



# SURE-FAST

## INDUSTRIAL FASTENERS

# Mechanical Testing

M12 & M16 Metric flanged purlin bolts were tested for determination of meeting the requirements of AS 4291.1-2015 *Mechanical Properties of Fasteners Made of Carbon Steel and Alloy Steel – Bolts Screws and Studs*



**Bolt Type:** M12 x 1.75mm, 30mm Coarse Pitch Thread  
M16 x 2.00mm, 40mm Coarse Pitch Thread

**Head Type:** Hex Head

**Head Markings:** SFC 8.8

**Coating Type:** Hot-dipped galvanized (HDG)

**Application:** Connecting overlapped purlins and purlins to clasps across various applications with assembled nuts

**Table 1: Test Results**

Sample Test No.	Product I.D.	Head Markings	Bolts Size / Description	AS 4291.1 Proof Load (kN)	Change in Bolt Length (µm)	Peak Ultimate Tensile Load (kN)	Wedge Tensile Test Observation	Rockwell Hardness HRC			Rockwell Hardness Average HRC
1	PC 8.8	"SFC 8.8"	M12 × 30mm	48.9	0	79.8	See Comments*	32	32	32	32
2	PC 8.8	"SFC 8.8"	M12 × 30mm	48.9	4	79.0	See Comments*	-	-	-	-
3	PC 8.8	"SFC 8.8"	M12 × 30mm	48.9	3	78.9	See Comments*	-	-	-	-
<b>Requirements</b>		<b>Min.:</b>				<b>67.4</b>					<b>22</b>
		<b>Max.:</b>			<b>12.5</b>						<b>32</b>
4	PC 8.8	"SFC 8.8"	M16 × 35mm	91.0	4	144.7	See Comments*	29	30	29.5	30
5	PC 8.8	"SFC 8.8"	M16 × 35mm	91.0	2	143.6	See Comments*	-	-	-	-
6	PC 8.8	"SFC 8.8"	M16 × 35mm	91.0	7	144.8	See Comments*	-	-	-	-
<b>Requirements</b>		<b>Min.:</b>				<b>125.0</b>					<b>22</b>
		<b>Max.:</b>			<b>12.5</b>						<b>32</b>

**Comments:**

Wedge Tensile Test Observation

Tested metric flanged purlin bolts meet the requirements of AS 4291.1-2015.