

Building Product Information Sheet

Class 1

Product Name:

Friulsider FM-X5 Nylon Frame Fixing - Hex Head

Date of Report:

02 / 11 / 2023

Product Line:

Friulsider Nylon Frame Fixing

Product Description and its intended use:

The Friulsider FM-X5 Nylon Frame Fixing is the most versatile of its kind, guaranteeing a perfect installation in all major base materials. FM-X5 distinguishes itself for its innovative multi-expansion that creates undercuts with various shapes and diameters: the plug occupies all empty spaces, while the tip has a differentiated expansion, increasing pull-out resistance and safety. Available in a Hex Head for quick and simple application.

Key technical specifications:

- Product type: Nylon Frame Fixing
- Finish options: Zinc Plated, Galvanized Steel, Stainless Steel, 3DG Coating, Nylon.
- Head options: Flush Hex Head, Countersunk Head.
- Base materials: Concrete, Stone (may be suitable), Solid brick, Hollow brick, Aerated concrete
- Special features: Removable, European Assessment, CE certified, Fire Rated.
- Load performance: Medium loads, Light loads.

Product Identifier

Friulsider Nylon Frame Fixing

Place of Manufacture:

Overseas

Manufacturer:

Friulsider S.p.A.

Importer:

Sesto Fasteners Limited

Address: 5e Piermark Drive
Rosedale, Auckland
Postcode: 0632
Website: www.sestofasteners.co.nz
Email: orders@sestofasteners.co.nz
Phone: +64 94158564
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Relevant Building Code Clauses:

- B1 Structure: Performance clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4
- B2 Durability: Performance clauses B2.2
- C6 Structural Stability (Fire Safety): Performance clauses C6.1, C6.2
- F2 Hazardous Building Materials: Performance clause F2.3.1

Statement on how the building product is expected to contribute to compliance:

- B1 Structure: clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4:
 - The Friulsideer FM-X5 Nylon Frame Fixing is the most versatile of its kind, guaranteeing a perfect installation in all major base materials. Trusted by engineers and architects in New Zealand. FM-X5 distinguishes itself for its innovative multi-expansion that creates undercuts with various shapes and diameters: the plug occupies all empty spaces, while the tip has a differentiated expansion, increasing pull-out resistance and safety. Available in a Countersunk Head for a discrete or flush finish.
 - Friulsideer FM-X5 Fixings hold European Technical Assessment, ETA reference ETA-10/0425, of 21/08/2019.
 - Design and Recommended load data for a single anchor with large anchor spacing and edge distances is available. Results vary based on the anchor size and base material. Refer to document 'FM-X5 Technical Data' for test results in a range of base materials available in the link below:
https://sestofasteners.co.nz/products/fruilsider-fm-x5-nylon-frame-fixing-countersunk?_pos=1&_sid=810ac2f33&_ss=r
 - Suitable for use in base materials: concrete, honeycomb brick, lightweight honeycomb brick, hollow light aggregate block, solid stone, solid brick, cell like clay brick, hollow dense aggregate block, aerated concrete.
 - Friulsideer FMX-5 Fixings hold a Certificate of Conformity from the Slovenian National Building and Civil Engineering Institute, compliant with EU Regulation No 305/2011 of the European Parliament. This document certifies that the factory production control is in compliance with the applicable performance requirements as described in ETA-10/0425. Valid until 24.7.2028. Refer to document 'ETA Certificate of Conformity- 1404 CPR 2557', available in the link above.
 - Compliant with requirements referenced in the National Construction Code (NCC).
 - Suitable for overhead applications.
 - CE certification.
 - B2 Durability: Performance clauses B2.2
 - Friulsideer FM-X5 Fixings hold a declaration of performance describing intended use, durability and material properties of the anchor. Refer to document 'Friulsideer FM-X5 Declaration of Performance' for manufacturer data, available in the link below:
https://sestofasteners.co.nz/products/fruilsider-fm-x5-nylon-frame-fixing-hex-head?_pos=1&_sid=e11de51f8&_ss=r
 - Base material requirements: Normal weight concrete in accordance to European Standard EN206-1.
 - Material properties: Sleeve: Polyamide Pa6 according to International Standard ISO 1874.
Screw: White zinc plated steel 5µm according to European Standard EN ISO 4042 cl.5.8-Ø6 and cl.6.8-Ø7.
Steel grey galvanised 10µm according to European Standard EN ISO 4024 cl.5.8-Ø6 and cl.6.8-Ø7.
Stainless steel AISI316 A4-70 according to ISO 3506-1.
 - Durability: Zinc plated steel for dry internal conditions. Stainless Steel AISI316 A4-70 for other environmental conditions.
 - Installation temperature range: -10 / +40°C.
 - Working temperature range: -40°C / +40°C (maximum 80°C for short period).
 - Characteristic Resistance values are available. Refer to document 'Friulsideer FM-X5 Declaration of Performance'. Declared performances according to ETA-10/0425 - ETAG03 parts 1,2, 3 and 4. Design method accordance to ETAG020 Annex C.
 - FM-X5 is made of a high quality nylon which has a very high percentage of elastomer. The advantages are smooth screwing, an expansion that does not stress the ribs of hollow base materials and a plug that remains flexible over time.
 - Variable geometry multi-expansion: FM-X5 distinguishes itself for its innovative multi-expansion that creates undercuts with various shapes and diameters. The plug occupies empty space, while the tip has a differentiated expansion, increasing pull-out resistance and safety.
 - Low expansion torque: FM-X5 can be inserted by hand during the initial insertion stage. The screw does not break and the recess remains intact.
 - FM-X5 with large rim is ideal for the fixing of substructures of ventilated facades. The large rim avoids any type of contact between the screw and the aluminium substructure, preventing corrosion.
 - Preassembled screw: ensures an immediate functional use of the plug. The containment system protects the screw and favours a correct installation even in extreme conditions.
 - FM-X5 Fixings (3DG Grey/Opaque) have been salt spray corrosion tested by Politecnico Milano's Materials Testing Laboratory. Test report number: 2018/0490, issued on 23/05/2018. Test method: NSS - Neutral salt fog test. Refer to document 'Salt Spray Test FM-X5 3DG' for corrosion data results.
 - Friulsideer FM-X5 Nylon Frame Fixings (Hex Head) are available in 3DG coating. 3DG offers maximum corrosion resistance in Salt Spray up to 1000 hours (minimum resistance depending on the geometry of the fixing). 3DG is a high resistance zinc coating with reduced thickness that does not interfere with the thread geometry, guaranteeing the correct body/nut coupling.
 - 3DG Coating has a special self-healing anti-scratch external finish that guarantees the complete fixing coating even in the event of minor impacts with other metallic bodies.
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- C6 Structural Stability (Fire Safety): Performance clauses C6.1, C6.2
 - Friulsider FM-X5 Fixings have been ETA assessed for F90 Minutes Fire Resistance (plug Ø10 in concrete).
 - Refer to document 'ETA-10/0425' for fire performance data relevant to FM-X5 anchors.
 - Fire Resistance (refer document 'Friulsider FM-X5 Declaration of Performance'):
 - F90 for X5 Ø10 in the admissible load $[(Frk / (YM \times YF))] \leq 0.8 \text{ kN}$.
 - Fire Reaction: A1 according to EN 13501-1 for metal screw (for sleeve part see ETAG020 p.1 sect.5.2.1.).
 - F2 Hazardous Building Materials: Performance clause F2.3.1
 - Friulsider FM-X5 are safe when handled.
 - 3DG Coating complies with the RoHS (Restriction of Hazardous Substances) directive 2011/65/EU, the European CE Reach regulation 1907/2006, and is free from Chromium VI.

Limitations on the use of the building product:

Notes to recommended loads data available in document 'FM-X5 Technical Data'

- Friulsider reserves the right to make modifications without prior notice.
- The load values are only valid if the installation has been carried out correctly. The design engineer is responsible for the designing and calculation of the fixing. The designing and calculation of the anchorage should be carried out in accordance with annex C, of the ETAG020.
- Friulsider FM-X5 Fixings are designed for medium and light loads only. Refer to 'FM-X5 Technical Data' for design and recommended loads. Refer to document 'FM-X5 Aerated Concrete TDS 1037.1' for guidance regarding applications in aerated concrete. Both are available in the link below:
https://sestofasteners.co.nz/products/fruilsider-fm-x5-nylon-frame-fixing-countersunk?_pos=1&_sid=810ac2f33&_ss=r
- Friulsider FM-X5 fixings are designed for an installation temperature of $-10^{\circ}\text{C} / + 40^{\circ}\text{C}$ and working temperature of $=40^{\circ}\text{C} / + 40^{\circ}\text{C}$ (max $+ 80^{\circ}\text{C}$ for a short period).
- The use of plastic anchors is not recommended for permanent suspended loading applications above 40°C .
- The load values refer to a working temperature of 40°C . For temperatures higher than 40°C , please consult ETA-10/0425 for values.
- Refer to document 'Friulsider FMX5 Nylon Frame Fixing ETA 10-0415' for applicable safety factors relevant to recommended load data.

Design requirements that would support the use of the building product:

Friulsider FM-X5 Nylon Frame Fixings have been designed for use in the following applications:

- Facade and roofing substructures
- Insulation fixings
- Profiles
- Concrete
- Stone
- Solid brick
- Hollow brick
- Aerated concrete

Features that support use of the building product:

- Countersunk head for a discrete / flush finish
 - Comes pre-assembled to ensure an immediate functional use of the plug.
 - FM-X5 is made of a high quality nylon which has a very high percentage of elastomer allowing for smooth screwing
 - Can be inserted by hand during the initial insertion stage
 - Maximum versatility
 - Has a fire resistance class of 90 minutes
 - ETA approved
 - National Code Compliant.
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Installation requirements:

Installation steps

1. Drill a hole into the base material using a drill with the appropriate bit size. The hole size should match the size of the Friulsider plug.
2. Clean dust and material from the hole.
3. Insert the plug into the hole. Ensure the plug is flush with the surface of the base material.
4. Insert the screw into the plug and turn clockwise with a screwdriver or power drill. As you tighten the screw, it will expand the plug inside the hole, securing it into place.
5. Installation complete!

Maintenance requirements:

N/A. no ongoing maintenance required.

Is the building product subject to warning or ban under section 26?:

No

