

LITHOCELL® Natural Stone - PS3 (6,35/19)(0,5-0,5)S(1)

Description of the product

PS3 is a sandwich panel with a cosmetic finish consisting of a split stone slab (< 3 mm). It has an aluminium honeycomb core and galvanized steel sheet skins. It is obtained by gluing a split stone finish slab to a panel without finish such as the RAWCELL® Metal panel. Main fields of application: construction, furniture, shipbuilding, lifts.

Layers

1) INTERNAL CORE

aluminium honeycomb
(Starcell production)
aluminium alloy: 3000 series
density: 29 - 40 - 56 - 65 - 80 kg/m³
cell diameter:
6.35 mm (standard);
10 - 12.7 - 19 mm (on request)

2) ADHESIVE

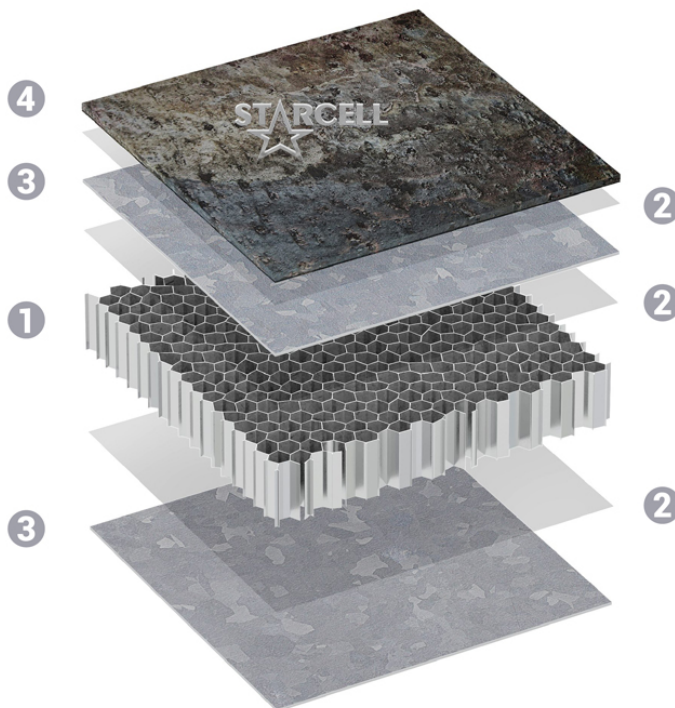
thermoplastic or polyurethane

3) EXTERNAL SKINS

raw or primed galvanized steel sheet
skin thicknesses:
0.3 - 0.5 - 0.6 mm (standard)
0.8 - 1.0 mm (on request)

4) FINISHING

split stone slab
thickness: < 3 mm



Technical sheet of the support panel

PRODUCT ID CODE		
Code structure	Value in this sheet	Meaning
LITHOCELL®		family to which the product belongs
Natural Stone		subfamily to which the product belongs
PS3 (n/n)(n-n)		panel type
PS3 (n/)()	6,35/ =	size (mm) of the hexagonal honeycomb cell
PS3 (/n)()	/19 =	panel thickness (mm)
PS3 (/)(n-n)	0,5-0,5	thickness (mm) of the two skins
S(n)	1=	standard dimensions (mm) - S(1) = 1.000 X 1.000

CHARACTERISTICS OF MATERIALS AND COMPONENTS

Front finishing layer

material:	split stone slab
standard thicknesses (mm):	3,0
surface appearance:	natural - split

Structural skins

material:	steel sheet
type:	hot dip galvanized
standard thicknesses (mm):	0,3 - 0,5 - 0,6 (squared); 0,8 - 1,0 (not squared)
surface appearance:	raw - primed
standard adhesive:	thermoplastic - polyurethane

Hexagonal cell honeycomb

material:	aluminium foil
type:	3000 series alloy
foil thicknesses (µm):	50 - 60 - 70
density (kg/m³):	29 - 40 - 56 - 65 - 80
standard cell sizes (mm):	6,35
on request cell size (mm):	10 - 12,7 - 19

PHYSICAL AND DIMENSIONAL CHARACTERISTICS OF THE PANEL

Dimensions

standard (mm):	S(3) = 1.000 X 2.150 - S(7) = 1.250 X 2.550 - S(12) = 1.500 X 3.050
special (mm):	1.500 - 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):	5,44	5,71	5,85	5,98	6,25	6,52	6,79
tolerance (kg/m²):	± 0,2						

*The weights refer to panels with the following characteristics:

cell size (mm): 10

foil thickness (µm): 70

thickness of the skins (mm): 0,3

MECHANICAL CHARACTERISTICS OF THE PANEL

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

LITHOCELL® Natural Stone - PS3 (6,35/19)(0,5-0,5)S(1)

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					3.900		
deflection at Max* load (mm):	DIN 53293; EN 14125					3,58		
resistance to peeling* (N):	DIN 53295	> 130 (min.) - >380 (average)						
compressive strength* (Kg/cm²):	UNI 4913	27						
elasticity modulus (E)* (N/mm²):	DIN 53293					130.000		
stiffness modulus (R)* (N/m²):	DIN 53293	1.000						
thermal expansion coefficient* (°C⁻¹):	-	1,2x 10⁻⁵						
operating temperature (°C):		from -40 °C to +75 °C (on request +120 °C)						

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

CERTIFICATIONS

Type	Standard	Sector	Class
fire behaviour of the panel	EN 13501-1	CIVIL	A2-s1, d0
fire behaviour of the panel	IMO Res. MSC.307(88) - 2010FTP Code	SHIPBUILDING	C
fire behaviour of the panel	UNI 11170-3	RAIL	0
fire behaviour of the honeycomb	ISO 1182		M1 F0

PROPERTIES

- Very high resistance to bending, shear and tensile stress.
- Excellent dimensional stability, also in terms of flatness over time.
- Very good compressive strength (due to aluminium honeycomb).
- Excellent ratio between mechanical performance (high) and weight (content).
- Excellent weather resistance.
- Ideal for outdoor applications due to its excellent resistance to aggressive weather.
- Ease of machining with manual or CNC equipment suitable for machining steel.
- Wide operating temperature range.
- Excellent fire resistance and low emission of toxic fumes.

FIELDS OF APPLICATION

Typical applications for the LITHOCELL® Natural Stone - PS3 panel include building façades, interior design and general design.

STORAGE

The LITHOCELL® Natural Stone - PS3 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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