

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:

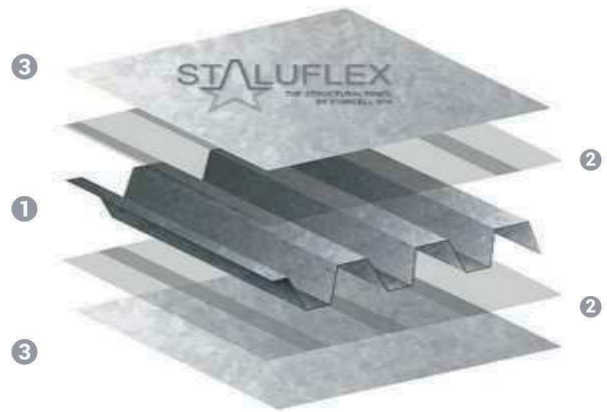
corrugated galvanised steel DX51D Z100
product in various heights, from a minimum of 2 mm to a maximum of 25 mm.

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®ZNxxyzzW		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

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

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%).

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