

The standard sheet for panels



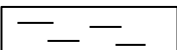
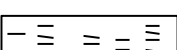
1 Quality requirements of the panels

1.1 Outside of the panel

Due to the production process (the natural shrinkage of the polyester) in combination with the quality of the plywood, foam and inlays the following deviations can occur.

- Visible seams of the plywood, foam and inlays
- Visible elevations of the plywood, foam and inlays
- Depressions (dents) in the plywood, foam and inlays
- Repairs of the plywood

These deviations are visible in the panel and have the following tolerances:

	Diameter or Max. length	Max. width	Per plywood plate	Per length or per 6 meters
	Ø 40mm		3	
	Panel height	3 mm	1	
	1220 mm	20 mm		2
	400 mm	30 mm		3

Pinholes

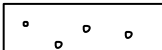
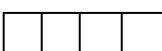

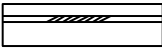
After spraying the panels, pinholes can become visible. These pinholes are not visible in the polyester plate before the polyester plate has been sprayed. Our warranty conditions do not reimburse these pinholes. Pinholes can be prevented by treating the polyester with a spray filler before spraying (see the spray instructions of the paint supplier)

Repairs outside

Repairs on the outside only occurs at sanded panels

1.2 Inside of the panel

Deviations on the inside of the panel

	Diameter or Max. length	Max. width	Per plywood plate
	Ø 40 mm		5
	Height of the panel	3 mm	1
	Height of the panel	160 mm	1
	Height of the panel	160 mm	1

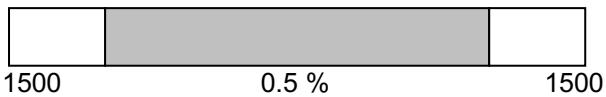
2 Measurement tolerances

2.1 Length and width measurements

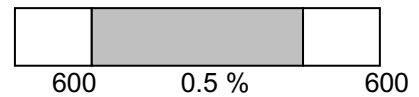
	Length (mm)						Thickness	Flatness
	till 1000	1000 till 2000	2000 till 4000	4000 till 8000	8000 till 12000	12000 till 16000		
Panels	± 2	± 3	± 4	± 5	± 6	± 7	Standard for the wall thickness of panels	0.5 % of the length

The flatness is measured according to the table below:

Panels > 6 meters



Panels < 6 meter



2.2 Wall thickness

a. The standard for the wall thickness of the panels

It is important to know what tolerances apply to the different layers the panel consists of in order to determine the standard for the wall thickness of the panels. All these tolerances together determine the standard for the wall thickness of the panel.

The following thickness deviations apply for the different materials the panel consists of.

b. Polyester plate

For this a wall thickness deviation of +/-0.2 mm applies

c. foam

For every foam layer a thickness deviation of +/- 0.3 mm applies

d. Plywood

With plywood the following formula can be used

Maximum thickness: thickness X 0.03 + 0.8 mm (12mm x 0.03 + 0.8mm) = 12mm + 1.1

Minimum thickness: thickness X 0.03 + 0.3 mm (12mm x 0.03 + 0.3mm) = 12mm - 0.6

e. The adhesive layer

For every adhesive layer a thickness deviation of +/- 0.3 mm applies

f. Sanded polyester plate

When a polyester plate is sanded, the thickness of the panel will become 0.1-0.3 mm thinner. The maximum sanding width is 2950 mm.

So the standard for the wall thickness will become the total of the different tolerances of the layers a panel consists of.

All measurements need to be done at 20 degrees Celsius.

3. Visual tolerances

Defects, as described in table 1, may occur if the frequency does not exceed 2 defects per 1250 mm², at which the distance between them being no less than 25 mm.

The quality of the gelcoat:

Name	Description	Tolerances
Customer damage	Small piece broken from the corner	max. length 3 mm
Cracking	Small cracks in, on or under the surface of a layer	max. length 25 mm* max. depth 0,2 mm
Air inclusions	Air between the gelcoat	max. D: 1,0 mm
Dent	Small dent in the surface of the laminate	max. D:0,8 mm depth <20% of the wall thickness *
Scratch	Caused by poor treatment	max. length 50 mm, max. depth 0,2 mm

Quality of the reinforcement layers:

Name	Description	Tolerances
Customer damage	Small piece broken from the corner	max. length 3 mm
Delamination		nothing
Dry spot	A not well impregnated surface	max. D=5 mm
Strange inclusions	Non laminate particles	max. D: 0,8 mm
Air inclusions (reinforcement)	Air between the layers	max. D: 3,0 mm
Blisters		nothing

* frequencies and locations determined by the customer

4. Transportation and storage

When transporting and storing the panels, the panels need to be supported by means of foam strips with a maximum distance of 1 meter of each other and 0,5 meter from the end and the begin of the panel. These foam strips always have to lie above the other at the different layers. The best way to move the panels is with multiple suction cups on the crane. If a package of panels is moved with lifting strips, the distance between the lifting strips may not be more than 3 meters of each other and no more than 1.5 meters from the ends of the panels.

The panels have to be stored dry and, depending on the skin plate, not in the sunlight. During long-term storage the panels may not be stored "cold" on top of each other.