



# TECHNICAL BROCHURE

*Improvement through innovation*

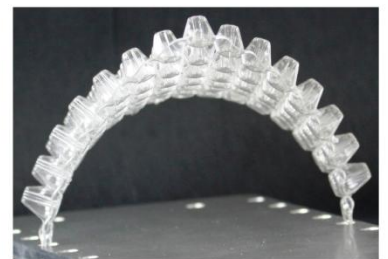
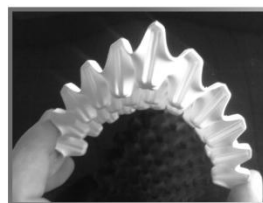
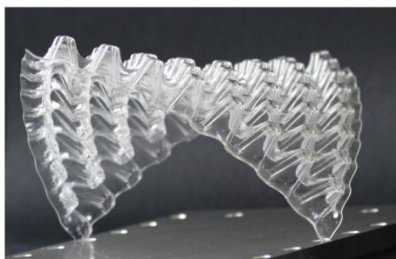
## A Breakthrough Enhancement

*Here are the results of normalised compressive and shear tests on Pyramidcore polycarbonate specimens, compared to classical PC tubus honeycomb:*

*Increase in compressive strength of + 54 %*

*Increase in shear strength of + 72 %*

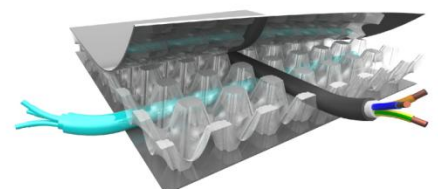
## Unique Possibilities of Formability

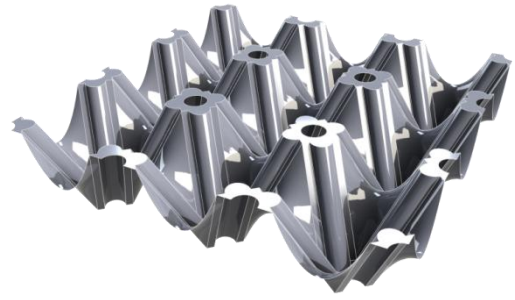
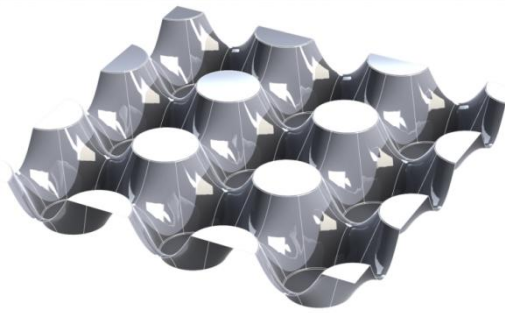


*Flexible adaptative foils,  
No thermoforming required*

## Multifunctionality

*Patented open structure: - easy to cable  
- no moisture*





	Density		Compressive Strength		Shear Strength		Shear Modulus	
	kg.m <sup>-3</sup>	lb.ft <sup>-3</sup>	MPa	psi	MPa	psi	MPa	ksi
Pc Honeycomb PLASCORE	64	4,0	1,1	165	0,55	80	20,7	3,0
<b>PC PYRAMIDCORE</b> Height: 16mm	66	4,1	1,7	242	0,95	138	18,2	2,6
<b>Improvement</b>	<b>+ 3 %</b>		<b>+ 54 %</b>		<b>+ 72 %</b>			

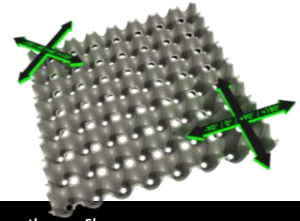
Testing condition:

Raw material: polycarbonate Rate speed of 0,5 mm.min-1.

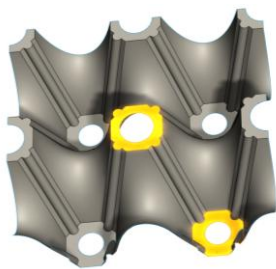
Compressive tests: specimen's size 100 x 100 x 15,6 mm (L x w x h), 2mm thick aluminium skins.

Shear tests: specimen's size 150 x 75 x 15,6 mm (L x w x h), 20mm thick steel plates.

All specimens were glued with the adhesive Araldite 2021 (methyl methacrylate).



Raw Material	Density kg.m <sup>-3</sup>	Stabilized Compressive Strength MPa	Compressive Modulus MPa	Curve at 66% deformation	Shear Strength -90°/0°/+90°/+180° MPa	Shear Modulus MPa	Curve at 4 mm deformation	Shear Strength -135°/-45°/+45°/+135° MPa	Shear Modulus MPa	Curve at 4 mm deformation
Polystyrene choc	62	1,4	56,8		0,4	16,4		0,4	11,5	
Polycarbonate	73	2,1	67,5		1,2	27,0		1,1	24,7	
Polystyrene	74	3,1	112,9		0,8	27,9		0,9	32,6	
PMMA choc	27	0,35	19,2		0,2	5,2		0,2	5,2	
PMMA choc	74	2,0	68,6		0,8	15,7		0,8	15,7	



Larger interfaces: same upper and lower bonded areas

Adjustable mechanical properties

