to use with such systems to ensure compliance.

- The consumer must ensure that Structnail® specialised steel fasteners and information contained in this document is reviewed and approved by a design professional responsible for the application and/or building products manufacturer to ensure equivalency to substituted screws and compliance prior to use of the fasteners (pins).
- Design performance specification data is based on correct installation and use of correct specified installation tools as described in this document and referenced on the Structnail® website www.structnail.com

Reference Documents

- Aerosmith® Fastening Systems, 2011. Versapin Fasteners. [Online] Available at: <http://www.aerosmithfastening.com/versapin> [Accessed 9th March 2013].
- Aerosmith® Fastening Systems, n.d. Aeorsmith® Gripshank™ Super Sharp™. [Online] Available at: <http://www.aerosmithfastening.com> [Accessed 9th March 2013].
- Materials & Testing Laboratories Limited, 2007. Shear Test of Nail / Gauge Steel, Wellington, NZ: Materials & Testing Laboratories Limited.
- Progressive Engineering Inc, 2008. AISI CF-92 Fastener Shear Test, s.l.: Progressive Engineering Inc.
- Progressive Engineering Inc, 2012. Product Evaluation Report - Versapin Gripshank™ & Helical Pneumatic Fasteners, Indianapolis: Progressive Engineering Inc.
- Walther, T., 2006. Impact Steel Frames Nail Pull-out Test, Porirua City, NZ: BRANZ Limited
- STA Consulting Engineers Pty. Ltd. – Structnail® Structural Design Certificate 24/01/18.
- ICCONS Laboratory Test Report No. 20220315AS

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