



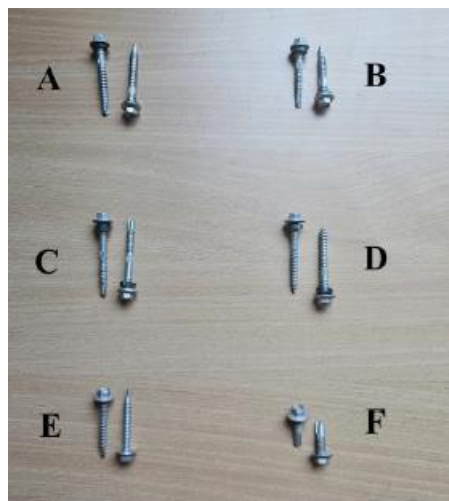
# SURE-FAST

INDUSTRIAL FASTENERS

## Mechanical Testing

Roof-Fast Self Drilling screws were tested for determination of shear, torsional, tensile and withdrawal strength properties in accordance with AS 3566.1-2002 *Self-Drilling Screws for the Building and Construction Industries – Part 1: General Requirements Mechanical Properties Appendix B* for Torsional Testing and AS4291.1 Clause 9.2 for Tensile Testing.

The following screws types were tested with the results shown in **Table 1**.



- Screw Type A:** Roof-Fast Self Drilling (SD) – M6-11 x 50mm long
- Screw Type B:** Roof-Fast Self Drilling (SD) – 12 x 42mm long
- Screw Type C:** Roof-Fast Self Drilling (SD) – 12 x 53mm long
- Screw Type D:** Roof-Fast Self Drilling (SD) – T17 12 x 50mm long
- Screw Type E:** Batten-Fast Self Drilling (SD) – M5.5-11 x 40mm long
- Screw Type F:** Shed-Fast Self Drilling (SD) – 14 x 22mm long

**Head Type:** 5/16" Hexagon Head  
**Coating Type:** Zinc

**Figure 1: Test Samples**

**Table 1: Self-Drilling Screws Results**

Screw Type	Screw Description	Single Plane Shear Force (kN)			Peak Torque (Nm)				Peak Tensile Load (kN)			Peak Test Force (kN)			
		Mean	Max	Min	Mean	Max	Min	Comment	Mean	Max	Min	Mean	Min	Max	Comment
A	Roof-Fast Self Drilling (SD) – M6-11 x 50mm long	11.31	11.76	10.91	16.5	17.3	15.6	Pass	19.0	19.8	17.9	5.0	4.8	5.4	1.5mm Thick Steel Purlin. 2.8kN Min Force (AS3566.1) - Pass
												3.5	3.1	3.8	1.2mm Thick Steel Purlin. 2.8kN Min Force (AS3566.1) – Pass
												2.1	1.8	2.4	0.75mm Thick Steel Top Hat – Pass
												1.3	1.2	1.4	0.55mm Thick Steel Top Hat - Pass
												4.2	4.1	4.5	90 x 45mm Radiata Pine. 2.8kN Min Force (AS3566.1) - Pass
B	Roof-Fast Self Drilling (SD) – 12 x 42mm long	10.7	11.26	9.93	14.6	14.8	14.1	Pass	18.8	19.5	18.2				
C	Roof-Fast Self Drilling (SD) – 12 x 53mm long	10.67	11.11	10.01	13.9	14.9	13.2	Pass	13.8	16.7	12.2				
D	Roof-Fast Self Drilling (SD) – T17 12 x 50mm long	10.09	10.48	9.67	12.4	12.8	11.7	Pass	16.1	17.3	15.2				
E	Batten-Fast Self Drilling (SD) – M5.5-11 x 40mm long	10.59	11.12	10.14	15.6	15.9	15.2	Pass	17.7	18.4	17.2	5.2	5.0	5.4	1.5mm Thick Steel Purlin. 2.8kN Min Force (AS3566.1) - Pass
												4.2	4.1	4.3	1.2mm Thick Steel Purlin. 2.8kN Min Force (AS3566.1) – Pass
												2.2	2.1	2.2	0.75mm Thick Steel Top Hat – Pass
												1.2	1.1	1.2	0.55mm Thick Steel Top Hat - Pass
												3.3	3.1	3.6	90 x 45mm Radiata Pine. 2.8kN Min Force (AS3566.1) - Pass
F	Shed-Fast Self Drilling (SD) – 14 x 22mm long	9.78	11.12	8.3	22.6	25.0	20.1	Pass							