



SURE-FAST

INDUSTRIAL FASTENERS

Mechanical Testing

Sure-Fast Metric Flanged Purlin Bolts and Nuts were tested to ensure meeting the requirements of AS 4291.1-2015.

Bolt & Nut Type: Metric Flanged Purlin Bolts M12 x 30mm

Head Type: Hexagon Head

Coating Type: Zinc

Table 1: M12 x 30mm Bolts

Sample Test No.	Product I.D.	Head Markings	Bolts Size / Description	AS 4291.1 Proof Load (kN)	Change in Bolt Length (um)	Peak Ultimate Tensile Load (kN)	Wedge Tensile Test Observation	Rockwell Hardness HRC	Rockwell Hardness Average HRC
1	PC 8.8	"SFC 8.8"	M12 x 30mm	48.9	0	79.8	See Comments*	32	32
2	PC 8.8	"SFC 8.8"	M12 x 30mm	48.9	4	79.0	See Comments*	-	-
3	PC 8.8	"SFC 8.8"	M12 x 30mm	48.9	3	78.9	See Comments*	-	-

Requirements Min.:
Max.:

67.4

12.5

22

32

Bolt Sample Detail Comments:

M12 x 1.75mm Coarse Pitch Thread, Hex Head Flanged Bolts, 30mm Thread Length.

Wedge Tensile Test Observations:

Tests 1 to 4: Fractured in the free threaded length of the bolt.

Tests 5 to 6: Necked in the free threaded length of the bolt.

All bolts meet the requirements of AS 4291.1-2015 for the properties as reported herein.



Table 2: M12 Flanged Nuts

Nut Size	Product I.D.	Nut Markings	Proof Load No.	Proof Load (kN)	Test Comments	Hardness Test No.	Vickers Hardness HV			Hardness Average HV	Specified Range HV	Test Comments
M12 × 1.75mm	PC 8	"S 8"	1	74.2	Pass	1	224	224	229	226	200-302	Pass
M12 × 1.75mm	PC 8	"S 8"	2	74.2	Pass	-	-	-	-	-	-	-
M12 × 1.75mm	PC 8	"S 8"	3	74.2	Pass	-	-	-	-	-	-	-

Nut Sample Comments:

Sample Nominal Dimensions:

M12 x 1.75mm Corse Pitch Thread Flanged Nuts: Thickness = 12.5mm; Width A/F = 17.9mm; Flange \varnothing = 27.7mm

At completion of proof load testing all nuts were able to be unthreaded by hand. Therefore, all nuts were deemed to have passed the proof load test in accordance with AS/NZS 4291.2-2016.

The recorded hardness of each nut is within the range as specified in AS/NZS 4291.2-2016 Table 6, therefore the nuts have passed the hardness test.

