SoudaFrame SWI

Technical data

Material		GFRP (glass fibre reinforced plastic)
Fire reaction class	EN 13501-1 DIN 4102	Class E (normal flammability) Class B1
Thermal conductivity (λ)	EN 12667	λ = 0,125 W/(m.K)
Temperature resistance		-40 °C → 90 °C
Application temperature		5 °C → 35 °C
Thickness		Variable (4 to 6 mm)
Weight/meter		90 mm = 2,200 kg/m 130 mm = 2,583 kg/m 160 mm = 2,940 kg/m 200 mm = 3,322 kg/m
Ageing resistance		Excellent
Humidity resistance		Excellent
Chemical resistance		Excellent
Pull-out strength frame fixing screw		F_{RK} = 1.08 kN
Compressive strength frame fixing screw		F_{RK} = 1.17 kN
Load transfer		90 mm ≤ 787 kg/m (a) 130 mm ≤ 629 kg/m (b) 160 mm ≤ 500 kg/m (b) 200 mm ≤ 375 kg/m (b)
Fall protection		$F_{RK, max}$ = 3.87 kN (c)

* These values may vary depending on environmental factors such as temperature, moisture, and type of substrates.
** This information relates to fully cured product.
(a) Values at 3 mm deformation, with a bonded and bolted frame, masonry: concrete C20/25.
(b) Values at 3 mm deformation, with a bonded and bolted frame incl. SoudaFrame SWI Support, masonry: concrete C20/25.
(c) Values with a window frame + screw in a frame of 200 mm incl. SoudaFrame SWI Support.

Product description

SoudaFrame SWI is a specially developed pre-frame system for the installation of construction elements (e.g. windows) in the insulation layer in front of the wall (inside or outside). The front of wall installation system consists of lightweight L-shaped frame elements made of glass fibre reinforced plastic (GFRP), precisely fitting metal plug-in corner and extension connectors (SWI Corner and SWI Link), a metal support bracket for increased load transfer or fall protection (SWI Support), a specially developed adhesive (Soudaseal SWI) for the air- and driving rain tight installation and sealing of the frame to the wall and SWI Clips for an easy installation by a single operator with standardized perimeter joint dimensions.

Properties

- Lightweight L-shaped frame elements available in different sizes
- Extra-long profile lengths (= less connections)
- High loadbearing capacity
- Very high thermal efficiency
- Air- and driving rain tight connection to the loadbearing wall at 600 Pa
- Good temperature resistance
- After installation suitable for application of adhesives, plaster, tapes, paint, etc. (preliminary testing is recommended)
- One-man installation (for normal size windows)
- Very fast frame preassembly due to precisely fitting plug-in connectors: SWI Corner and SWI Link

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- Guaranteed fall protection through the use of SWI Support brackets, even for large and heavy window elements such as sliding doors.
- Easy to install both level and square, only 1 adjustment needed for the entire frame (instead of having to fix and adjust each item separately)
- Simultaneously drilling through frame and wall, only 1 drill and 1 screw size (≥ 80 mm) needed, regardless of the insulation thickness
- Standardised joint dimension (ca. 17 mm) around the window frame thanks to the SWI Clip
- One standardised installation for all SoudaFrame SWI dimensions
- Guaranteed compatibility with all SWS products
- Complies with the requirements according to DIN 4108 (EnEv) and the recommendations of the RAL installation guide

Applications
For the installation of construction elements (e.g. windows) in the insulation layer in front of the wall (inside or outside).

Packaging

Colour	: Black
Depth (mm)	: 90, 130, 160, 200
Height (mm)	: 95
Length (mm)	: 2200 & 6000

Shelf life
> 10 years in a cool and dry storage place at temperatures between +5°C and +25°C.

Substrates
Substrates: Various porous and non-porous surfaces such as wood, concrete, stone and other materials commonly used in construction.
Nature: rigid, clean, dry or slightly moist, free of dust and grease.
Surface preparation: The load-bearing wall requires no pretreatment. Porous surfaces in water loaded applications should be primed with Primer 150. A preliminary adhesion test on every surface is recommended. Prior to applying the Soudaseal SWI adhesive the SoudaFrame should be cleaned with Soudal Surface Cleaner.

Application method
- The following tools are required for the customisation and assembly of SoudaFrame SWI: a meter, a (mitre cut) saw, a foilbag gun, Soudaseal SWI, frame fixing screws, a combi drill, a metal and concrete drill bit, a rubber hammer and sufficient pieces of SWI Link, SWI Corner, SWI Clip and SWI Support.
- Determine the correct length of the 4 sides of the support frame based on the façade opening and cut the frame elements to size using a suitable saw (e.g. mitre cut saw ø 305 mm with diamond blade). Dust extraction is strongly recommended.
- Frame elements smaller than 40 cm may not be used.
- Connect the 4 sides of the frame by using the SWI Corner plug-in connectors (2 per corner). Use a rubber hammer for the assembly.
- To extend the support frame, 2 frame elements can be linked by means of SWI Link plug-in connectors (3 per extension).
- Apply 2 uninterrupted beads of Soudaseal SWI approx. 1 cm from each edge with a triangular nozzle over the entire circumference of the SoudaFrame SWI support frame. Apply an extra bead over the connection seams of the corners and at the area's where the frame has been extended.

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- Place the complete preassembled frame against the wall, press well and slide back and forth and up and down to distribute the adhesive evenly.
- Ensure that the installed SoudaFrame SWI is completely level and square and drill the holes for the screws using a concrete drill bit (ø 10 mm).
- Place sufficient SoudaFrame SWI support brackets depending on the weight of the façade element and/or the desired fall protection.
- It is recommended to screw the frame element all the way around. At least 4 hexagonal screws must be placed, 1 in each vertical frame element (15 cm above the bottom cutting edge) and minimum 2 in the lower horizontal frame element (25 cm of the cutting edge of each side). The maximum distance between 2 screws is 70 cm. If the distance exceeds 70 cm, an extra screw is needed.
- The recommended screws are ETA rated hexagonal frame fixing screws of at least 80 mm long, type SXR 10 x 80 FUS or equivalent, and adapted to the type of wall.
- Apply an extra bead of Soudaseal SWI in the inner corners of the frame.
- Slide the SWI Clips onto the frame and place the window on the clips.
- Fixate the window into SoudaFrame SWI using the appropriate window screws and ensure an air- and driving rain tight seal between SoudaFrame SWI and the window frame by using the appropriate SWS products.

*Consult the Soudal website or a Soudal representative to receive a detailed installation guide.

Health- and Safety Recommendations

Take the usual labour hygiene into account. Always wear gloves and safety goggles. Wear a dust mask during cutting and also ensure sufficient dust extraction. Consult label and material safety data sheet for more information.

Remarks

- Protect material from impact.
- Do not use in applications where continuous water immersion is possible.

Standards and certificates

- IFT MO/01 systemtest:
  PB 17-002267-PR01-1 (IFT Rosenheim)
- IFT MO/02/1:
  PB 17-002267-PR03 (IFT Rosenheim)
- IFT MO/02/2:
  PB 17-002267-PR04 (IFT Rosenheim)
- MPA Thermal conductivity:
  Nr. 185542 (MPA Hannover)
- MFPA Fire reaction:
  KB 3.1/18-189-2 (MFPA Leipzig)
- UGent systemtest
  (University of Ghent, BE)

Liability

The content of this technical data sheet is the result of tests, monitoring and experience. It is general in nature and does not constitute any liability. It is the responsibility of the user to determine by his own tests whether the product is suitable for the application.

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