

INSTALLATION OF SOLID WOOD LAMPARQUET ACCORDING TO EN 13227 (PK 1)

WHAT IS LAMPARQUET OR 10 MM SOLID PARQUET? TERMS

Solid wood lamparquet products consist of solid wood and, in the past, were available in Germany as 10 mm or even 8 mm solid parquet.

In addition to the three grades, it should be possible to select a free grade, which allows the manufacturers themselves to determine the appearance. Free grading includes any type of wood which can be used for wooden floors and whose average HB hardness is at least 10 N/mm².

ATTRIBUTE

A characteristic feature of lamparquet elements is that they have to be bonded as smooth edge elements to a continuously flat load-bearing substrate without a lateral connection (without a

Extract from DIN EN 13227

Grading rules for Quercus spp. (oak)			
Top surface of element			
Attributes	Classification		
	○	△	□
Healthy sapwood	Inadmissible	Admissible ^{a)}	Slight impairments permissible
Branches Sound and firmly grown together b < 70 mm b ≥ 70 mm	Permissible if: Diameter ≤ 2 mm Diameter ≤ 3 mm	Permissible if: Diameter ≤ 5 mm Diameter ≤ 10 mm	Permissible if: Diameter ≤ 15 mm Diameter ≤ 30 mm
Rotten branches	Inadmissible	Diameter ≤ 3 mm	Diameter ≤ 10 mm
Shallow cracks	Inadmissible	Admissible	All attributes permitted without restriction due to size or quantity provided that they do not affect the strength or durability of the parquet floor.
Bark ingrowth	Inadmissible	Inadmissible	
Lightning cracks	Inadmissible	Inadmissible	
Fibre inclination	Unrestricted use permitted	Unrestricted use permitted	
Colour differences	Minor differences allowed	Admissible ^{b)}	
Veining	Admissible	Admissible	
Pest infestation	Inadmissible	Inadmissible	Inadmissible with the exception of blue stain and black feeding tunnels
Invisible parts			
All attributes permitted without restriction as to size or quantity provided that they do not affect the strength or durability of the wooden floor. Healthy sapwood is permissible up to 50% of the thickness.			
a) Healthy sapwood is permitted for large and maxi-sized lamparquet elements if it does not occupy more than 15% of the upper surface. b) Oak brown heart			

Parquet tapis are large lamparquet elements that have to be glued during installation and additionally mechanically nailed from above. Colloquially, lamparquet is often referred to as thin parquet, thin strip or also 10 mm solid parquet. Adhesive folds or flutes on the underside are permitted, but must not make up more than a fifth of the total thickness of the element.

The product can be supplied untreated or with a surface coating applied in the manufacturing plant. Three grades are available. The following table shows an example of grades of oak.

tongue and groove connection).

MOISTURE CONTENT

The wood moisture content of the individual elements must be in the range of 7-11% in the initial delivery. Chestnut must be in the 7-13% range. For Germany, or in climate zones similar to Germany, a wood moisture content of 9% applies.

GEOMETRY

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Product	Nominal dimensions		
	Thickness <i>t</i> (mm)	Length <i>L</i> (mm)	Width <i>b</i> (mm)
Lamparquet elements	9 to 11	120 to 400	30 to 75
Large lamparquet elements including parquet floorboards	6 to 10	≥ 400	60 to 180
Maxi-sized lamparquet elements	13 to 14	350 to 600	60 to 80

SPECIAL FEATURES OF LAMPARQUET

The structure and geometry of the strips of lamparquet require a few precautions to be taken in order to achieve perfect installation results. The solid structure of the strips and the relatively unfavourable ratio of width to thickness result in comparatively low dimensional stability. The dimensional changes that may occur depend on various factors:

Wood type:

Wood types such as beech or maple, with large differential swelling and shrinkage dimensions and short wood moisture exchange times, show relatively large dimensional changes when the humidity alters.

Cuts:

Where strips are obtained with a tangential cut (perpendicular to the growth rings), dimensional changes and cupping are likely to be more pronounced than with strips obtained with a radial cut (parallel to the growth rings).

Dimension:

The size of transverse cupping that occurs depends on the strip width and/or the ratio of width to thickness.

Side profile:

Slightly inclined planed sides reduce the expansion and swelling pressure in the surface.

Manufacture:

The time from cutting and final finishing in the drying process as well as the type of drying influence the extent of dimensional changes due to fluctuations in the wood moisture content.

HINTS FOR BONDING LAMPARQUET

When dispersion parquet adhesives are used, the underside of the wood becomes moistened. The moisture content of dispersion parquet adhesives is higher than that of the solvent-based

parquet adhesives used in the past. The consequence of this wood moistening is the expansion of the parquet strip as well as the formation of cupping in the transverse and longitudinal directions. The wood moisture gradient (= moisture gradient between the underside and top surface) decreases within a few days, so that cupping and horizontal expansion partly recede during this time. The extent of these changes depends, among other things, on the type of wood, the strip geometry, the side profile, the form of wood cut (annual ring position), the initial moisture content of the wood, the type of adhesive used, the trowel notches and the amount of adhesive used, the absorbency of the substrate and the ambient climate conditions. The time between laying the parquet and sanding the dispersion parquet adhesives should therefore be at least 5 days. If the sanding process is too early, the edges of the parquet flooring that are still turned up are sanded off, with the result that the parquet strips appear convex (= "belly" up).

Reaction resin adhesives from the SMP, SPU and PUK series do not generate any moisture in the wood, and therefore no dimensional changes, due to their absence of water and solvents. Elastic SPU, PU or SMP adhesives reduce the load on the subfloor due to their elasticity, but parquet flooring bonded in this way can show more pronounced dimensional changes in the long term under unfavourable ambient climate conditions, whereas bonding with hard elastic or hard PU or SPU adhesives places increased demands on the subfloor strength, as the tensions in the lamparquet are only "decoupled" by the elasticity to a limited extent.

TECHNICAL DATA SHEET

SUITABLE ADHESIVES FOR BONDING SOLID WOOD LAMPARQUET

Substrate	Lamparquet acc. to DIN EN 13227 55 x 250 mm, at least 10 mm thick	Lamparquet acc. to DIN EN 13227
Absorbent subfloors: Concrete (C 25/30) Cement screed Calcium sulphate (self-levelling) screed* Cement-based parquet levelling compounds OSB panels (OSB/2 to OSB/4) Chipboard (P4 to P7)	<ul style="list-style-type: none"> ✓ STAUF PUK 446/455/410 ✓ STAUF SMP 950 ✓ STAUF SPU 460/570/555/510 ✓ STAUF M2A 720/910 	<ul style="list-style-type: none"> ✓ STAUF PUK 446/455/410 ✓ STAUF SPU 460/570/555/510
Non-absorbent subfloors Sanded mastic asphalt	<ul style="list-style-type: none"> ✓ STAUF PUK 446/455/410 ✓ STAUF SMP 950 ✓ STAUF SPU 460/570/555/510 	<ul style="list-style-type: none"> ✓ STAUF PUK 446/455/410 ✓ STAUF SPU 460/570/555/510

* preferably by trowelling in combination with M2A types

For bars with a width of more than 55 mm, or a width/thickness ratio of more than 5:1 and/or strip lengths of more than 300 mm, as well as for wood types with large differential swelling dimensions and short wood moisture exchange times (e.g. beech, Canadian maple), as well as on non-absorbent substrates, the use of a solvent-free and water-free hard reactive resin adhesive is recommended.

ADHESIVE APPLICATION:

The trowel notch to be used: STAUF No. 5 (TKB B 9)

In any case, the strips must be pressed firmly enough in order to achieve as complete a wetting as possible of the adhesive on the back of the strip.

The information provided above corresponds to the current state of the art. The information is purely indicative and non-binding, since we have no control over the installation process and because the actual installation conditions on site vary. Thus no claims can be made based on this information. The same is true for the commercial and technical advisory services that are provided without obligation and free of charge. We therefore recommend carrying out sufficient testing of your own in order to determine whether the result is suitable for the intended purpose.