

Multilayer engineered hardwood floor, state of the art technology and high performance, heat-treated resulting in a rich palette of colour tones through the whole thickness of the wood while showing its texture.

Available with a special natural oils finish, interlocking tongues and grooves for easy and precise installation.

Material is supplied in random lengths subject to availability.

All shipments may have about 10% lengths shorter than the standard ones.

Fahrenheit 190 could be supplied in 180 mm width, at the same price, depending upon the availability of raw materials.

Width	Assorted lengths	Total thickness
140 mm	from 1500 to 2000 mm	16 mm
190 mm	from 1500 to 2000 mm	16 mm

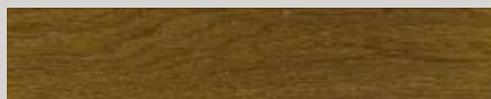
SPECIFICATIONS

Top layer

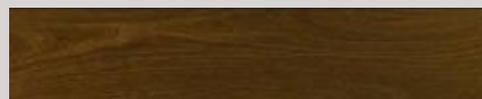
Total thickness of approximately 5 mm in **Oak from Fontaines** and **Ash from Fontaines** wood species heat-treated.

It is characterized by heating cycles of different intensity and duration; thanks to this natural process the whole thickness of the top layer acquires a dark colour tone. The heating treatment, by its own essence, shows characteristic colour tone variations even within the same wood board.

Proposed in different colour tones: Oak from Fontaines 380°F and 430°F both in the width 140 and 190 mm and Ash from Fontaines 350°F and 460°F only in the width 190 mm.



Oak 380°F



Oak 430°F



Ash 350°F



Ash 460°F

As the time passes the floor tends to get lighter due to the exposure to the air and light.

The outline of each strip is characterized by *chamfered edges* (about 0,5 mm depth x 45°) that enhances the natural appearance of the wooden boards.

Support base

Made up of 9 layers of birch plywood all bonded with moisture resistant adhesives ("marine" plywood). The first layer is laid at a right angle to the fibre of the top layer to guarantee greater stability of the transversal section.

The top layer is joined to the base using special adhesives which conform to the *JAS Type II (Japanese Agricultural Standard)* requirements, and also to those of the class D4 of the UNI EN 204 regulation, not noxious, formaldehyde and VOC free.

Locking system

The boards interlock on all four sides and have two tongues and two grooves.



Finish

It is an essential vegetable oils based treatment. The specific application technique, along with the quality of the especially created blend, allows the oils to penetrate deeply into the wood, offering the most natural appearance, both visual and tactile, whilst enhancing the characteristic grain of the wood and camouflaging the small marks caused by normal every day use.

The natural oils finish has the feature to continue in time its penetration into the wood, also when the boards are still in their boxes. As soon as it is installed it's possible to have a *dry surface* on the hardwood floor that will be *restored applying the proper periodical care product*.

Listone Giordano® Atelier Fahrenheit is proposed with a "*brushed*" surface: a special treatment is performed on the wood's surface before the finish is applied in order to accentuate the appearance of the wood's natural pores and fibres.

The finish process of the hardwood floor Listone Giordano® Atelier can create non homogeneity of the colour tone that cannot be considered to be a defect, but a natural feature of these hardwood floors.

Moreover due to the nature of the product, the surface may present signs of the passing of time and non homogenous effects caused by the wear and tear of the surface.

Grades

Cottage

Varied grain figure and colour tone with the presence of firm or filled knots. Open knots may occur. Available only for Oak from Fontaines wood species.

Fibramix

Varied grain figure and colour tone with the presence of small or big, firm or filled knots. Open knots may occur. Available only for Ash from Fontaines wood species.

LAYING

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 ÷ 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.

Installation

Choose an adhesive that is compatible with the characteristics of the sub-floor and that won't transmit humidity to the wood (do not to use adhesives that contain water).

Ecolfit® Listone Giordano® is the one component adhesive recommended for all the range of our hardwood floors. The residues of the adhesive can be removed both during the installation and after the hardening of the glue.

We do not recommend the use of Puliplus® Listone Giordano or aggressive solvents to remove adhesive residues on oil finished hardwood floor especially if stained.

Spread the adhesive on the subfloor only using a suitably notched trowel and lay the boards on top by interlocking them, if possible, using only your hands. Do not use other tools unless necessary and be sure they are covered with a material that ensures they will not harm the product. The planks should also be locked together, taking care not to allow adhesive into the joints.

Listone Giordano® Atelier Fahrenheit can only be installed by fully adhering it to a suitable subfloor.

When Listone Giordano® Atelier Fahrenheit 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® Atelier Fahrenheit, despite its total thickness of 16 mm, is able to offer a limited thermal resistance ($R = 0,092 \text{ m}^2\text{K/W}$).

With a floating installation it would be necessary to add the thermal resistance of the sound insulation foam underlay and **particularly that of the air in any empty spaces that might remain under the flooring.**

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°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).

For any further information about installation see the sheets PO 1 - Listone Giordano® over underfloor heating system and PO 5 – Installation of Listone Giordano®.

Operations to be performed during and at the end of the laying

At the end of the laying, first of all, *remove the dust found on the floor's surface by cleaning with a vacuum cleaner* equipped with a brush suitable for hardwood floors.

Then apply **Oleonetto®** Listone Giordano water down in double dose (2 caps diluted in 1 litre of clean water) passing it over the floor's surface using a soft cotton cloth well-wrung according to the instructions on the tin.

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.

After a long period of time a *slight darkening effect can appear in the deeper parts of the wood* (brushings, sawings, etc.) due to the accumulation of the dust. Regular maintenance of the floor will reduce this appearance.

Never wash the floor with water only: it will not efficiently clean the surface of the floor and, moreover, the minerals contained in water may leave behind a residue that could affect the surface appearance of the floor.

Do not use liquids containing acid or basic concentrations, such as bleach or ammonia, which could create marks/halos on the wood that would be impossible to remove.

Maintenance of Listone Giordano® Atelier Fahrenheit has to be done only by the following products: **it's inadvisable to apply different products.**

For daily maintenance *remove the dust found on the floor's surface by cleaning with a vacuum cleaner* equipped with a brush suitable for hardwood floors; then



periodically wash the floor with **Oleonetto**[®] Listone Giordano: pour a cap per each litre of water and pass it over the floor's surface using a soft cotton cloth well-wrung according to the instructions on the tin. No need to rinse.

In case the cotton-cloth touches other surfaces dry quickly to avoid marks or halos.

For periodical care, in case of presence of tough dirt, wash the floor with **Extraclean** Listone Giordano[®], a product for the deep cleaning of the varnished and oiled hardwood flooring (see instructions above).

For natural oil finished hardwood floors, after the application of **Extraclean** Listone Giordano[®], particularly if applied all over the parquet surface, it is recommended a periodical care treatment with **Oleovivo**[®] Listone Giordano (see direction for use below).

For periodical care apply **Oleovivo**[®] Listone Giordano, a solution natural oils based specially formulated to restore the surface film of protection when it begins to lose its uniform appearance due to foot traffic and general wear.

The use of **Oleovivo**[®] Listone Giordano must be scheduled based on the intensity of the floor's use. It is estimated that *it must be applied every 6-12 months*; however it is advisable to *apply the product for the first time 3-6 months after the installation*.

Remove the dust found on the floor's surface by sweeping with a broom or, better yet, clean with a vacuum cleaner equipped with a brush suitable for oiled hardwood floors.

The floor should firstly be cleaned with **Extraclean** Listone Giordano[®], according to the instructions above, in order for the application of **Oleovivo**[®] to be more effective.

Shake well. Pour **Oleovivo**[®] Listone Giordano **pure** directly on the floor, a small amount at a time. Using a cotton cloth, spread the solution over the floor as if to clean, always wiping in the direction of the wood grain (this operation can be performed either by hand or with a large brush).

Once the product is applied, the floor's surface should appear to be slightly wet.

Wait some minute (anyway no longer than 10-15 minutes).

Polish the floor's surface using a domestic buffer fitted with a felt pad or other soft material (do not use brushes). If you do not have a buffer, the floor can be polished by hand using a soft cloth underneath a long-handled floor brush.

While *the floor can be walked upon as soon as the treatment has been completed*, it would be best to wait a few hours to ensure the best results.

Immediately after these operations have been completed, hang the cotton rags used during the application process in fresh air or soak in water. Rags that are left to pile up in poorly ventilated areas may spontaneously combust.

A 1 litre bottle of **Oleovivo**[®] Listone Giordano is generally sufficient for treating a surface area of approximately 80–100 m². By taking into account possible waste, ***it is recommended that you order 1 litre of product each 60 m² of parquet.***

CERTIFICATIONS



biosphera
CERTIFIED

Biosphera

Biosphera is a marking system based upon Listone Giordano's green procurement policy.

Listone Giordano® Atelier Fahrenheit offers both in its top layer and in its support the Biosphera certified mark that identifies raw materials whose forestry management is certified according to international standard (FSC, PEFC, SFI, OLB, LEI, etc.).



CE certifications

Listone Giordano® Atelier Fahrenheit strictly complies to all CE rules.



Formaldehyde

Listone Giordano® Atelier Fahrenheit fully complies to the class E1, which is amongst the strictest European regulations (UNI EN 14342).



Fire reaction Certification

Listone Giordano® Atelier Fahrenheit Oak complies to the **Cfl-s1** fire reaction class according to the requirements of the EN14342 regulation on the CE mark.

Listone Giordano® Atelier Fahrenheit Ash complies to the **Dfl-s1** fire reaction class.



ISO 9001

Quality Management System certification.



ISO 14001

Environmental Management System certification for the Miralduolo di Torgiano (PG) factory.

Made in

Listone Giordano® Atelier Fahrenheit is a product Made in Italy.

Important information about hardwood floors



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 (particularly Oak and Beech) 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.

Despite of the stabilising effects given by the flooring support, *prolonged exposure to an excessively dry climate* can lead to the appearance of **small gaps between strips** even on multilayer products. 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.

SP 65 – September 2012

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.