

GUIDELINES FOR VISUAL ASSESSMENT OF PRODUCT QUALITY

The surface quality of visually painted wooden windows, wooden exterior doors, wooden facades, wooden window sills and wooden posts is assessed according to this guide. The surfaces can be covered with covering (opaque) paint or transparent glaze (lasur).

Definitions

Window – an opening in the wall of a building, fitted with glass in a frame to admit light or air and allow people to see out.

Exterior door – an openable barrier at the entrance to a building that separates exterior and interior climate.

A window and an external door are constructional products that have been manufactured in accordance with the requirements of national product standards, national technical approvals and other national technical specifications and norms for construction products. The European standard EVS-EN 14351-1 applies to windows and exterior doors.

Windows, exterior doors and facades are made of laminated glulam (finger-jointed or non-finger-jointed, also known as solid).

Laminated glulam - an element of timber compiled from two or more layers, which may contain one or more adjacent lamellas.

The thickness of the dry coating layer – according to the finishing coating manufacturers, the specified dry film thickness finishing agent shall be 100 (+/- 20) µm. The measurement results of the dry film thickness are affected by the natural structure of the surface to be measured. The thickness of the dry layer of meranti and oak products cannot be achieved due to the natural structure of the wood. When measuring the thickness of the dry layer, the weighted average of the measurements of the different regions is calculated.

Crack - (narrow) gap, slit, rift.

Surface quality is observed from a distance of approx. 2 m in diffuse daylight in accordance with the usual use of space.

1. REQUIREMENTS AND TOLERANCES

ID		Requirements
1.1	Planing trace, kinetic wave	≤ 2,0 mm allowed.
1.2	Wood fibers	The coating must completely cover the wood fibers.
1.3	Adhesive residues	Adhesive residues with a maximum width of 3 mm may be present at the joints, there must be no adhesive residues on the surface.
1.4	Fasteners	Fasteners must not be rusty. Separation of recessed mounting points is permitted. In the case of technically prescribed screw fastening or nail fastening, it is permissible for the screws and nails to remain visible. When using double-sided tape, air bubbles under the tape are allowed.
1.5	Joints	The joint between the glass strip and the frame and the joint between the parts may be ≤ 2.0 mm. If two or more openings are connected to each other, the gap between the connection may be up to 1,2mm/m.
1.6	End surface	End surfaces do not need to be sanded. Rounded edges on end surfaces and repair of torn areas are allowed.
1.7	Crushing	Crushing areas with an area ≤ 5.0 mm ² or a depth ≤ 2 mm are permitted in areas which, after installation, are no longer visible when a window is closed.
1.8	Wood pores	The pores must be painted, the pores may differ depending on the type of wood.
1.9	Year-rounds	Trees behave differently and embossed year-rounds are allowed.
1.10	Glue and finger joints, spots, knots	Distinct places are allowed. Defects in the finish are not considered to be visible from the paint layer due to changes in humidity and / or temperature, glue joints, repair plugs and finger joint contours, branch contours, wood grain, etc., until the finish layer is damaged (cracked, detached, etc.). See p 1.2. For finger-jointed pine openings, one finger-jointed per 1m may be present on profiles 2 m long and longer.
1.11	Resin release	Irrespective of the surface paint, resin release cannot be prevented when using resin-rich wood (eg pine). The release of the resin is allowed, it is not considered a defect and it does not affect the declared performance of the products.
1.12	Differences in color	The color may vary slightly depending on the properties of the wood and may change over time. Products painted with transparent glazes are allowed to vary the color and shades of the paint layer due to the natural color difference and texture of the wood. Slight flow of paint is allowed. Brush or roller paint repairs (overpainting) on the products installed on site and the resulting structural difference in the paint layer compared to the factory painted paint structure are allowed. The above color corrections and overpainting do not affect the declared performance of the products.
1.13	Silicone	The silicone connection must completely seal the joint between the wood and the glass package. Line thickness fluctuations are allowed +/- 2 mm. Unevenness in the corners is allowed. Air bubbles (≤ 2.0 mm ²) and streaks (≤ 1 * 5.0

		mm) inside the silicone are permitted and do not impair the tightness of the joint. Some silicone residues on the glass and wood are allowed. Silicone can be easily removed from surfaces after drying.
1.14	Glass packages (glazing unit)	<p>The quality of glass packages is assessed according to the manufacturer's instructions: http://bodesa.lt/en/glass_packets/permitted_values_for_insulating_glass There is no fixed location at the joint of the glazing unit. Joints are allowed on each side of the package perimeter. Unevenness in the corners of the partitions is allowed. The height variation of the spacers is allowed ≤ 2.0 mm.</p> <p>Glass defects are allowed as described below: Edge area 10% of the length of the edge of glass measured from the sides of glass.</p> <p>Internal residues of glass– bubbles, dots, spots etc: Surface area of glass < 1 m²: max 4 items à Ø 3,0 mm Surface area of glass > 1 m²: max 1 item à Ø 3,0 mm per running meter of the edge of glass Production residues (dot-shaped) on the area between glasses: Surface area of glass < 1 m²: max 4 items à Ø 3,0 mm Surface area of glass > 1 m²: max 1 item à Ø 3,0 mm per running meter of the edge of glass Production residues (flat) on the area between glasses: Light grey or transparent allowed max 1 item < 3 cm² Scratches: Max 30 mm x 2 mm per one length, visible from 2 m distance. Sum of single lengths max 90 mm Filamentous scratches: Allowed, but not in bulk</p>
1.15	Aluminum coatings	A gap of ≤ 1.5 mm is permitted in the corner joints of aluminum profiles. For aluminum surfaces larger than 0.1 m ² , some surface corrugation is allowed. Hair scratches are allowed on the aluminum surface. Fluctuations in the flatness of the aluminum coating of +/- 3 mm are permitted.
1.16	Maintenance and repair	The products must be inspected and maintained at least once a year https://www.lasita.ee/wp-content/uploads/2018/02/Lasita-Aken-AS_Maintenance-and-user-instructions-of-windows-and-doors_Annex-3.pdf Products can be repaired on site (replacement of glass package and glass strips, repainting, replacement of brackets and seals, etc.). Repairs do not affect the declared performance of the products.

The development of this manual is based on the following documents and the technical possibilities of Lasita Aken AS.

1. Requirements for construction materials and products and procedures for attesting their conformity
<https://www.riigiteataja.ee/akt/130072013002?leiaKehtiv>
2. Estonian Building Materials Manufacturers Association
<http://www.eetl.ee/et/avataited>
3. EVS-EN 14351-1:2006+A2:2016 Windows and doors. Product standard, product characteristics. Part 1: Windows and exterior doors
4. EVS-EN 14080:2013 Timber structures. Lamellar glulam and plank glulam. Requirements
5. EVS-EN 15497:2014 Finger-jointed solid construction timber. Performance requirements and minimum production requirements
6. REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0005:0043:ET:PDF>