

Description

GREENFLEX is an innovative and internationally patented point connection system for precast insulated sandwich panels. Made of GFRP (Glass Fiber Reinforced Polymer) it is formulated to efficiently withstand, in the concrete alkali environment, the actions between the two layers of the panels.

Available in three different heights (20,6 - 25,6 - 30,6 mm) with thickness 2,5 mm or 4,0 mm, fits with all request in the geometry and layer's composition of the precast sandwich panels that can variate in length up to 13 m and width up to 3,5 m.

Application

GREENFLEX is easily installed in each type of precast sandwich panel (insulated, lightweight, fire resistant) and with every insulation material, securing no heat transfer between the layers of the panels. The geometry of the panel can be different as horizontal and vertical, with and w/o doors and windows openings.

GREENFLEX enables the sliding of the different layers of the panels under the action of thermal expansion of the external layer due the heating of external surface. The special geometry of **GREENFLEX** basement permits a safe and easy installation on the steel welded wire mesh of the facing layers.

Once installed, enables a bending action in the direction of maximum stress. This bending is caused by thermal expansion of the external layers. **GREENFLEX** allows the external layer of the panel to move independently from the internal one in the maximum thermal expansion direction.

Technical Data

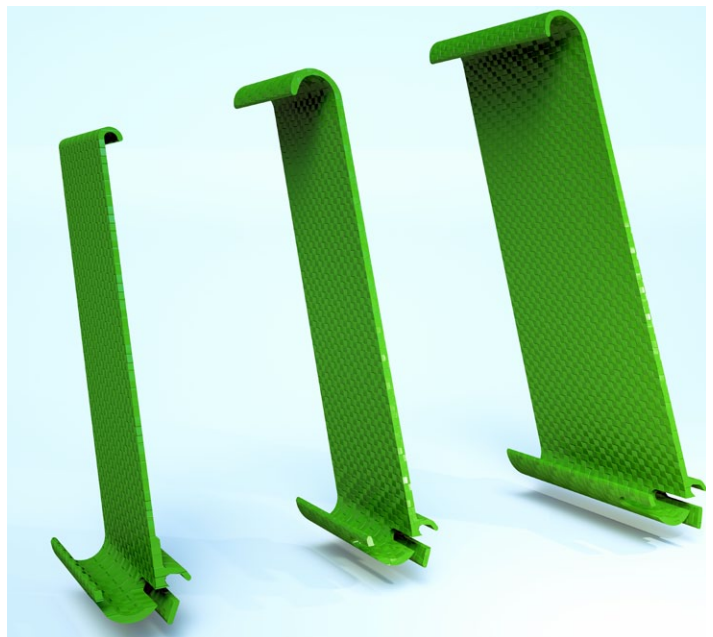
Physical / mechanical properties	Reference Standard	Values	UOM
Specific weight	ASTM D792	1,70 + 0,10	g/cm ³
Glass percentage in weight	ISO 1172	60 + 5	%
Tensile strength (in the direction of maximum stress)	ASTM D638	220 + 30	MPa
Tensile modulus (in the direction of maximum stress)	ASTM D638	16200 + 600	MPa
Bending strength (in the direction of maximum stress)	ASTM D790	310 + 30	MPa
Bending modulus of elasticity (in the direction of maximum stress)	ASTM D790	11500 + 300	MPa
Coefficient of linear thermal expansion	ASTM D696	$< 13 \times 10^{-6}$	K ⁻¹
Thermal conductivity	EN 12667:2001	$< 0,235$	W/mK
Melting temperature	DSC ISO 11357	No melting	-----
Class of inflammability	UL 94	HB	Class

Features

- Fast and flexible installation.
- Use with foam insulation of your choice.
- Significant reduction of ties versus comparable systems.
- No thermal bridging between wythes.
- Acts as NON composite panel in the maximum thermal expansion direction and as a COMPOSITE panel in the orthogonal direction.
- ETA tested according European Assessment Document EAD 330389-00-0601.
- Specific application software to aid with design and layout.

Benefits

- Easy to use for design and in production line both.
- One kind of connector for each kind of panel.
- Enhance thermal properties of insulation.
- Significant reduction in production, material, transport and labor costs.
- Make the panels lighter and easier to handle.
- Applicable to all brands and kinds of foam panel insulation.



Installation

1. A first layer of concrete is cast with usual operating methods (consider also to utilize our **FLEXFORM** form liners to create patterns on exposed side walls).
2. The steel welded wire mesh is placed in position and **GREENFLEX** inserts are then connected to the mesh at the interlaces, that is at the points of maximum strength, following the prescriptions of the **FLEXWARE** software and user's manual.
3. **GREENFLEX** inserts and the grid to which they are anchored are then embedded by at least 2.5 cm into the concrete layer of the non-bearing wythe (see the visible mark on the surface).
4. Layer of thermal insulation deposited to fully cover the surface.
5. Spacers and reinforcements are added according to the design specifications in the structural wythe completed with accessories.
6. Additional layers of thermal foam deposited fully cover the empty volumes, to make the panel lighter and to increase isolation performances.
7. Second steel welded wire mesh and spacers added in position before the final pouring.
8. The final concrete overlay poured, uniformly distributed on the surface, flat levelled and finished.

How to order

Specify: (1) Product code, (2) Quantity, (3) Description.
Example: 020670, 20.000, Greenflex 206/70

Ordering Information

Product code (1)	Description (3)	Weight (g/pc)	Packaging (pcs)
020670	Greenflex 206/70	93 g	200 pcs
025680	Greenflex 256/80	155 g	150 pcs
306100	Greenflex 306/100	180 g	100 pcs

Manufacturer

Flexcomp Ltd.
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Website: www.flexcomp-uk.com

Warranty

Flexcomp Ltd. (hereafter quoted as Flexcomp) warrants for two years from date of shipment, that Products and any associated application drawings and engineering services provided by Flexcomp ("Ancillary Services") will be free from defects in material and workmanship and, in the case of custom designed formwork, that the formwork will meet the specifications set forth in the design drawings approved by Flexcomp and Customer. Any claim under this warranty must be made in writing within such warranty period. If any Product and/or Ancillary Service covered by a timely claim found to be defective, Flexcomp will, within a reasonable time, make any necessary repairs or corrections or, at Flexcomp option, replace the Product. Unless preauthorized by Flexcomp in writing, Flexcomp will not accept any charges for correcting defects or accept the return of any Product. This warranty will not apply to any Products that have subjected to misuse, neglect, storage damage, misapplication, accident or any other damage caused by any person other than Flexcomp Ltd., or that have not maintained in accordance with Flexcomp specifications.