



# PRODUCT DATASHEET

## A4 STAINLESS STEEL MULTI-FIX SCREW

### PRODUCT DETAILS

<b>Purpose:</b>	Fixing timber battens, truncking, track and general components into concrete, masonry and timber
<b>Head style:</b>	12mm Countersunk Head
<b>Material Grade:</b>	Thread and Head - AISI 316/ A4, Drilling Point - SAE C1018 / C1022 (Hardened)
<b>Coating:</b>	≥ 5µm Electroplated Zinc (Passivated)

### GENERAL PHYSICAL CHARACTERISTICS

Product Code	Size	Drill Point	Recess Type
A4CSK6.3-45-GP	6.3mm x 45mm	Gash Point	Phillips 3
A4CSK6.3-57-GP	6.3mm x 57mm	Gash Point	Phillips 3
A4CSK6.3-70-GP	6.3mm x 70mm	Gash Point	Torx 30
A4CSK6.3-75-GP	6.3mm x 75mm	Gash Point	Torx 30
A4CSK6.3-82-GP	6.3mm x 82mm	Gash Point	Torx 30
A4CSK6.3-100-GP	6.3mm x 100mm	Gash Point	Torx 30

### CHARACTERISTIC MECHANICAL PROPERTIES

Property	Magnitude
Tensile Capacity, ( $F_{ult}, R_k$ )	14,100 N
Shear Capacity, ( $V_{ult}, R_k$ )	9,700 N
Torsional Capacity, ( $\tau_{ult}, R_k$ )	13,2 Nm

### TECHNICAL DATA

#### Ultimate pull out loading from steel

##### Steel substrate (S275 JR mild steel)

Major diameter	Steel thickness	Steel thickness	Steel thickness
6.3mm	0.7mm	1.0mm	1.2mm
Force	1,000 N	1,400 N	2,000 N

#### Characteristic pull out loading from timber

Major diameter	Timber grade	Embedment depth	Load
6.3mm	C16	25.0mm	3,000 N
		35.0mm	3,700 N

#### Characteristic/ Safe Loading: Withdrawal Resistance (Concrete and Masonry Substrates, $\gamma = 3.0$ )

Embedment Depth (mm)	C35 Concrete (35N/mm <sup>2</sup> )	Aerated Concrete (7N/mm <sup>2</sup> )	Class B Engineering Brick (75 N/mm <sup>2</sup> )
25.0	3,900 N	2,700 N	4,200 N
35.0	5,800 N	3,900 N	5,700 N

#### Concrete and masonry setting information

Substrate type	Category	Data
All	Nominal embedment depth	35.0mm
Non cracked concrete (>30N/mm <sup>2</sup> )	Minimum base material thickness	100.0mm
	Minimum screw spacing	55.0mm
	Minimum edge distance	55.0mm
Cracked concrete (>30N/mm <sup>2</sup> )	Minimum base thickness	100.0mm
	Minimum screw spacing	40.0mm
	Minimum edge distance	55.0mm

Influence of Compressive Strength on Withdrawal Resistance (Reduction Factors)									
Nominal Anchor Diameter	Drill Hole Diameter	Embedment Depth (mm)	Compressive Strength - Cube (EN 1992)						
			C20/25	C25/30	C30/37	C35/45	C40/50	C45/55	≥C50/60
6.3mm	5.15mm	25/0	0.6	1.0			1.2		1.3
		35.0	0.7	1.0	1.1	1.2	1.3	1.4	1.5

Influence of edge distance on loadings (reduction factor)										
Percentage of stated minimum	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Reduction factor	N/A	N/A	N/A	N/A	N/A	0.75	0.80	0.85	0.90	1.00

NOTE: The results expressed in this document are determined from empirical testing. Specifiers, end-users and other third parties should make their own decision(s) on what safety factors to use relevant to their design(s)/ application(s). This document is provided, strictly: without prejudice, without recourse, without liability, non-assumpsit, no assured value, errors and omissions excepted, subject to change without notice and all rights reserved.  
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