

RAWCELL® Fiber - PGA 1000 (6,35/n)(0,5-0,5)S(8)

Description of the product

PGA 1000 is a sandwich panel without a cosmetic finish, with an aluminium honeycomb core and glass fibre fabric skins impregnated with epoxy resins directly by Starcell. Main fields of application: construction, furniture, naval, weight-reduction of marble and mosaics.

Layers

1) INTERNAL CORE

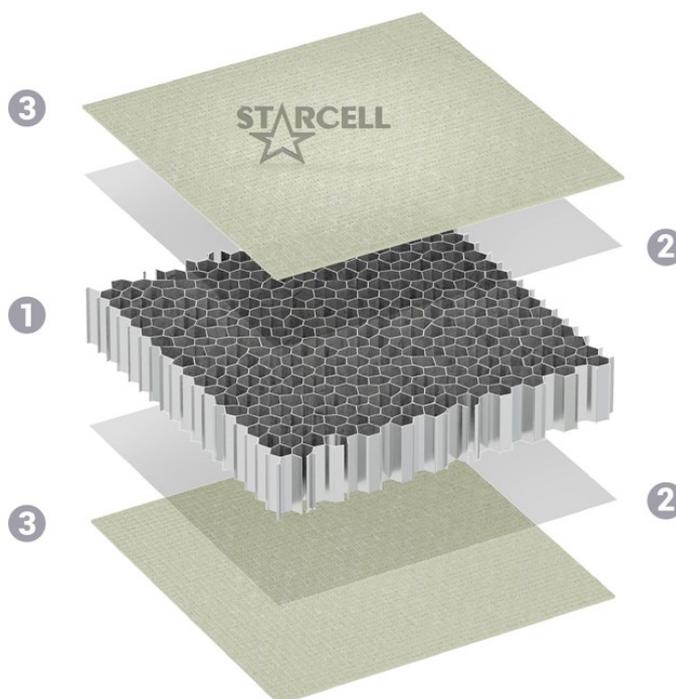
aluminium honeycomb
(Starcell production)
aluminium alloy: 3000 series
density: 29 - 50 - 56 - 65 - 80 kg/m³
cell diameter:
6.35 mm (standard);
10 - 12.7 - 19 mm (on request)

2) ADHESIVE

thermoplastic or
thermosetting
(Starcell formula)

3) EXTERNAL SKINS

glass fabric impregnated with epoxy resins
(impregnated fabric weight: 1000 g/m² per side)



Technical sheet of the panel

PRODUCT ID CODE		
Code structure	Value in this sheet	Meaning
RAWCELL®		family to which the product belongs
Fiber		subfamily to which the product belongs
PGA 1000 (n/n)(n-n)		panel type
PGA 1000 (n/)()	6,35/ =	size (mm) of the hexagonal honeycomb cell
PGA 1000 (/n)()	/n =	panel thickness (mm)
PGA 1000 (/)(n-n)	0,5-0,5	thickness (mm) of the two skins
S(n)	8=	standard dimensions (mm) - S(8) = 1.300 X 3.050

CHARACTERISTICS OF MATERIALS AND COMPONENTS

Structural skins

material:	glass fibre roving fabric
type:	(impregnated weight 1000 g/m ² - 600 tex)
standard thicknesses (mm):	0,5
impregnation:	epoxy resin (Starcell formula)
surface appearance:	raw
standard adhesive:	thermoplastic film (Starcell formula)
on request adhesive:	epoxy film

Hexagonal cell honeycomb

material:	aluminium foil
type:	3000 series alloy
foil thicknesses (µm):	60 - 70
density (kg/m ³):	29 - 50 - 56 - 65 - 80
standard cell sizes (mm):	6,35 - 10 - 12,7 - 19

PHYSICAL AND DIMENSIONAL CHARACTERISTICS OF THE PANEL

Dimensions

standard (mm):	S(9) = 1.300 X 2.550 - S(13) = 1.550 X 3.050
special (mm):	1.550 - maximum length: 4.300
tolerance (mm):	± 1 (squared panels)

Thicknesses

standard (mm):	5	10	12,7	15	20	25	30
special (mm):	from 4 to 60						
tolerance (mm):	± 0,3						

Weights*

weights referred to standard thicknesses (kg/m ²):	3,06	3,39	3,56	3,71	4,04	4,36	4,69
tolerance (kg/m ²):	± 0,2						

*The weights refer to panels with the following characteristics:

cell size (mm): 6,35

foil thickness (µm): --

thickness of the skins (mm): 0,5

MECHANICAL CHARACTERISTICS OF THE PANEL

The characteristics of this sheet refer to the following type of panel:

RAWCELL® Fiber - PGA 1000 (6,35/n)(0,5-0,5)S(8)

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

Type	Standard	Characteristic value						
standard thicknesses	-	5	10	12,7	15	20	25	30
maximum load* (N):	DIN 53293; EN 14125	251	479	515	1.583	1.835	2.337	
deflection at Max* load (mm):	DIN 53293; EN 14125	11,42	4,41	6,12	8,86	8,01	12,59	
resistance to peeling* (N):	DIN 53295	> 130 (min.) - >350 (average)						
compressive strength* (Kg/cm ²):	UNI 4913	21,97 ± 10						
elasticity modulus (E)* (N/mm ²):	DIN 53293	14.460	16.130	12.169	18.817	23.777	19.022	61.840
moment of inertia (I)* (mm ⁴):	DIN 53293	253	1.128	2.363	3.942	9.506	18.758	32.634
operating temperature (°C):		from -40°C to +80°C						
maximum distributed load** (Kg):		2.000						
deflection**(mm) for a distributed load of: 300 kg		1,50						

(*) values obtained by Starcell's Internal Laboratory.

(**) value obtained on a panel held on 4 sides:

size (mm): 1.000 X 1.000

thickness (mm): 20

cell size (mm): 6,35

PROPERTIES

- Very high resistance to bending, shear and tensile stress.
- Excellent resistance to peeling.
- Excellent dimensional stability, also in terms of flatness over time.
- Very good compressive strength (due to aluminium honeycomb).
- Maximum mechanical performance, compared to the high lightness of the panel.
- Excellent weather resistance.
- Surface particularly suitable for gluing additional finishes.
- Wide operating temperature range.
- Ease of machining with manual or CNC equipment.

FIELDS OF APPLICATION

The typical applications of RAWCELL® Fiber - PGA 1000 panel are in the marble, stone and ceramic market, where high mechanical characteristics are required together with low overall weight and maintenance of properties over time; the panel is often used for civil engineering applications both indoors and outdoors (including application in ventilated façades); it is supplied in standard or custom sizes to suit all needs.

STORAGE

The RAWCELL® Fiber - PGA 1000 panel is a product in the “semi-finished products” category and therefore is 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 their edges.

SAFETY DATA SHEETS

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

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