

Berantevilla, 28 November 2023

CERTIFICATE

TO WHOM IT MAY CONCERN

We hereby certify that our hardwood engineered flooring of Oak in all its models and qualities is suitable to be laid on an underfloor heating system provided that requirements indicated by IMA are totally fulfilled, copy of which are here enclosed, complied with standard UNE 56-810:2010 and that of the installed underfloor heating system manufacturer instructions are also followed in the same way.

Yours faithfully,

MA FLOATING FLOORS





To whom it may concern:

Wood has its own natural warmth unlike most stonelike floors: it is already warm and comfortable. It complies with the coefficients of resistance and thermal transmission stipulated in the regulations. So, IMA floating floor is also for this kind of installations (see suitable species).

For the heating system to work at full capacity, the floor must be in "intimate" contact with the heated floor.

IMA's floating wood flooring is perfectly compatible with the most common underfloor heating systems (electric or hot water under-floor heating). In order that the central heating system works to its full capacity, it is necessary for the flooring to be in direct contact with the heated floor.

The floor temperature should be no more than 25° or 26°. Before starting the installation, the central heating tests to 2/3 rds. of its power should be carried out so as to help the setting and drying out of the floor. Be careful of the distribution joints of the pipe-work which may produce concentrated heat, which could affect the flooring. In the diagram there is an installation chart showing the recommended distribution of different elements which have shown excellent results.

Berantevilla, Alava, 28 November 2023





MEASURES OF RESIDUAL MOISTURE IN SCREEDS WITH **UNDERFLOOR HEATING SYSTEMS**

In the application Standard UNE 56-810:2010 " WOOD FLOORS - INSTALLATION -SPECIFICATIONS" there is a drying protocol for the installation of wooden flooring on these types of supports.

- The screed must be clean, compact, fully consolidated. Moisture shall not exceed 2% in weight.
- There should not be cracks or cervices.
- The system pipelines must be at least 30mm below the edge/surface of the screed.

According to the aforementioned UNE 56-810 in its section 10.3 "Moisture of the screed, drying protocol", it says:

"To force drying, the floor radiant heating system itself can be used following the start-up, maintenance and shutdown instructions of the system manufacturer. In the absence of these, the following protocol can be applied:

- 1. Set up the system and gradually increase the temperature to 2°C to 3°C intervals daily for a week to reach the normal temperature regime of the system. Never exceed $25^{\circ}\text{C} - 26^{\circ}\text{C}$.
- 2. Hold for another week at this temperature until the complete drying of the floor.
- 3. Gradually reduce the system temperature at intervals of 2°C to 3°C per day until its final shutdown.
- 4. No installation of wooden flooring work should be undertaken until the screed gets the room temperature.

In the screed which has incorporated an underfloor heating system, extreme precautions must be taken when we evaluate its status since the use of levelling compounds can influence the thermal transmission.

It is advisable to use materials that convey heat between the screed and the wooden floor.

According to the Standard UNE-56810, the most suitable parquet installation system for installations over underfloor heating is the glued system. These kinds of glues applied must retain their elasticity after drying and their tenacity and internal cohesion must be maintained over time. The most used adhesives are single-component or two-component silane and epoxy polyurethane glues.









Berantevilla, Alava, 04 May 2023

TECHNICAL DATA SHEET

We hereby provide you with some technical information of our engineered hardwood flooring, model: 1-Strip Oak. CD Grade, Natural 1L 190mm, Optimax-Ceramic finished, UNE-EN 13489

- Density and thickness: +/- 680Kg/m³
- Class of reaction to fire: (which is obtained from table 1 of Standard EN 14342 Annex ZA) C_{ff}-s1
- Class of formaldehyde emission: E1
- Resistance to the breakage¹: NPD
- Slip resistance: USERV:47
- Biological durability: Class 1
- VOC emission according to UNE-ISO 16000-6 and UNE-ISO16000-9: A. It complies with Standard UNE 14342. Annex ZA

MEASURES OF THE BOARD:

Length:

1995mm (Orders admitting up to 15% of boards shorter than this length)

Width:

190mm

Total thickness:

14mm

Thickness top layer:

+/-3.8/4.0mm

DIMENSIONAL TOLERANCES:

Length:

+/-0.2%

Width:

+/-0.2mm

Face Curvature:

<1.9mm

Edge Curvature:

<1.9mm

DIMENSIONAL STABILITY:

European Standard applied:

EN 1910

Board subjected to dry environment (30% RH) and to humid environment (85% RH)

Movement in width: 0.28mm (0.14%) Moisture content of boards: 8 - 9%

Visual aspect: 1-Strip board, grade CD, rustic, admitting sapwood, knots, filled knots and small holes accepted in this grading, superficial splits and heartwood. Varnished Optimax-Ceramic. This product is framed and within grading of Standard UNE –EN-13489.

This type of wood flooring is suitable for installations over underfloor heating:

Thermal conductivity: 0.17 W/mK

Thermal resistance: 0.10 m2 °C/W

Each board is controlled individually before leaving the factory. However, we suggest that customers and installers inspect boards before installation. In case that a defect is found, please inform IMA TARIMA FLOTANTE at once, always before the installation and the defected board/s will be replaced free of charge.





