

## Surface visual quality classes

Prepared according to recommendations of German Laminated-Wood Research Laboratory (Association)(Studiengemeinschaft Holzleimbau e.V.).

**Special requirements or criteria (other, not specified below) are the subject of agreement between the supplier and the buyer, i.e., they are additionally stated in the specifications of the supplied product and descriptions.**

	Criteria	Industrial quality	Standard quality	Selected (extra) quality
1	Firmly grown knots	Permitted	Permitted	Permitted
2	Fallen and loose knots with bark remnants	Up to $\varnothing \leq 30$ mm permitted, from $\varnothing > 30$ mm to be replaced in the works	Up to $\varnothing \leq 20$ mm permitted, from $\varnothing > 20$ mm to be replaced in the works	Replaced in the works. Not replaced in the works if up to $\varnothing 5$ mm in diameter.
3	Resin galls <i>Delivery condition</i>	Permitted	Up to 5 mm wide resin galls are permitted	Up to 3 mm wide resin galls are permitted
4	Faulty points improved by means of "ships" or knot hole plugs	Not necessary	Permitted	Permitted
5	Knots and cracks improved by means of filler compound <i>Number of improvements not limited</i>	Not necessary	Permitted <i>To be agreed with the client</i>	Permitted <i>To be agreed with the client</i>
6	Insect attack, bore holes	Burrows are permitted up to 2 mm	Permitted bore holes up to 2 mm	Not permitted
7	Pith	Permitted	Permitted	Pith not permitted in visible surfaces of external lamellas
8	Cracks caused by shrinking <i>Delivery condition</i>	Not limited	Up to 2 mm wide	Width – up to 1 mm
9	Discolorations as a result of blue stain, red and brown stripes <i>Delivery condition</i>	Not limited	Up to 10% of the whole structure component visible surface area	Not permitted
10	Mould <i>Delivery condition</i>	Not permitted	Not permitted	Not permitted
11	Contamination of the surface <i>Delivery condition</i>	Not permitted	Not permitted	Not permitted
12	Distance between finger joints	Not limited	Not limited	Distance between finger joints of visible external lamellas min. 0.7 mm.
13	Surface	Unplaned areas are permitted up to 5% of the surface area if not deeper than > 3 mm	Planed, edges slightly chamfered. Planed chatter permitted up to a depth of 1 mm.	Planed, edges slightly chamfered. Planed chatter permitted up to depth of 0.5 mm. Surface can be polished

				by separate agreement.
14	Grown in bark	Permitted	Width up to 10 mm, length up to 60 mm	Not permitted
15	Rip-outs	Permitted	Depth up to 2 mm, diameter up to 15 mm	Not permitted

**NOTES:**

1. The depth of the crack may be, independent of the visual quality class of the surface for structure components, for members not being subject to tensile-stresses perpendicular to the grain up to 1/6 of the width of the structure component, for members being subject to tensile-stresses perpendicular to the grain, up to 1/8 of the width of the component.

2. If visual surface quality class is not specified in the order, products of standard surface quality are supplied.

*Compared with solid wood, glued laminated timber is mainly a crack-resistant wooden material. Cracks on the surface caused by changes and fluctuations in the climate or environment are inevitable. Thus, they are not a considered a defect and are permitted and have no impact on strength of the structure component.*