

quadrone

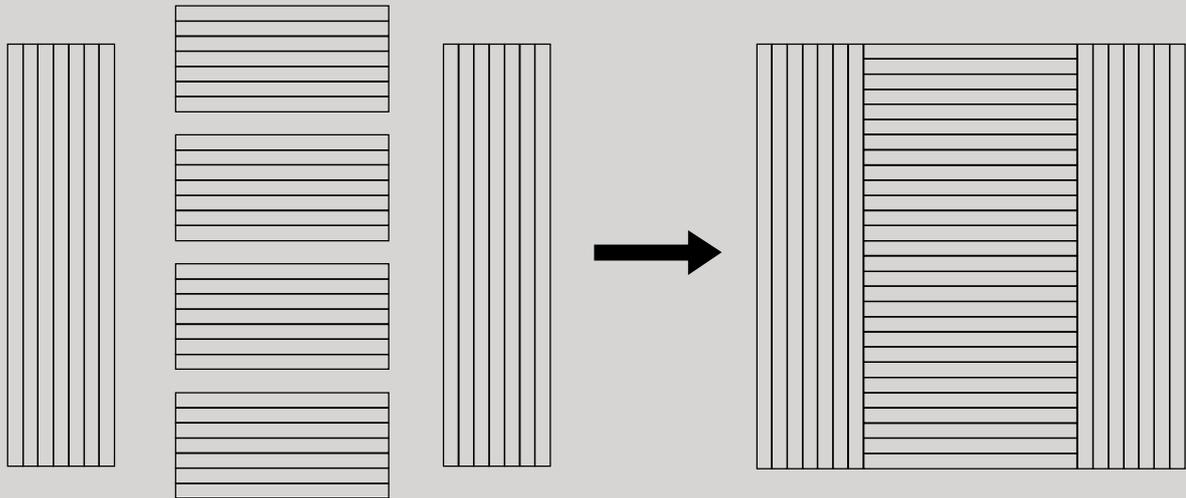


NATURAL GENIUS

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Solid wood floor made in Teak Antique; the surface is unfinished and craftsmanship and show the typical signs of the reclaim of the raw material.

Made of large 1000x1000 mm square modules, total thickness 18,5 mm.



Information sheet

SPECIFICATIONS

In order to facilitate the logistic and fitting operations, each module is supplied in 6 specific elements: 2 side boards 250x1000 mm + 4 middle boards (250x500 mm), each one of them incorporating 7 elements.

The two different types of panels, as described above, are groove profiled on four sides; loose wooden tongue-joints in Teak wood species are supplied with the flooring.

They could request some handmade correction during the installation due to their major tolerance in the working.

Each element is enhanced by a slight chamfered edge.

The appearance of the **Teak Antique** wood species may be marked by **noticeable grain irregularities with colour variations** that range from brownish-gold, brownish-black, brownish-green, brownish-red or brownish-grey tones and some little area of sapwood.

The wood's appearance is prone to a very significant colour change from when the floor is first installed.

When exposed to air and especially to light, the wood surface's undergoes an actual *photochemical reaction*. *The oxidation process*, induced by the ultraviolet rays of natural light, takes place on the extractives, which are found in the actual composition of the wood.

This inevitable and completely natural process depends on certain variables such as the exposure time, the quantity of light and the quantity and quality of the wood's extractives.

Teak Antique is amongst the wood species featuring a high content of these substances, but over time, unlike other woods such as Iroko and Doussié Africa in which oxidation produces an overall darkening effect, **the wood colour tone tends to homogenize into a lighter brown tones (this colour is commonly compared to honey), reducing or even eliminating the differences that may have initially appeared to be more evident.**



The Teak antique reaches over the years a high-level of natural seasoning resulting into **extraordinary physical and mechanical properties** as well as stability, in case of hygroscopic variations, uncommon to any other wood species.

The oxidation and crystallization process of (oily) substances contained in the Teak fibres is prone to protect the wood from bacteria, fungi or insect-eating aggression.

Listone Giordano® Quadrone collection features Teak antique **sourced from painstaking handcrafted restoration of dismantled material due to restoration of ancient buildings in India**. The raw material, once processed and properly regenerated, enhances the charm of old times showing typical amber colour, as well as visible traces of its former life (holes, pieces of wood, filling of cracks, etc.).

Listone Giordano® Quadrone features aesthetic and dimensional characteristics of a hand-made product. Therefore *prospective tolerances* related, for instance, to the planarity of the elements inside each board, different thickness between the boards, small areas not perfectly filled, angle cracks, variation of the dimensions of the workings, indentations, etc. proof the craftsmanship value of the product itself.

Varied grain figure and contrasting colour tone typical of Teak antique. The boards have a widespread presence of filled or open cracks, unlimited and large knots adherent, firm or partially filled.

Every module is different from the others and this originality features Listone Giordano® Quadrone as unique piece.

The wood undergoes a natural treatment in order to eliminate every kind of insect; it is possible to see some hole made from this small animals before this treatment.

The *bottom of the boards* of Listone Giordano® Quadrone can show major cracks and empty areas in the wood, filling with sawdust and vynilic glue, holes made from insects, pieces of fillers or varnish due to a previous use: these features do not compromise nor the aesthetic value of the product nor its functionality.

PLANNING

Considering the particular shape of the product, a preliminary project of the surface is necessary to order the correct number of modules and related waste due to perimeter cutting of the elements (usually measured between 5% and 10% though percentage may vary according to dimension and shape of the area to be laid).

LAYING

The installation of the material **Listone Giordano® Quadrone** asks **experience and skills** of the installer because many adjustments that involve craftsmanship of the wood are required before, during and after the installation.

All the tools for the installation of the solid wood floorings are needed.

Make sure that all work on site (decoration, installation of sanitary fixtures, etc.) has been completed.

Maintain the humidity level between 45% and 65% and the temperature between 16 and 25°C: because outside of these ranges, adhesives and other chemical products may be affected during drying/curing.

We recommend the boxes of hardwood flooring are stored in secure, dry and weather proof rooms and not placed directly on the ground (i.e. should be placed on dry pallets).

Open the boxes only as the flooring is being installed and no more than one box at a time as needed.

Subfloor

The subfloor on which the hardwood flooring is to be installed must be smooth, level, and have a compact surface so as to guarantee the best possible contact between the underside of the planks and the subfloor itself.

We recommend the following checks are carried out before installation:

Smoothness/Flatness of the subfloor

A 2 metre long straight edge should be placed on the subfloor, the maximum allowable tolerance is $2 \div 3$ mm.

Concrete subfloor superficial structural strength

When hammering the surface no marks or deep cracking should appear.

Concrete subfloor superficial compactness control

It should not be possible to create deep scratches or excessive dust when scrapping the surface of the subfloor with a nail.

Fissuring

Small fissures created as a result of the normal shrinkage of the cement are allowable, but excessive cracks, in particular those which permeate throughout the complete thickness of the subfloor, must be properly consolidated by suitable and permanent means.

Cleaning

Before the installation begins it is very important to carefully clean and check the surface of the subfloor.

Make sure that the moisture content of the subfloor is within the recommended limits for the specific thickness and type of subfloor.

The subfloor residual moisture control has to be executed only using calcium carbide hygrometer and the maximum values allowed for the installation are:

- 2,0% for a concrete slab (max. thickness 80 mm);
- 0,4% for anhydride slab;
- 10,0% for Wooden panels.

Glue down installation

Choose an adhesive that is compatible with the characteristics of the sub-floor.

We suggest only the use of two-components glue.

Spread the adhesive on the subfloor only using a suitably notched trowel and lay the boards on top.

Take care not to allow adhesive into the joints or on the surface.

When Listone Giordano® Quadrone is to be installed in an area with an **underfloor heating system**, it is necessary to use the glue down method. As well as conferring greater dimensional stability on the planks, the perfect adherence of the wood to the sub-floor guarantees better conduction of heat into the rooms.

Note that in this condition Listone Giordano® Quadrone, despite its total thickness of 18,5 mm, is able to offer a limited thermal resistance ($R = 0,123 \text{ m}^2\text{K/W}$).

When the glue down installation is over an underfloor heating system, it is necessary first of all to make sure that the heating system is one that functions at a low temperature, then that the distance between the wood and the heating pipes or cables embedded in the screed is at no point less than 30 mm, and finally that the contact temperature of the hardwood floor surface will not exceed $26/27^\circ\text{C}$.

The construction characteristics of the sub-floor must be determined; it must be protected against the possibility of moisture intrusion and must be level, solid, clean and, in the case of concrete slab, have a maximum residual humidity of 1.7% (percentage of water to dry weight).

After the gluing wait at least 15-20 days before start to finish the floor.

Floating installation

In case of floating installation, if there is any evidence of, or even doubt about, the possibility of moisture intrusion (for example on ground floors or on floors containing high humidity lightening materials, etc.) it is necessary to lay **a double polyethylene sheet** over the sub-floor and **extend it a few centimetres up the walls** to form an effective moisture barrier.

Before starting the actual installation of the planks, it is essential to lay foam underlay. This will provide sound insulation in the room where the flooring is installed and also stop sound from being transmitted to the rooms below.

The installation of the boards is carried out by inserting a continuous bead of glue (suitable for floating hardwood floors) on the upper part of the groove in order to ensure the right jointing between the boards.

All around the perimeter of the room, including where the hardwood floor meets other flooring materials, it is essential to leave **an expansion gap of about 10 mm** (more if the room is particularly large) that will be covered by a suitable skirting board along the walls or by a threshold where the wood floor meets a different floor surface. If the installation is over a very large area it is necessary **to allow for expansion gaps every 6 - 8 metres, both width-wise and length-wise.**

During installation, any adhesive that accidentally comes into contact with the top surface of the planks should be wiped away quickly with a damp cloth. If the adhesive is allowed to dry on the surface it will not adversely affect the finish in any way, but its removal will require considerable effort risking to alter the shining of the hardwood floor.

Floating installation over large areas

When installing the boards over large areas, it is necessary creating expansion gaps in order to compensate for swelling caused by possible absorption of moisture (for example atmospheric humidity).

An expansion gap of at least 15/20 mm must be created around the entire perimeter of the floor.

Finish

During the manufacturing process a sanding is made on the surface of the wood.

This sanding is coarse and it is not enough for direct applying any kind of finish.

It is compulsory to sand slightly again the surface before starting the finish of the floor.

It is possible to use natural oils, urethane oils or varnishes for finishing.

Apply the finish products according to the directions of the technical sheet of their manufacturers.



CLEANING AND MAINTENANCE

Maintain the humidity level of the atmosphere between 45% and 65% and the temperature between 15 and 30° C. This is also the same environmental conditions recommended for ensuring people's comfort and health.

Use protective felt pads for furniture, chair legs, etc.

Any armchair on castors should be covered with suitable rubber.

We recommend the use of a proper door-mat to clean the shoes.

Rugs and carpets should be removed from time to time. Leaving a rug on the same spot for a long time, especially soon after hardwood floor installation, may create an area of different colour tone.

Objects with weight concentrated over small surface areas can cause localised indentations in the surface of the wood.

Rubber shoes soles may leave dirty marks on the surface which could prove hard to remove.

We strongly recommend not to use sticky tape and adhesives materials on the surface because in case of remaining for a prolonged time or with high temperature, they can leave marks difficult to remove.

The cleaning of Listone Giordano® Quadrone has to be done using only the products suggested from the manufacturer of the finish product applied..



NATURAL GENIUS

CERTIFICATIONS



CE certifications

Listone Giordano® Natural Genius Quadrone strictly complies to all CE rules.



Fire reaction Certification

Listone Giordano® Natural Genius Quadrone complies to the **Dfl-s1** fire reaction class according to the requirements of the EN14342 regulation on the CE mark.

Made in

Listone Giordano® Natural Genius Quadrone is a Made in India product.

Important information about hardwood floors



NATURAL GENIUS

Information sheet

We invite you to read this page which contains important information on the basic characteristics and natural performance features of hardwood floors

Wood is a "living" material. For this reason it is susceptible to changes caused by external factors such as sunlight, temperature, humidity and everyday use.

It's important to know that:

- **the colour** of a hardwood floor depends not only on the wood fibres, but also on other substances that are naturally found in the wood itself, known as *extractives*. Since the colour of these substances may vary based on exposure to air and light, the hardwood floor's original colour will naturally and inevitably change over time, generally towards darker colour tones.

This behaviour is the same in *stained versions*, in direct proportion to the colour tone.

- Due to their elevated content of extractives, **tropical woods** are particularly susceptible to chromatic changes. Over time, they generally take on a brownish-dark tone. This phenomenon is most commonly seen in *Iroko and Doussié* wood. Intense and rapid oxidation may rapidly occur in localized areas, particularly in Doussié wood, which may cause different types of colour variations even on elements that were originally similar. In certain conditions, this oxidation process can make the silica traces naturally found in the structure of the wood species appear even more evident.

Teak, on the other hand, is characterised by its typical colour variations in its natural state. When exposed to sunlight, Teak's colour tends to lighten and become more uniform with a medium-light tone, reducing or even eliminating the differences that may have initially appeared to be evident.

- On the contrary **long exposure of the floor to the sunlight** (maybe through windows), can create a discolouring of the floor (U.V. sun rays are able to discolour also materials other than wood). To prevent this phenomenon we advise to use suitable curtains, blinds or special protective film coverings to the windows to filter U.V. rays.

- The natural characteristics of the extra wide wood boards combined with the typical varied grain of the tangential cut *might show minor fractures in correspondence to the medullary rays*.

These standard features of the product may become marked should the wood floor be exposed to particularly severe climate conditions.

- in certain wood species the strips of wood that are taken from a perfectly radial section of the log, are characterised by a striped grain along with shinier band and flecks known as **silver figures and ray fleck** (visible also in coloured finishes).

Woods with these characteristics, which indicate an intersection with medullary rays, constitute an increasingly sought-after feature.

These characteristics clearly distinguish the more valuable strips in terms of both aesthetic appearance

(fibre regularity) and technical performance (dimensional stability, impermeability, etc.).

- **wood is naturally susceptible to dimensional variations** that depend on room temperature and humidity. To prevent these factors from generating undesirable effects on the floor, the room's climate must always be kept within the recommended limits (**air temperature between 15°C and 30°C and, most importantly, air humidity between 45% and 65%**).

What's more, these temperature and humidity ranges are the same ones recommended for people's comfort and health.

Prolonged exposure to an excessively dry climate can lead to the appearance of **small gaps between strips**. However, these gaps will tend to diminish, until disappearing completely, once the proper climatic conditions are re-established.

- On the other hand, *extremely humid or dry conditions* may generate tension inside the wood that may even be elevated at times; in more severe cases **microfractures may appear on the top layer of the wood** (due to the shifting of the interface between the growth rings once the elastic compression limit has been surpassed).

For these reasons it is important that the proper climatic conditions be guaranteed, both during the installation process and later on, even if the areas are not inhabited.

- *The hardwood floor finish serves a protective function*. Over time, foot traffic and maintenance lack may cause the floor to lose its homogeneity and shine, the extent of which depends on the intensity of the solicitations received and the maintenance executed.

- All of the wood species used for manufacturing hardwood floors Listone Giordano® are **hard enough to fully guarantee the required performance characteristics for its specific use**.

However, damage caused by blows or fallen objects, along with highly concentrated loads (high heels, work ladders, etc.) can leave marks on the surface.

- Wood does not have the same uniform appearance as synthetic materials. For this reason no two floors in the same wood will ever be exactly identical.

For the same reason **a sample consisting of just a few strips will give a general idea of how the entire floor will look**. However, it can never fully represent the floor's final aesthetic result.

The phenomenon described above constitute the natural features of hardwood floors.

For this reason these characteristics cannot be considered to be defects.

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The indications reported in this technical sheet derive from the research and the direct experience of the Firm and have to be considered generally valid, because of it's impossible to foresee all the applicative and environmental variables. All contents of this information sheet are intended for guidance only and may be subject to change at any time and without prior notice.