

Maximum reliability. Minimum fuss.



Technical Data Sheet

SureFast® Stainless Steel
SF-RS-SSA4-6.1 Fasteners



Fastener Systems

A4 (316 Grade) Stainless steel concrete fasteners for flat roofing.

Application

- + For mechanically fixing single-ply and flat roofing systems to concrete decks in combination with appropriate SureFast® components
- + For mechanically fixing flat roofing accessories and trims to concrete

Key Features

- + High resistance to corrosion - suitable for use in marine environments
- + Optimised thread design for excellent pull-out performance and resistance to unwinding
- + Compatible with the SureFast® range of tube washers and pressure plates
- + Purpose designed and precision manufactured by Fixfast
- + CE Marking - in progress

Specification

Material	1.4401 stainless steel (316M), with carbon steel case hardened welded point
Coating	Organic
Head Type	Low profile oval style, TX25 recess
Drilling Capacity	Up to 0.7mm S275 Steel

Installation and handling

Installation Tool	Variable speed electric screwdriver
Installation Drive	Fixfast TX25 drive bar range
Installation Speed	1500rpm
Correct Installation	Fasteners should be driven within three degrees of perpendicular to the surface of the fastened material. Avoid over-driving, and do not over-tighten.
Handling	Fasteners may have sharp edges, and the use of power tools can be dangerous. Use personal protective equipment. Store fasteners in dry conditions. Inspect each fastener before use and do not use damaged fasteners. Replace any fasteners which appear to have been installed incorrectly.

Installation details

Substrate	Dimension Limits	Minimum Penetration
Cast in-situ concrete	100mm minimum thickness 100mm minimum edge distance	25mm embedment
Preformed concrete components	40mm minimum thickness 70mm minimum edge distance	25mm embedment

Recommended pilot hole for concrete usually 5mm diameter.
Pilot hole depth should be a minimum of 25mm greater than embedment depth to allow for sediment.
For concrete deck applications a site pull-out test is recommended.

Dimensions

Fastener	Nominal Length	Nominal Diameter	Nominal Head Diameter
SF-RS-SSA4-6.1 x 50	50mm	6.1mm	9.0mm
SF-RS-SSA4-6.1 x 80	80mm		
SF-RS-SSA4-6.1 x 120	120mm		

Build-ups

Fastener	Concrete
SF-RS-SSA4-6.1 x 50	0-20mm
SF-RS-SSA4-6.1 x 80	40-50mm
SF-RS-SSA4-6.1 x 120	80-90mm

Build-ups are shown without tube or plate. Figures should be reduced or increased by the differential in substrate thickness for other substrates and the penetration differences accounted for. Further calculations will be necessary when used with SureFast® tube washers or SureFast® pressure plates: approximately 25mm of fastener sits within a SureFast® tube, and build-ups are reduced by 3-4mm when used with flat plates.
Consult the Fixfast SureFast® selector chart for full details, or for assistance selecting the correct fastener please contact Fixfast.

Performance - Pull-out values (axial load resistance)

Substrate	Characteristic Value
Concrete C25/30	3.19 kN
Concrete C32/40	3.61 kN

All values are tested and calculated according to Eurocode procedures.
Independently tested to ETAG006

Durability Class

	Years/Environment						
	Interior	Semi-interior	Rural	Urban	Industrial/Coastal	Marine	Swimming Pools & Chemical Plants
Corrosivity Category	C1	-	C2	C3	C4	C5	-
A4 Stainless Grade 316	40	40	40	40	30	25	n/a

Environment Conditions are defined in Fixfast's **Terms and Conditions of Warranty**.

Atmospheric environments are now commonly categorised by reference to an international standard, of which the UK version is BS EN ISO 9223:2012.

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Usage Conditions

The fasteners are for use with the substrates and materials shown in this datasheet within the limits stated. The fixing area must be solid with no perforations and must be chemically inert and dry.

The fasteners must be stored with due care and must not be allowed to suffer any corrosion or damage prior to installation.

Fixing patterns must be established on the basis of load calculations to Eurocode standards. It is the designer's responsibility to take into account all loading criteria and apply appropriate safety factors in accordance with performance data issued by Fixfast. The design of the building and application where the fastener is to be used must be to the minimum standard of mechanical performance laid down from time to time in the appropriate Codes of Practice or Building Regulations.

Where the fastener is in contact with materials which are not an inherent part of the system being fixed, these materials must be approved by the system manufacturer or relevant body for use with the system and must be chemically inert and dry. Such materials and their effects on the fasteners' performance are not the responsibility of Fixfast.

Fixfast products must be used as a complete system with tools and accessories as recommended, according to Fixfast's recommended procedures and according to good practice as detailed by the appropriate body for the type of work. They must be used only with other Fixfast products where such other products are available. They must not be cut, altered or modified.

The stated performance of the fastener will only apply while there is no damage or degradation to the materials and components it is associated with in the application, including damage resulting from incorrect installation, and as long as there is no change to the fasteners' immediate environment.

Performance data is applicable to use with new materials as detailed in a new-build application. Refurbishment or extensions/additions/abutments may be considered new-build if all materials used in conjunction with the fasteners are themselves new and unaffected and uncontaminated by any previous installation. Performance data for fasteners used in refurbishments and in contact with previously used materials must be agreed by Fixfast for each specific project and Fixfast given the opportunity to establish values by testing.

The fasteners are suitable for use in buildings for residential and commercial use governed by any regulations in force concerning the well-being of the occupants, where the immediate fastener environment is safe for human presence without any protection. They are suitable for use in buildings for industrial use where the same conditions apply and the materials used or stored are chemically inert. Use within atmospheres containing chlorides and substances known to affect stainless steel, such as around swimming pools, is specifically excluded.

The fasteners are suitable for use in buildings with humidity class of Class 1, Class 2, Class 3 or Class 4 to BS 5250 provided the other environmental conditions also apply. They are suitable for use in buildings with an internal temperature range of -45°C to 50°C. They are suitable for use in Coastal locations (defined as any point between 2km and 10km of the sea). These environmental conditions must remain unaffected throughout the installed life of the fastener, and any change will invalidate the performance data for the fastener.



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ISO 9001, ISO 14001
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