

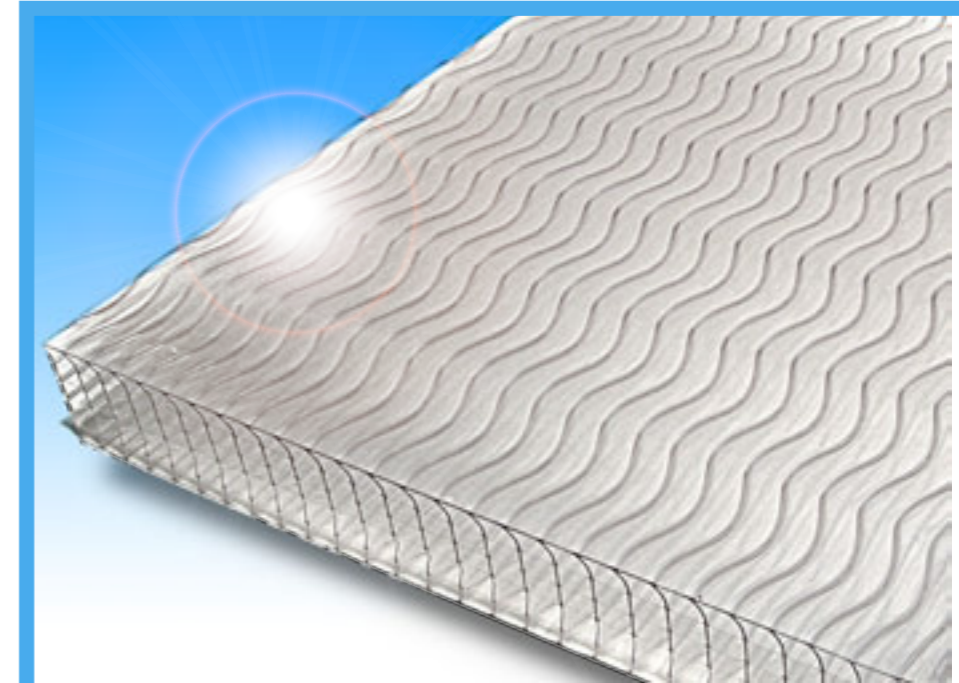
POLISNAKE Loads

Table of the lengths allowed, for sheets contained on 4 sides in a frame for minimum 20 mm – Uniformly distributed loads
Breaking loads.

		WIDTH					
		600 mm	700 mm	980 mm	1.050 mm	1.250 mm	
POLISNAKE 4-LITE 10 mm	Load	600 N/m ²		6'000	2'600	2'200	1'750
		900 N/m ²	6'000	4'000	2'100	1'750	1'500
		1.200 N/m ²	3'950	3'100	1'750	1'500	1'300
		1.500 N/m ²	2'750	2'400	1'500	1'300	1'050
		1.800 N/m ²	2'400	1'950	1'300	1'150	900
		2.000 N/m ²	2'050	1'750	1'200	1'050	820
		2.500 N/m ²	1'850	1'500	1'000	900	700
		600 mm	700 mm	980 mm	1.050 mm	1.250 mm	
POLISNAKE HC 16 mm	Load	900 N/m ²			4'550	3'200	2'300
		1.200 N/m ²			2'900	2'100	1'750
		1.500 N/m ²		6'000	2'150	1'650	1'500
		1.800 N/m ²	600	4'800	1'800	1'400	1'250
		2.000 N/m ²	4'300	3'300	1'400	1'250	1'100
		2.500 N/m ²	2'100	1'800	1'100	1'000	850
		600 mm	700 mm	980 mm	1.050 mm	1.250 mm	
POLISNAKE Q 25 mm	Load	900 N/m ²				6'000	3'100
		1.200 N/m ²				4'900	2'650
		1.500 N/m ²			6'000	3'400	2'350
		1.800 N/m ²			3'750	2'550	1'980
		2.000 N/m ²		6'000	2'750	2'100	1'750
		2.500 N/m ²	6000	3'250	1'950	1'700	1'350
		600 mm	700 mm	980 mm	1.050 mm	1.250 mm	
POLISNAKE Q 32 mm	Load	900 N/m ²					6'000
		1.200 N/m ²					4'300
		1.500 N/m ²				6'000	3'200
		1.800 N/m ²			6'000	4'000	2'550
		2.000 N/m ²		6'000	3'700	3'150	2'200
		2.500 N/m ²		4'200	2'500	2'100	1'700

**HIGH LOAD RESISTANCE - LOW WEIGHT
EXCELLENT LIGHT TRANSMISSION - NEW LOOK**

POLISNAKE



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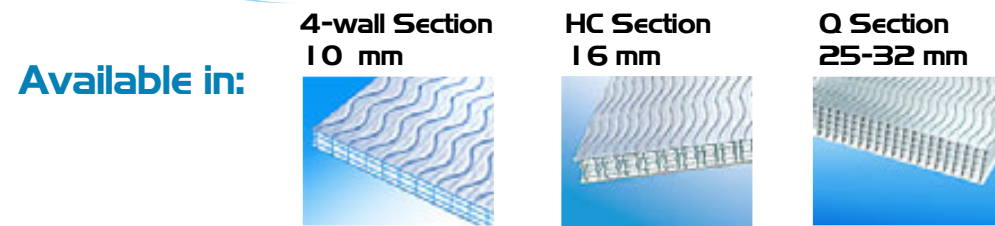
 **4-wall Section**
10 mm

 **HC Section**
16 mm

 **Q Section**
25-32 mm



All the data reported in this literature can be changed by POLITEC SA at any time without obligation of notice. These data are the result of our best knowledge but they are a non-binding information and do not release Client to make own tests in order to check whether the products are suitable with the use they are planned for. The products having a weight lower than the standard reported herein are not covered by any guarantee.



POLISNAKE is a new and exclusive concept of multi-walled sheet and its development is the synthesis of the highest knowledge in the extrusion technology. POLITEC has innovated their products by bringing all the properties of polycarbonate sheets to the highest level. The original, unique and pleasing look of **POLISNAKE** allows new architectural solutions by exalting the characteristics of this structure.

LOAD RESISTANCE

Compared with sheets with the same weight and thickness POLISNAKE structure allows to increase the extreme collapse load up to 60%. Please find hereunder some experimental data drawn from load tests.

Section	Sizes	Breaking load		POLISNAKE sheets increase
		POLISNAKE	POLITEC STANDARD	
10LITE	700 x 3000	1.400 Pa	900 Pa	+55%
16HC	1000 x 3000	1.500 Pa	1.100 Pa	+36%
25Q	1050 x 1500	3.200 Pa	2.300 Pa	+39%
32Q	1250 x 1500	3.500 Pa	2.200 Pa	+59%

LIGHT TRANSMISSION

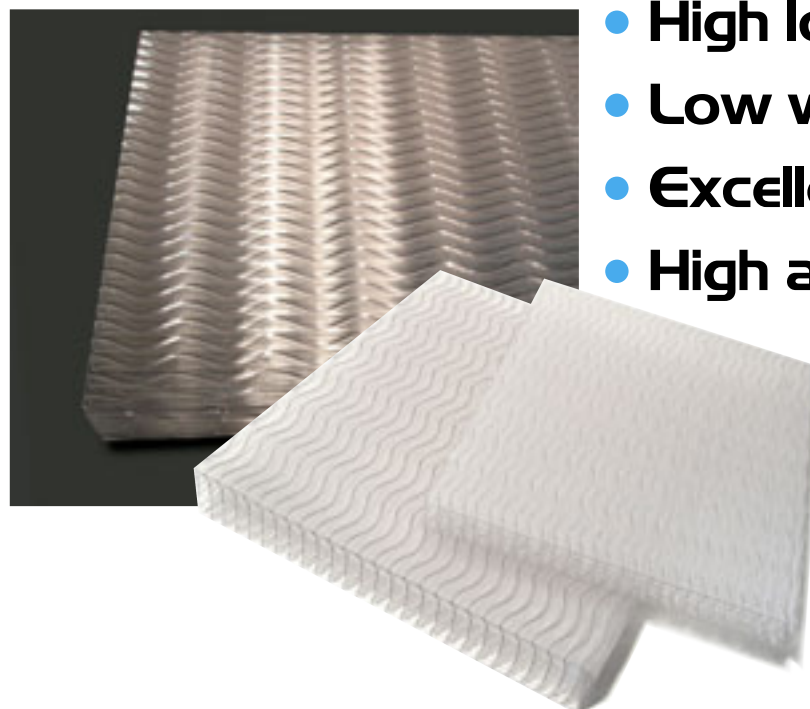
Reflection and transparency change in POLISNAKE structure; the light transmission does not decrease but grows.

THERMAL INSULATION

The excellent thermal insulation properties, peculiar to multi-wall sections, do not vary in **POLISNAKE** sheets.

UV PROTECTION

The UV protection by co-extrusion protects the sheets and ensures the stability of the physical properties of polycarbonate. **POLISNAKE** sheets are covered by a **10 year warranty** against ageing, loss of light transmission and breakage by hail.



- High load resistance
- Low weight
- Excellent light transmission
- High aesthetical valence

POLISNAKE Technical data

Section	Thickn.	Weight	Width	Uvalue	Colours	LT	G value
POLISNAKE 4-LITE	10 mm	1,75 Kg/m ²	1250 mm	2,49 W/m ² K	Clear (0010)	80	78
					opal (0037)	45	59
POLISNAKE 16HC	16 mm	2,5 Kg/m ²	1250 mm	1,95 W/m ² K	Clear (0010)	62	67
					opal (0299)	37	48
POLISNAKE-Q	25 mm	3,4 Kg/m ²	1250 mm	1,43 W/m ² K	Clear (0010)	55	63
					opal (0299)	41	37
POLISNAKE-Q	32 mm	3,9 Kg/m ²	1250 mm	1,20 W/m ² K	Clear (0010)	51	59
					opal (0299)	37	34

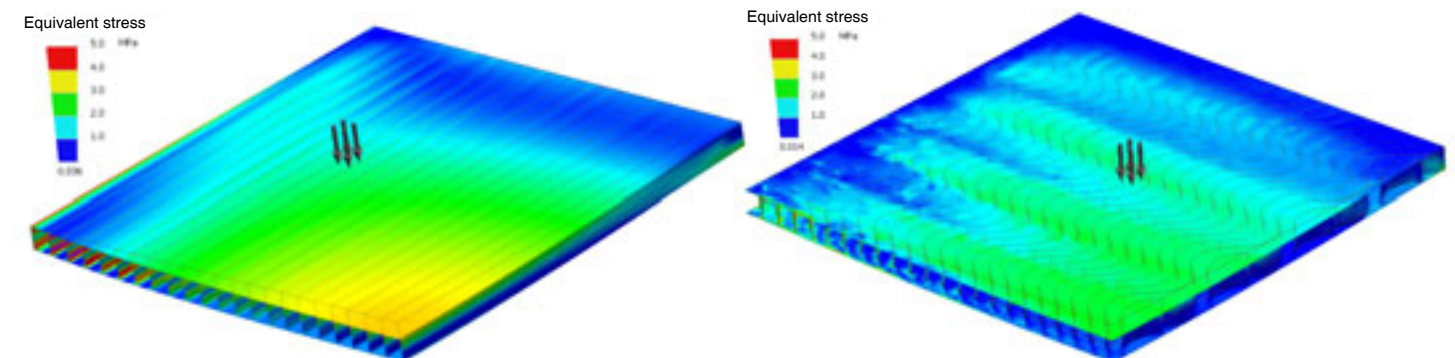
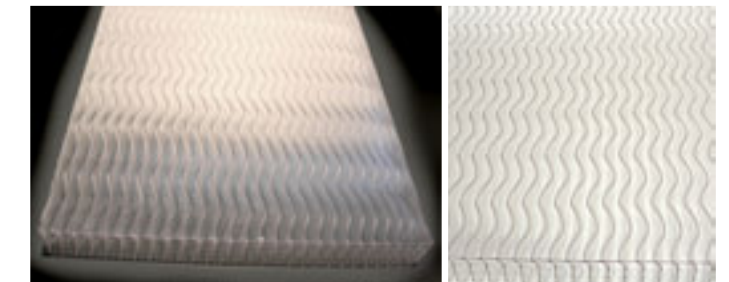
Comparative analysis / Finite elements

Material: Polycarbonate

Young Modul	2275 MPa
Poisson coefficient	0.38
Density	1.2e-006 kg/mm ³
Yield stress	62.01 MPa
Stress at break	68.9 MPa

Pattern:

Sheet size:	600 x 600 mm
Calculation size:	300 x 300 mm
Supports:	on four sides
Thickness:	10 mm
Uniform load	900 N/m ²



Rectilinear sheet

Results:

Maximum deformation 3,294 mm

Polisnake sheet

Results:

Maximum deformation 1,883 mm

The comparative stress analysis of a Polisnake sheet and a sheet with the same weight and thickness makes clear how the mechanical behaviour of POLISNAKE sheets optimizes the distribution of the strengths. In this example the deflection of POLISNAKE is roughly the half and the extreme collapse is higher by 46 %. Load tests made by Institute Giordano (Italy) confirm the theoretic calculation values in comparison with the rectilinear sheet.