

Sandwich element tolerances

Properties	Standard (based on)	Values
Length/width tolerance	DIN EN 822	+/- 2 mm/m (minimum +/- 2 mm)
Thickness/tolerance < 50 mm total thickness > 50 mm total thickness	DIN EN 823	+/- 0.7 mm +/- 1.0 mm over 500 mm reference distance
Angular tolerance/diagonal	DIN EN 824	+/- 1 mm over 500 mm reference distance
Roughness tolerance * < 50 mm total thickness > 50 mm total thickness	DIN ISO 1302	Rt 0.6 mm over 200 mm reference distance Rt 1.0 mm over 200 mm reference distance
Drill hole/pocket hole tolerance	DIN ISO 2768	+/- 2 mm
Fire protection class	DIN ISO 4102	See Stadur product data sheet
Curvature of longitudinal edge of foam	DIN EN 824	+/- 1 mm over 500 mm reference distance
Visual surface assessment	GSB guideline	Letter template „B1“ TNR
Dimensional reference temperature	DIN ISO 1:2002 -10	20° ± 5° C

Tolerances for „untrimmed“ sandwich elements

Length tolerance	-10 mm	+100 mm
Width tolerance	-10 mm	+50 mm

Notes on surfaces / exterior view

- Aluminium surfaces** are assessed on the basis of the "GSB Guideline Standard D 65".
A coating on the good side may not exhibit any scratches that extend through to the metal. Slight defects are permissible. None of the following defects may be visible to the naked eye from a distance of 3 m in the room: increased surface roughness, colour runs, holes, inclusions, craters, bubbles, stains, scattered holes, scratches. The colour coating must be uniform with a homogeneous brilliance.
- GRP surfaces** are defined via the type of manufacturing process (manual or endless production and the desired surface quality).
Inclusions up to 1.5 mm in diameter, holes/craters in the gel coat, light/dark effects up to 1.5 mm in diameter, crow's feet up to 15 mm in diameter, edge damage, breakouts and depressions in the gel coat cannot be excluded.
Dark surfaces and various metallic surfaces can reach temperatures of up to 100 °C in the sunshine. The use of such colours is the responsibility of the client. For such surfaces it is necessary to make a precise selection of the materials used (GRP, adhesive, foam) with regard to thermal expansion and temperature behaviour.
- Wood** can be offered as a natural product in a large number of variants. A definition and summary of their properties can be found in the Eurocode 5 and EN 310 standards. Consideration needs to be given to the quality of the surface, whether rough or machined, whether solid or multiplex superstructures saturated for increased water repellence or strength, inferior core layer structures or interior layers capable of being milled.
Thickness tolerances for panels are to be taken from EN 315.
Edge breakouts up to 2 cm from the edge and 5 cm in length and noticeable "knots" are natural.
Colour variations in the form of differing grain patterns are possible. The surfaces must be protected against light and weather influences.

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General

1. Non conforming tolerances have to be agreed upon separately.
2. Non-laminated surfaces are not protected against weather influences and damage. Neither scratches nor corrosion or dirt can be excluded.
3. Asymmetric element structures can lead to deformations.
4. Technical data for the individual products are to be taken from the respective technical data sheet and the associated standard.
5. Desired colours must be adjusted by means of retained samples and an LAB value determination.
6. Attention must be paid to the notes from the Stadur processing guidelines.
7. Milling irregularities cannot be excluded with drilled holes and milled slots.
8. In sandwich structures it is not the coefficients of expansion of the materials used that have to be accounted for, but rather the consideration of the structure as a whole.
9. The use of second quality articles excludes any guarantee for visual or defective surfaces.
10. In the case of sandwich elements with inserts or foam top-layer joints, these cannot be prevented from creating impressions on the surface. Over a reference distance of 200 mm a roughness value of Rt 1.0 mm has to be tolerated.
The general rule is: The thinner the covering material, the greater the subjective surface variance.
11. In the case of aluminium profile surrounds or GRP solid inserts, overhanging material and escape of adhesive cannot be excluded. Trimming can lead to cutting irregularities, depending on the material thickness.
12. The above details are based on our present level of knowledge and have been made in all conscience. Since the data, safety standards and required regulations are subject to continuous changes and their use or misuse is beyond our sphere of influence, Stadur can give neither an explicit guarantee, nor a guarantee in a figurative sense.