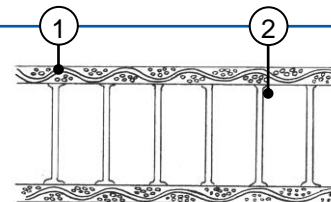


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**Panel structure**

MonoPan® is a thermoplastic sandwich panel, consisting of a polypropylene honeycomb core and fibre-glass reinforced polypropylene face sheets which are homogeneously and permanently joined together by a thermoplastic fusion/welding process.



1. Longitudinal- and transverse filaments in PP-matrix
2. Honeycomb with cell walls melted to face sheets

**Face sheets**

The face sheets on both sides are of the same thickness and have the following specifications:

Standard: single-layered on each side, natural colour (opaque-white) with a thickness of 0.7 mm (resulting in approximately 980 g/m<sup>2</sup> weight per skin).

Standard	0.7 mm natural colour	980 g/m <sup>2</sup>
On request	0.7 mm black	980 g/m <sup>2</sup>
	1.0 mm natural colour	1.485 g/m <sup>2</sup>
	1.0 mm black	1.485 g/m <sup>2</sup>

**Honeycomb**

Standard	PP-honeycomb	Density 80 or 85 kg/m <sup>3</sup>
On request	PP-honeycomb	Density 90 kg/m <sup>3</sup>
		Density 100 kg/m <sup>3</sup>
		Density 120 kg/m <sup>3</sup>

**Surface coating**

Optional ( 1 site)	Surface with primer	- plasma pre-treatment - Polypropylene - bonding agent - pre-painted coating
	Surface painted white RAL 9010	- plasma pre-treatment - Polypropylene – bonding agent - UV-curing final coating
On request	Anti-Slip-Surface	

- - - Custom specifications are available on request for at least 500 m<sup>2</sup> - - -

**Technical delivery terms**

<b>Production Sizes</b>			
Length	2.000 to 13.600 mm		
Width	2.190 to 2.750 mm		
Panels could be cut into smaller dimensions if required.			
<b>Tolerances</b>	Length	Width	
	± 2 mm		In case length ≤ 2.750
	± 4 mm		In case >2.750 length ≤ 6.800
	± 8 mm	± 4 mm	In case length > 6.800

<b>Panel thickness</b>		
Standard	25 and 30 mm	Tolerance: ± 0.35 mm
On request	14 to 50 mm (from 500 m <sup>2</sup> )	Tolerance: ± 0.5 mm



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**Properties**

**Weight**

The weight of a MonoPan® panel consists of the weight of its two components: the skin sheets and the honeycomb core. Thus the material has no specific density. Please see technical datasheet for weight calculation details.

**Impact strength**

At a temperature of 20°C the impact strength, applied by a Falling Dart Impact Test with a Ø20 mm spherical head, is >80 J (translated >250 J/m²), at -20°C it is still 35 J.

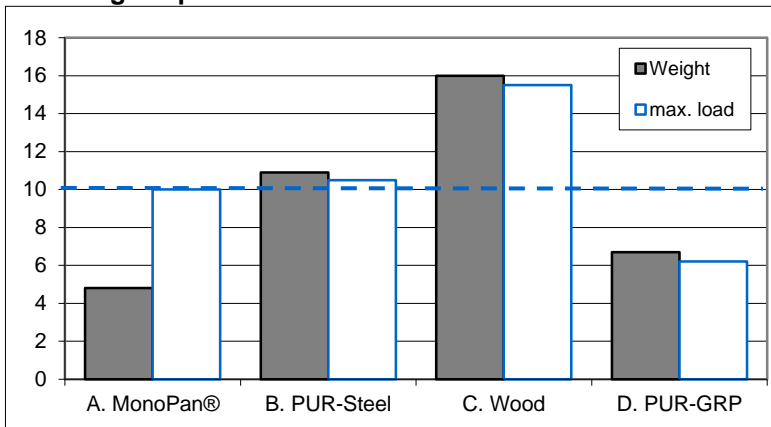
**Weather resistance**

Due to the high glass content of the skin sheets MonoPan® panels offer excellent UV-protection that could be improved further by coating. In the long term MonoPan® panels do not show any major signs of aging, especially when compared to similar plastic materials, which have a stronger tendency to surface cracks at intensive UV-radiation. MonoPan® does not decompose and is also very resistant to salt water. Chemical resistance is generally very high whilst water absorption of panels is below 1.5%.

**Compression strength**

Compression strength at short term load is 2.3 MPa on an area of 50x50 mm.

**Bending Properties**



The graph shows the strength in kg/cm width at a centred line load applied on a panel with a span distance of 750 mm compared to a weight per unit area of kg/m².

Materials:  
 A: 30 mm Standard MonoPan®  
 B: 40 mm PUR, 0.6 mm Steel  
 C: 16 mm Plywood  
 D: 40 mm PUR, 2 mm GRP

**Fire behaviour**

Unpainted MonoPan® is flammable according to DIN 4102 – class B2. A standard coating could improve fire behaviour substantially reaching class F1 fire rating according to DIN 53438-3.

**Heat insulation**

Thermal Insulation Behaviour of Standard Panels			
25 mm	Heat transfer coefficient K	2.5	W/m²K
30 mm	Heat transfer coefficient K	2.2	W/m²K

**Fabrication**

MonoPan® can be shaped mechanically and by thermal forming. Machining is very similar to processing wood. Feasible options for joining parts are riveting, welding or gluing.

For applications, treatment and storage please note the „Technical Data Sheet“ of the manufacturer.

The specifications in this data sheet represent the current state of our technical knowledge and its purpose is to inform about MonoPan® and its applications. Thus the specifications do not guarantee particular properties or suitability for a specific application. We reserve the right to make changes in accordance with technological processes and other developments. We guarantee faultless quality in accordance with our conditions of sale.

