

OKAWOOD Insulating Glass with Wooden Grid Tolerances

Guideline for Assessing Visual Quality

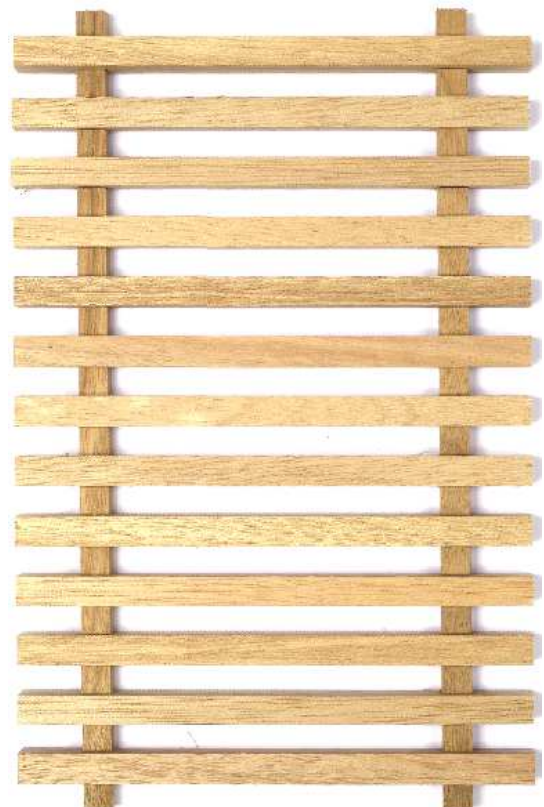
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Please observe the following information aimed at protecting you and your customers from damage and so as not to endanger any claims for compensation and warranty claims. The following information is designed to draw your attention to specific details which are often overlooked, but are important, and therefore must be considered. As such recommendations are of a general nature, and not aimed at each specific case, they do not lay claim to completeness. All valid laws, directives, standards and recognised technological regulations must also be observed. Please refer to the separate enclosures for product-specific information. Please contact us if there is any doubt. Non-compliance with this information will endanger any claims for compensation or warranty claims.

General

The product "OKAWOOD Insulating Glass with Wooden Grid" is an insulating glass with a wooden grid of rough-sawn, filigree wood rods integrated in the cavity of an insulating glass unit. OKALUX uses only high-quality wood. Both are genuine wood - not a replica. Being a natural product, there are bound to be deviations in color, brightness and position of the wood louvers. Similarly it is possible for resin to escape from the wood. The timber used comes from sustainable managed forests.

Before use, the wooden grid is subjected to a drying process which was specially developed for this product. Each insert then undergoes a 100% check and damaged or severely deformed rods are replaced. Nevertheless, timber is a material which "works" more than for example metal. For this reason we have drawn up the following list of criteria for assessing the visual quality of this product. The criteria are based on generally accepted technical rules from comparable applications. As an alternative we recommend using OKASOLAR insulating glass with integral sun control louvers made of metal.



Assessment basis

Assessment is based on the Technical Guidelines of the Glazing Trade "*Visual Inspection and Assessment Principles for Glazing in Buildings*" [Technische Richtlinie des Glaserhandwerks "*Visuelle Prüf- und Bewertungsgrundsätze für Verglasungen am Bau*"] [1]. The generally accepted technical rules provide general instructions for insulating glass with integral staves comparable to a fixed timber grid. However, only qualitative statements are made in [1].

Rattling noises

In section 4.1.3 of [1] it is pointed out that rattling noises are possible. This is system-related and inevitable.

Surface quality

In section 4.1.3 of [1] it is pointed out that visible saw cuts and color separations on integral staves are production-related and inevitable. In the case of the uncoated OKAWOOD wooden grid insert the same applies for the quality of the wood surface and possible deviations in the color of the timber. Optical changes may result on some surfaces from the effects of temperature and UV rays.

Rectangularity

In section 4.1.3 of [1] it is pointed out, without further quantification, that production-related tolerances exist with regard to deviations from rectangularity (see 3. Tolerances).

Temperature-related length changes

According to [1], repercussions from temperature-related changes in the length of the staves are inevitable. Such repercussions can be for example the deflection of rods about the weak axis as the result of temperature-related constrictions. These assessment principles apply also for the product "OKAWOOD Insulating Glass with Wooden Grid".

Tolerances

The quantification of production tolerances and geometrical imperfections in the used state is based on the ift Guideline VE-07/2 "*Multi-pane insulating glass with moving sun protection systems integrated in the glazing cavity*" [ift-Richtlinie VE-07/2 "*Mehrscheiben-Isolierglas mit beweglichen Sonnenschutzsystemen integriert im Scheibenzwischenraum*"] [2], because apart from this guideline no other comparable, accepted technical rules exist.

Deviation from rectangularity - Crookedness

Section 6.2.2 of [2] defines a permissible permanent deviation from rectangularity as 6mm per meter louver length. The maximum deviation is limited to 15mm. These tolerances can be applied to the product "OKAWOOD Insulating Glass with Wooden Grid".

Sagging

According to section 6.2.3 of [2], the permissible sagging of the louver is ± 5 mm up to a louver length of 1.5m and ± 10 mm up to a louver length of 2.5m. These tolerances can be applied to the product "OKAWOOD Insulating Glass with Wooden Grid".

Twisting

For the twisting of wood rods, the surface projected perpendicular to the gazing plane can be taken as the assessment criterion.

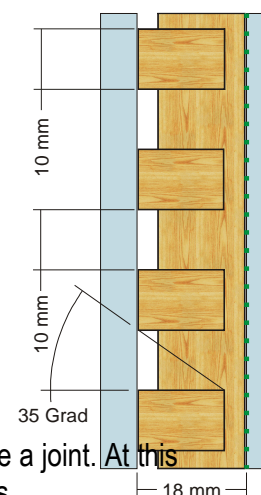
Other properties

All other properties are product-specific properties and are excluded from the assessment.

Dimensions and Tolerances

The table below show maximum dimensions and visible widths.

Louvres length	max. 1700 mm	± 3 mm/m
Length of support elements	max. 3500 mm	± 3 mm/m
Face width of louvres	10 mm	± 1 mm
Distance between louvres on the support element	10 mm	± 1 mm
Face width of support element	10 mm	± 1 mm
Distance between support elements	max. 600 mm	± 3 mm
Freely cantilever of louvres	50 mm	± 2 mm
Offset at the junction		max. 6 mm
Gap at the junction	in accordance with	+ 3 mm



Widths or heights in excess of the maximum lengths specified in the table above require a joint. At this joint it may be possible to see a gap or even an offset between the neighbouring louvres.

Quoted standards and guidelines

- [1] *"Visuelle Prüf- und Bewertungsgrundsätze für Verglasungen am Bau" Technische Richtlinie des Glaserhandwerks Nr. 9 1. Auflage, Verlagsanstalt Handwerk GmbH, Düsseldorf, 2006.*
- [2] *"Mehrscheiben-Isolierglas mit beweglichen Sonnenschutzsystemen integriert im Scheibenzwischenraum" ift-Richtlinie VE-07/2, 2007*

Assembly instructions

OKAWOOD is glazed as per normal insulating glass. During transportation, the insert may slide to the side, creating a greater visible slit between the spacer or the support profiles could become inclined. We must be notified in writing beforehand of any special loads which may occur during transportation (vibrations/shaking).

Please refer to our customer instructions "Supplying" and "Glazing" for information and recommendations concerning the installation and assembly of our insulating glass.

Other printed matter

If you do not have the following printer matter, please request it directly from OKALUX or download it from the Internet at www.okalux.com:

General terms and conditions of business
Product-specific information texts

As well as these, there are the following customer notes:

Customer notes on offers
Customer notes on delivery
Customer notes alarm glass
Customer notes screen printing
Customer notes Structural Glazing / Edge deletion
Customer notes on heat-soak test
Customer notes on glazing
Customer notes SIGNAPUR®
Customer notes OKAWOOD tolerances
Cleaning instructions for OKALUX gen.
Cleaning instructions OKACOLOR
Guideline for visual quality