ALMA, CHEVRON 45°, 60°
Londra, Castello, Austria, Marchesi, Amburgo, Gautier 45

Type Number 012/25 ALM SPINA 45

Product Sheet

This product sheet complies with the provisions of the Legislative Decree of 6 September 2005, No. 206 Consumer Code – Product Information (formerly Law of 10 April 1991, No. 126 "Rules for consumer information" and the Decree of 8 February 1997, No. 101 "Implementing regulation").

Product Features

Product Type	Two-layer engineered flooring with tongue and groove joint	
Reference Technical Standard	UNI EN 13489:2018	
Type of Support	6 mm phenolic birch plywood (Londra) 7 mm phenolic birch plywood (Castello) 11 mm phenolic birch plywood (Austria, Marchesi, Amburgo, Gautier 45) 11 mm phenolic Mahogany plywood (Austria)	
Dimension (mm):		
Top Layer Thickness	4 mm	
Total Thickness	10 mm (Londra) 11 mm (Castello) 15 mm (All the others)	
Width	50 mm (Gautier 45) 70 mm (Londra) 90 mm (Castello, Austria) 120 mm (Marchesi) 140 mm (Amburgo)	
Length	From 420 to 920 mm	
Wood Species	• European Oak (*Quercus petraea* Liebl.) • American Red Oak *(Quercus rubra L.)* • European Walnut *(Junglas regia L.)* • American Walnut *(Junglas nigra L.)* • Asian Teak (*Tectona grandis* L. f.)	
Appearance (Classification) – Element Face	**Oak (*Quercus petraea* Liebl.)**	
	AB (free class)	**ABC (free class)**
• **Healthy sapwood**	Allowed up to 50% if distributed	Allowed
• **Knots:** **Sound** **Tight** **Rotten**	≤ 15 mm ≤ 6 mm if not grouped (1) Not Allowed	≤ 25 mm ≤ 6 mm if not grouped (1) Not Allowed
• **Yellow discoloration**	Not allowed	Allowed
• **Checks (hairline cracks)**	Not allowed	Allowed

• **Bark inclusions**	Not allowed	Not allowed
• **Lightning strike**	Not allowed	Not allowed
• **Interlocked grain**	Not allowed	Allowed
• **Grain deviation**	Allowed, without any limitation	Allowed, without any limitation
• **Sound heartwood**	Not allowed	Allowed
• **Color variations (including black heart, red heart)**	Slight variation allowed	Slight variation allowed
• **Traces of slats**	Not allowed	Not allowed
• **Parenchymal rays (ray flecks)**	Allowed	Allowed
• **Biological alteration**	Not allowed	Not allowed
Appearance – Non-visible parts	All features are permitted without limits in size or quantity as long as they do not compromise the strength or wear resistance quality of wooden flooring.	
Appearance (Classification) – Element Face	**American Red Oak (*Quercus rubra* L.), European Walnut (*Juglans regia* L.), American Walnut (*Juglans nigra* L.), *Asian Teak (Tectona grandis L. f.)***	
	AB (free class)	**C (free class)**
Healthy sapwood	Allowed up to 50% if distributed	Allowed
• **Knots:** **Sound** **Tight** **Rotten**	≤ 15 mm ≤ 6 mm if not grouped [(1)] Not allowed	≤ 25 mm ≤ 6 mm if not grouped [(1)] Not allowed
Yellow discoloration	Not allowed	Allowed
Checks (hairline cracks)	Not allowed	Allowed
Bark inclusions	Not allowed	Not allowed
Lightning strike	Not allowed	Not allowed
Interlocked grain	Not allowed	Allowed
Grain deviation	Allowed, without any limitation	Allowed, without any limitation
Sound heartwood	Not allowed	Allowed
Color variations (including black heart, red heart)	Slight variation allowed	Slight variation allowed
Traces of slats	Not allowed	Not allowed
Parenchymal rays (ray flecks)	Allowed	Allowed
Biological alteration	Not allowed	Not allowed
Appearance – Non-visible parts	All features are permitted without limits in size or quantity as long as they do not compromise the strength or wear resistance quality of wooden flooring.	

Notes	(1) Knots are considered grouped if the distance between them, measured edge to edge, is no greater than 30 mm.
Surface treatment	• Varnished, including pigmented finishes • Oiled, including pigmented finishes • Treated with chemical reagents • Smoked
Recommended installation	By gluing to the subfloor using specific adhesives; Floating installation with hybrid technique;

Information on Wood Species

Wood is a natural material characterized by chromatic variations in grain and texture, making each element unique. Due to exposure to air and light, wood tends to change its surface color over time (oxidation). Wood features structural characteristics linked to its natural variability, which can also affect surface treatments in terms of differing absorption of finish/color. For this reason, any match between the supplied product and the sample viewed must be considered purely indicative. All wood species offered by the manufacturer have hardness levels that ensure performance suitable for indoor flooring. Nonetheless, parquet can be damaged by impacts, falling objects, or the application of concentrated loads on small surfaces. Any surface treatment applied to the wooden floor (varnish, oil, etc.), although protective, does not prevent such occurrences.

As provided by UNI 11265, it is the responsibility of the designer to identify the type of flooring based on the intended use and required performance, as well as to assess compatibility between the flooring and environmental conditions, as specified in UNI 11935:2024.

Product Storage

According to UNI 11935:2024, the product must be stored in a dry place, in its original packaging, intact and elevated off the ground to avoid moisture absorption. Improper storage may result in hygroscopic alteration of the wood and subsequent dimensional deformation, as well as expose the material to potential contamination by wood-boring insects. Packaging must be opened using appropriate tools, taking care not to damage the wooden elements and only at the time of installation.

Verification of Environmental Conditions Before Installation

As indicated in UNI 11935:2024, to ensure proper installation, it is essential to verify immediately before laying that the subfloor possesses certain key characteristics to be suitable for receiving wood flooring and maintaining structural stability over time:

- Cracking.
- Moisture.
- Thickness.
- Elevation.
- Flatness.
- Compactness throughout the entire thickness.
- Surface scratch resistance.
- Mechanical resistance.
- Cleanliness.

At the time of installation, ambient air humidity must be between 45% and 65%, with a temperature not lower than 15°C. Subfloor moisture depends on the type of screed. Specifically:

- Cement-based or special binder screeds.
  - Standard: 2 %
  - With underfloor heating/cooling: 1,7 %.
- Calcium sulfate (anhydrite) screeds.
  - Standard: 0,5 %
  - With underfloor heating/cooling: 0,2 %.

Moisture levels in the screed must be measured with a carbide hygrometer immediately before installation. It is the responsibility of the screed installer or construction contractor to declare that a vapor barrier has been applied, as specified in UNI 11371.
For installation over heated or cooled floors, ensure that the heating coils are covered by at least 3 cm of screed, the surface temperature of the flooring does not exceed 23–24°C, and that the heating is gradually activated according to the procedure specified in UNI 11371.
For installation on pre-existing ceramic or marble surfaces, proper surface preparation is required. Do not install on subfloors with old adhesive residues.
The suitability of the environment and the subfloor must be verified in advance by the party responsible for carrying out the installation of the wood flooring, as provided by UNI 11265.

Instructions for Proper Installation

Open packaging only at the time of installation, in environments where windows are installed and plaster is dry. **Before installation, the installer must check the parquet's moisture content (7% ± 2%).** Given the natural variability of the material, during installation, the installer must mix elements from different packages to ensure a homogeneous and harmonious overall aesthetic appearance. As established by technical standard UNI 11265, any visible defects in the wood elements must be reported by the installer to the responsible party before installation. The use of materials by the buyer implies acceptance and acknowledgment of conformity with what was agreed upon, thereby waiving any claim. **For this reason, no complaints of any kind will be accepted for visible defects in installed material.**

Criteria and Methods for Evaluating Installed Flooring

The evaluation of the flooring is governed by UNI 11368:2021. Site conditions must be maintained as prescribed by the manufacturer of the wood elements and complementary installation products until the final inspection of the flooring, which must be carried out in the presence of the client or their technical representative before or at the time of delivery of the finished flooring.
If this is not possible, once the flooring is completed, the contractor/installer shall invite the client or their representative to carry out the final inspection within no more than 5 days from the date the invitation is received, unless otherwise contractually agreed.
The visual inspection of the installed flooring must be conducted, as indicated in UNI CEN/TS 15717, by observing the flooring while standing with natural diffuse light behind the observer (in the absence of natural light, diffuse artificial light may be used). For the purpose of identifying or evaluating defects on the surface of the flooring, direct artificial light must never be used.
Clearly, anything not visible under these conditions cannot be considered a defect.

Storage, Cleaning, and Maintenance

Wood naturally tends to balance its internal moisture content with that of its surrounding environment. Therefore, it is essential to avoid sudden hygrothermal changes. For the correct functionality and durability of wood flooring—and for occupant health and comfort—the recommended climate conditions, as outlined in UNI 11935:2024, are approximately 19–22°C with 40–50% relative humidity in winter and 24–26°C with 50–60% relative humidity in summer, even in uninhabited rooms.
Prolonged exposure of parquet to environmental conditions with lower humidity and higher temperatures than those indicated can cause cracks between the elements, microfractures, and, in extreme cases, delamination between the layers of multilayer elements. Conversely, exposure to higher humidity and lower temperatures may cause surface swelling or, in extreme cases, detachment from the subfloor.
During furniture setup and/or additional finishing work, areas of traffic must be protected using breathable coverings capable of absorbing impact (e.g., corrugated or flat cardboard, or fabrics). Furniture should have felt pads under the legs and should be positioned without dragging. For furniture and chairs with castors, rubber wheels are recommended. Any discoloration from rugs or objects typically fades once the floor is re-exposed to light.
A doormat should be placed at the entrance to remove dust or abrasive particles from shoe soles. Be cautious with pets. For routine cleaning, use a vacuum with soft bristles or an anti-static cloth, and clean the surface with water using a damp but well-wrung cloth. Do not use steam cleaners. If needed, use neutral, non-foaming detergents.
The suitability of cleaning products should be tested on a small, inconspicuous area before applying to the entire floor.

Do not use products containing alcohol, ammonia, or any aggressive chemical substances, as these may damage the surface finish and lead to rapid deterioration.

Safety Information

Brushing processes may result in certain wood areas not being perfectly smooth, as mechanical treatments—especially near knots and cracks—can cause surface fiber lifting (splinters), potentially hazardous when walking barefoot. This phenomenon can also occur during parquet use due to the natural settling of the wood. Such cases must be addressed either at the time of installation or as they arise, through adjustment and/or removal.

Disposal

Packaging, installation waste, and flooring that has been dismantled or is no longer in use must not be discarded in the environment but must be disposed of at public waste collection facilities in accordance with current regulations.

Warranty

The manufacturer guarantees its products within the legal time limits.

Notes

The recommendations in this sheet are based on the company's research and direct experience and are generally applicable, given the impossibility of predicting all environmental and application variables. This document is not contractual. Giorio S.r.l. reserves the right to change product features and ranges at any time without prior notice.

Accompanying Documentation

The supplied material includes the following documentation:

- CE Marking as defined by UNI EN 14342:2013
- Declaration of Performance (DoP) according to CPR 305/2011

Consulted References

UNI EN 13489:2018 "Wood and parquet flooring – Multilayer parquet elements"
Legislative Decree 6 September 2005 No. 206, Consumer Code
CPR 305/2011, European Regulation on Construction Products
UNI EN 14342:2013 "Wood and parquet flooring – Characteristics, conformity assessment, and marking"
UNI 11265:2015 "Skills, responsibilities, and contractual guidelines"
UNI 11368:2021 "Criteria and methods for evaluating flooring upon completion and delivery"
UNI 11935:2024 "Wood and parquet flooring for interiors – Instructions for design, installation, and use conditions"
UNI 11371:2017 "Screeds for parquet and wood flooring – Properties and performance characteristics"
UNI EN 13756:2018 "Wood flooring – Terminology"
UNI EN 335:2013 "Durability of wood and wood-based products – Use classes: definitions, application to solid wood and wood-based products".

CE Marking

This CE marking is issued in accordance with the provisions
of the harmonized standard UNI EN 14342:2013

CE

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UNI EN 14342:2013
Two-layer plank, thickness 10/4, 11/4, 15/4 mm, ALMA collection, CHEVRON 45°, 60°
LONDRA, CASTELLO, AUSTRIA, MARCHESI, AMBURGO, GAUTIER 45
Two-layer multilayer elements with tongue and groove joints, to be installed glued or floating with hybrid technique – UNI EN 13489:2018
Dimension: 10/4, 11/4, 15/4×50÷140×420÷920 mm;
CE marking referring to the product identified with type number:
012/25 ALM SPINA 45
in the Declaration of Performance (according to CPR 305/2011)

Reaction to fire, classified as [A]: - Minimum average bulk density - Minimum total thickness - Applicable final use condition	D_{fl}-s1 500 kg/m^3 10 mm Glued to the subfloor / without underlying air gap
Reaction to fire, classified as [A]: - Minimum average bulk density - Minimum total thickness - Applicable final use condition	D_{fl}-s1 500 kg/m^3 14 mm Glued to the subfloor / with or without underlying air gap
Reaction to fire, classified as [A]: - Minimum average bulk density - Minimum total thickness - Applicable final use condition	D_{fl}-s1 500 kg/m^3 10 mm All uses
Emission of formaldehyde	Class E1
Pentachlorophenol content	< 5 ppm
Release of other substances	NPD
Resistance to breaking and bending	NPD
Slip resistance USRV	NPD
Thermal performance: - Thermal conductivity of the top layer (with density of 700 kg/m³ ± 10%) - Thermal conductivity of the backing: birch or mahogany plywood	0,184 W/mK 0,170 W/mK

- Thermal resistance of the product: 10 mm 11 mm 15 mm	 0,058 m^2K/W 0,063 m^2K/W 0,087 m^2K/W			
Use class	2 Situations where the wood or wood-based product is sheltered and not exposed to weathering (particularly rain and driving rain), but where occasional, non-persistent moisture may occur.			
Biological Durability (UNI EN 350:2016)	Bulk Density (12% U.R.)	Fungi [1)]	Beetles [2)]	Termites [3)]
European Oak (*Quercus petraea* Liebl.)	*760 Kg/m³*	2-4	D	M
American Red Oak (*Quercus rubra* L.)	*760 Kg/m³*	3	n/d	S
European Walnut (*Juglans regia* L.)	*630 Kg/m³*	3	D	S
American Walnut (*Juglans nigra* L.)	*670 Kg/m³*	3	n/d	n/d
Asian Teak (*Tectona grandis* L. f.)	*680 Kg/m³*	1-3	D	M

(A): Table 1 of standard UNI EN 14342:2013
NPD: No Performance Determined
(1) 1 Very durable, 2 Durable, 3 Moderately durable, 4 Slightly durable, 5 Not durable
(2) D Durable, S Not durable
(3) D Durable, M Moderately durable, S Not durable
n/d: insufficient data available (as referenced in UNI EN 350:2016 – Annex B5)