STARCELL
HONEYCOMB & COMPOSITE PANELS

Via Sebenico 22 - 20124 Milano
Tel: +39 026883537 - Fax : +39 0269008152
E-Mail: info@starcellspa.com Website: www.starcellspa.com

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

Description of the product

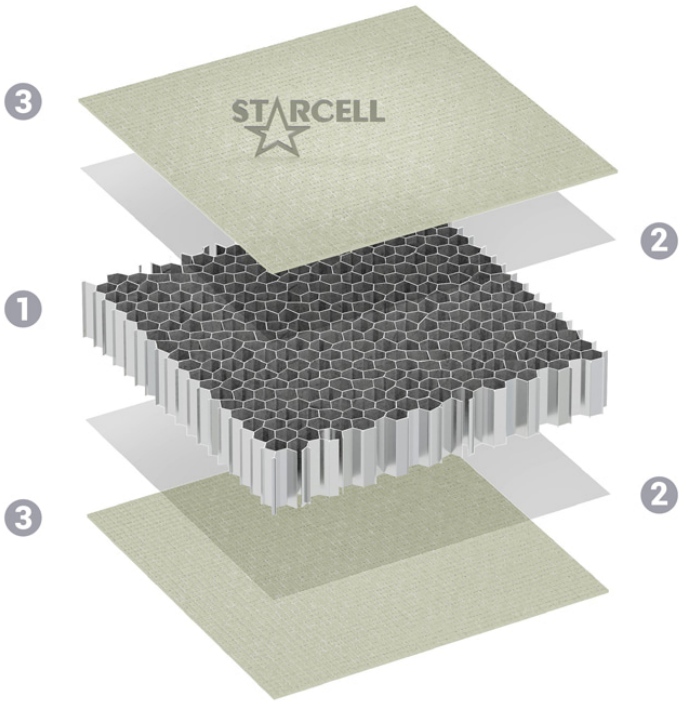
PGA is a sandwich panel without a cosmetic finish, with an aluminium honeycomb core and glass fibre fabric skins impregnated with epoxy resins directly by Starcell. Main fields of application: construction, furniture, naval, weight-reduction of marble and mosaics.

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
(Starcell formula)

3) EXTERNAL SKINS
glass fabric impregnated with epoxy resins
(dry fabric weight: 500 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 (n/n)(n-n)		panel type
PGA (n/)( )	6,35/ =	size (mm) of the hexagonal honeycomb cell
PGA (/n)( )	/n =	panel thickness (mm)
PGA (/)(n-n)	0,5-0,5	thickness (mm) of the two skins
S(n)	8=	standard dimensions (mm) - S(8) = 1.250 X 3.050

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CHARACTERISTICS OF MATERIALS AND COMPONENTS

Structural skins

material:	glass fibre roving fabric
type:	(dry weight 500 g/m² - 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/m³):	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) = 1.270 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/m²):	3,06	3,39	3,56	3,71	4,04	4,36	4,69
tolerance (kg/m²):	± 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

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MECHANICAL CHARACTERISTICS OF THE PANEL

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

RAWCELL® Fiber - PGA (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	2.140	2.692	2.338
deflection at Max* load (mm):	DIN 53293; EN 14125	11,42	4,41	6,12	8,86	8,18	13,01	12,59
resistance to peeling* (N):	DIN 53295	> 130 (min.) - >350 (average)						
compressive strength* (Kg/cm²):	UNI 4913	21,97 ± 10						
elasticity modulus (E)* (N/mm²):	DIN 53293	14.460	16.130	12.169	18.817	23.777	30.062	36.341
moment of inertia (I)* (mm⁴):	DIN 53293	253	1.128	2.363	3.942	9.506	14.555	18.758
operating temperature (°C):		from -40°C to +80°C						
maximum distributed load** (Kg):		450						
deflection**(mm) for a distributed load of: 300 kg		5,00						

(*) 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 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.

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STORAGE

The RAWCELL® Fiber - PGA 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.

Scheda tecnica aggiornata al 20-09-2019