

STALUFLEX® ZN

Description of the product

STALUFLEX® ZN is a sandwich panel made with a grooved galvanised steel core attached between two skins in galvanised steel. The panel is produced with high quality standards thanks to the automatised production line. The main characteristics of the panel are the high rigidity coupled with the lightness and the fact it can be totally recycled.

This specific galvanised panel is widely used as both a structural floor and as vertical cladding in the building, shipbuilding and railway industries.

Layers

1) CORE:

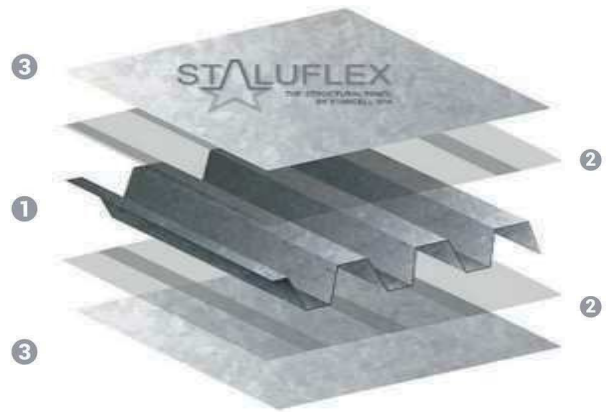
corrugated galvanised steel DX51D Z100
product in various heights, from a minimum of 2 mm to a maximum of 25 mm.

2) ADHESIVE

polyurethane glue produced directly for Starcell S.p.A by a leading international chemical company

3) EXTERNAL SKINS

galvanised steel DX51D Z100
thicknesses (0.2 - 0.3 - 0.4 - 0.5 - 0.6)
other thicknesses available upon request



Technical sheet of the panel

| PRODUCT ID CODE | | |
|-------------------|-----------------------|---|
| Code | Value | Meaning |
| STALUFLEX®ZNxyyzW | | Code |
| STALUFLEX® | STALUFLEX® | Product family |
| ZN | ZN | Core Material and Skins |
| xx | 4-6-10-15-18-20-25 | Nominal thickness of the panel (mm) |
| yy | 0.2 – 0.3 - 0.5 – 0.6 | Nominal thickness of the upper panel (mm) |
| zz | 0.2 – 0.3 - 0.5 – 0.6 | Nominal thickness of the lower panel (mm) |
| W | 0.2 - 0.3 – 0.4 – 0.5 | Nominal thickness of the core (mm) |
| | from (1) to (8) | (1) –(8) = Standard panel dimensions |



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CHARACTERISTICS OF MATERIALS AND COMPONENTS

SKINS

| | |
|--------------------------|---|
| Material: | galvanised sheet metal/pre-painted sheet metal |
| Type: | DX51D |
| Standard thickness (mm): | 0,3 – 0,5 – 0,6 |
| Surface appearance: | galvanised/RAL colours/other colours on request |
| Standard adhesive: | polyurethane |

CORE

| | |
|----------------------------------|--------------------|
| Material: | galvanised steel |
| Type: | D51X Z100 |
| Standard thickness (mm): | 0,30 |
| Nominal height of the core (mm): | 4-6-10-15-18-20-25 |

PHYSICAL AND DIMENSIONAL CHARACTERISTICS OF THE PANEL

DIMENSIONS

| | |
|-----------------------------------|--------------------------|
| Standard width (mm): | 1.000 – 1.250 – 1.500 mm |
| Standard length (mm): | 2.050 – 2.550 – 3.050 |
| Special (mm): | ON REQUEST |
| Tolerance skin misalignment (mm): | ± 5 |

THICKNESSES

| | | | | | | | |
|------------------------------------|------------------------------------|---|----|----|----|----|----|
| Standard nominal thicknesses (mm): | 4 | 6 | 10 | 15 | 18 | 20 | 25 |
| Special (mm): | ON REQUEST | | | | | | |
| Tolerance (mm): | ± 0,3 (unless otherwise specified) | | | | | | |

WEIGHTS*

| | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|
| Weights referred to standard thicknesses (kg/m ²): | 10,90 | 11,40 | 12,00 | 12,40 | 12,90 | 13,90 | 14,45 |
| Tolerance (kg/m ²): | ± 0,4 | | | | | | |

* The weights refer to panels with the following characteristics: corrugated thickness 0.30 mm - skins: 0.5 mm



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MECHANICAL CHARACTERISTICS OF THE PANEL

The characteristics of this sheet refer to a type of panel :

STALUFLEX® ZNxx where xx indicates the different nominal thicknesses of the panel

Starcell's Technical Department will gladly work with customers to determine the features of other panel configurations

| TYPE | STANDARD | CHARACTERISTIC VALUE | | | | | | |
|---|-----------|---|---|----|-----|-----|------|----|
| Nominal standard thickness | - | 4 | 6 | 10 | 15 | 18 | 20 | 25 |
| Max. load Concentrated (Kg) on 100mm ² (frame): 1200x1200 [mm] | ----- | | | | 150 | 150 | 150 | |
| Bending at maximum load * (mm): | ----- | | | | 3,8 | 2,5 | 1,95 | |
| Resistance to peeling * (N): | DIN 53295 | 130N-250N (direction L) - 220N-350N (direction W) | | | | | | |
| Rigidity (E * I) [N * m ² / m] | DIN 53293 | | | | | | | |
| Operating Temperature (° C): | | from -30 °C to + 110 °C (standard production) | | | | | | |

(*) values obtained from our internal test laboratory on a panel with a height of the corrugated galvanised sheet metal of 0,3 mm and a 0,5 mm thickness of the skin in galvanised sheet metal

The values shown in the above table will be updated whenever new data from laboratory tests is available

CERTIFICATIONS

| Type | Standard | Sector | Class |
|----------------|-------------------------------------|---------|-----------|
| Fire behaviour | EN 13501-1 | CIVIL | A1 |
| Fire behaviour | IMO Res. MSC.307(88) - 2010FTP Code | NAVAL | C - Class |
| Fire behaviour | UNI EN 45545 (ex UNI 11170-3) | RAILWAY | Underway |

PROPERTIES

- Very high rigidity;
- Excellent dimensional stability, also in terms of flatness over time;
- Excellent ratio between mechanical performance (high) and weight (low)
- Excellent product recyclability (100%).



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FIELDS OF APPLICATION

The STALUFLEX® ZN panel is widely used in the most varied fields of application, thanks to its particular characteristics: lightness, high rigidity and flatness, high mechanical performance, fire resistance, absence of toxic fumes and dimensional stability over time. This product represents one of the best solutions for applications on floating or structural floors in construction, ships, trains and buses.

The total recyclability of the panel, being entirely made in galvanised steel, extends their use wherever regulations or the commitment to environmental protection represent an essential constraint.

STORAGE

STALUFLEX® ZN panels belong to the "semi-finished" category and therefore subject to further processing; we recommend storing the panels horizontally in a closed and dry environment, possibly away from heat sources and to support them along the perimeter. Do not expose the packaged panels to atmospheric agents or sunlight

SAFETY DATA SHEETS

On request, safety data sheets of this product are available in Italian or English. For more information, please visit: www.starcellspa.com

Rev. 4 technical data sheet updated on 21-04-2021



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