

QUALITY GRADING FOR BAER SANDWICH PANELS

Thickness tolerances

The thickness tolerance is derived from the sum of the thickness tolerance of the individual materials.
 The following thickness tolerances apply:

Aluminium	± 0,6 mm
Polyester sheet	+ 0,4 / - 0,2 mm
PU foam	± 0,2 mm
XPS foam	± 0,2 mm
Multiplex	+ 0,5 / - 0,6 mm

Length tolerances

Panel length	From 0 to 4000 mm	± 4 mm
	From 4000 to 8000 mm	± 5 mm
	From 8000 to 15000 mm	± 6 mm
Panel width		± 4 mm
Angle tolerances		± 2 degrees

(All values measured at 20 degrees Celsius)

Optical tolerances

- Visible trace lines in the cover plate. These are caused by shrinking of the glue layer and by the varying thickness tolerances of the different layers. Tolerance: visible trace line over the total width of the panel (per every 0.6/1.2 m).
- Markings on inner layers.
- An unsmooth (clouded) surface of the polyester cladding.
- Small recesses in the panel (so-called 'dents') Tolerance: 1 piece per 2m² panel section.
- Pin holes may occur in a polyester cover plate. Prior to spraying, the surface must be inspected for pin holes, which must be primed (sealed flush). Baer will not reimburse the costs involved in this.
- Saw and milling edges may show traces of processing, such as serrated edges.

Storage

The panels must be stored in a dry environment, fully supported and flush against each other.



Temperature resistance

Glue	- 30 / + 90 degrees Celsius
PU foam	- 80 / + 100 degrees Celsius
PU320	- 200 / + 120 degrees Celsius
XPS foam	- 50 / + 75 degrees Celsius
Honeycomb	- 30 / + 80 degrees Celsius
BaerCore	- 40 / + 150 degrees Celsius
BaerWood	- 50 / + 100 degrees Celsius
Multiplex	+ 90 degrees Celsius
Polyester	- 30 / + 80 degrees Celsius (long duration) - 50 / + 130 degrees Celsius (short duration)
Aluminium	+ 60 degrees Celsius (coating) + 140 degrees Celsius (base material)

Temperature load

The properties of sandwich panels, as well as those of separately applied materials, change depending on the various temperature loads. Dark-coloured surfaces, in particular, may cause the maximum temperature load of the applied materials to be exceeded.

Exceeding the glass-transition temperature (approx. 65 degrees Celsius) of polyester sheet material will affect the mechanical properties, which may again lead to inner layers warping or showing markings. This is also the temperature threshold where optical changes in the surface occur.