

# Flat Top performance data

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SDS self drilling screws for metal and Needle point screws



## Flat Tops SDS and Needle Point — ZINC YELLOW

10 gauge



16mm



16mm



Thread



Ezi Find	Part No.	Description	Head	Coating	Length	Max Cap	qty	qty
420	SDSHZY1016	10-16x16	SMALL	ZINC YELLOW	Full	3.00	1000	8000
137	NPSHZY1016	10-18x16	SMALL	ZINC YELLOW	Full		1000	8000



## Load testing of Needle Point and Self Drilling Screws

A consignment of Flat-Top 10gx16mm Needle Point (NP) and 10gx16mm Self Drilling (SDS) screws were delivered to the Melbourne testing Services laboratory for testing in roof battens and purlin material manufactured from galvanised steel. batch testing numbers were assigned to each fastener and are as follows:

MT-1007-A	10 x 16 Needle Point with 0.55mm Roof Batten
MT-1007-B	10 x 16 Needle Point with 0.75mm Top hat
MT-1007-C	10 x 16 Self Drilling with 1.5mm C-Purlin

**Test Requirements:** At the request of Powers Fasteners load testing was conducted on each item to determine the tensile withdrawal capacity and lap shear strength of the fasteners when screwed into the matching base material. Five repeat tests were conducted for each test configuration.

**Test Procedure:** Load testing was conducted by mounting the assembled test pieces into a calibrated universal testing machine. A test load was applied to each fastener until the peak tensile or lap shear load was achieved.

**Test Data:** Test data for each fastener and material combination is provided in Table 1.

Table 1A 10x16-NP, 0.55mm Roof Batten			Table 1B 10x16-NP, 0.75mm Top Hat			Table 1C 10x16-SDS, 1.5mm C-Purlin		
Specimen Number	Peak Withdrawal Force (N)	Peak Lap Shear Force (N)	Specimen Number	Peak Withdrawal Force (N)	Peak Lap Shear Force (N)	Specimen Number	Peak Withdrawal Force (N)	Peak Lap Shear Force (N)
1	1630	4100	1	2520	4630	1	3760	6850
2	1650	3440	2	2180	4650	2	3510	6510
3	1610	3390	3	2340	4670	3	3890	6350
4	1390	4030	4	2340	4390	4	3730	6720
5	1610	3780	5	2340	4820	5	3700	6390
Statistics Mean	1578	3748	Statistics Mean	2344	4632	Statistics Mean	3718	6564
Std Deviation	106	327	Std Deviation	120	155	Std Deviation	137	215



## Flat Top Screw Performance Data

0.55mm steel channel			0.75mm steel Top Hat			1.5mm C-Purlin		
10-16x16 Needle Point			10-16x16 Needle Point			10-16x16 SDS Point		
Ezi-Find Number	Withdrawal Load (kN)	Lap Shear Load (kN)	Ezi-Find Number	Withdrawal Load (kN)	Lap Shear Load (kN)	Ezi-Find Number	Withdrawal Load (kN)	Lap Shear Load (kN)
137	1.60	3.75	137	2.35	4.60	420	3.70	6.60

Note: 1. The above data is based on independent tests conducted by a NATA registered laboratory Report No. MT-1007.

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