



SURE-FAST
INDUSTRIAL FASTENERS

Mechanical Testing

Self-Drilling Screws, suitable for steel, were tested for determination of withdrawal strength in accordance with AS 3566.1-2002 (R2015) *Self-Drilling Screws for the Building and Construction Industries – Part 1: General Requirements and Mechanical Properties*.

The test procedure included being driven into a galvanised steel substrate of 1.5mm nominal thickness.



Screw Type: Steel Self Drilling (SD); ST 6.3 14-10 x 25mm long

Head Type: Hexagon Head

Head Markings: SX4

Head (Nominal): 9.4mm Across Flats – To suit 3/8" Driver Bit

Coating Type: Zinc

Testing was conducted in accordance with AS3566.1 Appendix D. Steel SD screws were driven into a galvanised substrate of 1.5mm nominal thickness. Several full pitch threads were protruding from the underside of the test plate. Axial withdrawal force was then applied individually to the screw head at a constant rate until the screws achieved the peak tensile force and were observed to withdraw from the test plate.



Table 1: 14-10 x 25mm Withdrawal Test Data

Screw & Substrate Type	Specimen No.	Peak Test Force (kN)	AS 3566.1 Min. Force (kN)	Test Observations/Comments
(ST 6.3) 14-10 x 25 mm long; Steel Substrate 1.5 mm	1	4.25	3.10	Withdrawal from the steel substrate, no signs of damage to the screw threads - PASS
	2	4.39		"
	3	4.41		"
	4	4.49		"
	5	3.91		"
	6	4.42		"
	7	3.81		"
	8	4.21		"
	9	4.31		"
	10	4.55		"
Mean		4.28		
Minimum		3.81		
Maximum		4.55		

