Laminate flooring Advice section

PARADOR

living performance

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Useful information

With Parador laminate flooring, your ideas are quickly and easily turned into reality, as these high quality branded laminates can be installed in no time at all thanks to the patented click mechanism. They are also tremendously durable and very easy to care for. The large choice of different formats and installation patterns, brilliant decors and surface textures, offer just the right thing for every furnishing style. Place uncompromisingly good brand quality at your feet with laminate flooring from Parador. Laminate flooring can be installed in all areas of the home, but also, depending on the wear class, in commercially used areas such as hotels and office buildings. The flooring is not suitable in wet rooms.

The Basic, Classic and Trendtime product lines vary in terms of their technical properties. The special Eco Balance collection for sustainable living and the designer Edition collection round off the comprehensive laminate flooring range and offer the right laminate floor for every application.

The all-round edge impregnation ensures reliable swell protection on all Parador laminate floors, especially at the edges. The patented click connection, Safe-Lock[®] PRO, guarantees easy installation with the best stability for all Parador laminates. An underfloor heating system can be installed under all Parador laminate floors. In the Classic, Trendtime, Eco Balance and Edition product series, the micro scratch-resistant surface provides particularly good protection against scratches and, thanks to increased conductivity, the floor has antistatic properties and reduces electrostatic build up. Due to the additional Aqua-Proof process, the flooring from the Classic and Trendtime collections, with its wide variety of plank formats, is protected almost twice as much against moisture compared to standard flooring. A life-long guarantee is given on this quality.

You can see the technical properties on the technical data sheets, which can be downloaded at www.parador.de. You will also find an overview of the basic properties of the different collections in the current product catalogues.

Flooring and indoor climate

The main element of laminate flooring is its HDF core board, which is a so-called hygroscopic material. That means that the material can absorb moisture and release it again.

On the one hand this can have a regulating effect on the room's climate, but it can also lead to the disadvantage that the material swells (gets bigger) when it absorbs moisture or shrinks (gets smaller) when it emits moisture. Whether it swells or shrinks depends directly on the indoor climate.

If the climate is too dry, then hygroscopic material shrinks (gets smaller); (here: HDFcore board); if the indoor climate is too damp, then it swells (gets bigger).

Particularly in the winter months, when the room humidity is often much too low (see illustration), the natural shrinkage of the material can lead to gaps forming. Conversely, when it is too damp, if the gap to the wall is not adequate or expansion joints are missing, the floor area may start to bulge upwards.



Please make sure not to exceed or fall below the ideal humidity figure shown in the diagram for a long time over the course of the year.

Product composition



1 Overlay

The highly wear-resistant, watertight top layer made of melamine resin protects against normal everyday wear and tear, micro-scratches and dropped objects. The high corundum content is responsible for this, as its hardness is only exceeded by diamond.

2 Decor paper

The elaborately reproduced decors are fascinating with amazingly genuine imitations of many natural materials. The decor print made with solvent-free colours impresses with extraordinary brilliance. The impregnation using melamine resin also protects against moisture.

(3) HDF core board

The highly compressed, swell protected core board provides high dimensional stability and thus minimises the influences caused by climate fluctuations or unusual loads. In addition, the all-round edge impregnation ensures excellent edge swell protection. On the Classic and Trendtime product lines, the swell protection of the special core board is almost doubled by the Aqua-Proof method.

(4) Balancing layer paper

The reverse side of the laminate flooring is formed by the balancing layer paper, which compensates against tension and prevents the plank from warping. At the same time, the impregnated balancing layer paper protects the core board against moisture from beneath.

(5) Safe-Lock[®] PRO

The improved patented Safe-Lock[®] PRO click mechanism, is milled directly in the special core board and is characterised by several benefits:

> high fitting accuracy for invisible plank transitions and totally even surfaces,

- > extremely high connection stability for permanent fitting accuracy,
- > precisely, safely and quickly installed,
- > effortless handling

Underlay

Comprehensive information about underlays can be found in our catalogues and online under www.parador.eu.

When installing laminate flooring, we recommend using an underlay, as this compensates for slight uneven patches and has a positive effect on the floor's acoustics.

The underlays in the Akustik-Protect range are ideally suited for laminate floors:

Smart-Protect:

Universal hard foam underlay with good impact noise properties and ambient noise insulation as well as high compressive strength with a low inherent weight.

Akustik-Protect 100:

Integrated moisture barrier and good impact and ambient noise insulation*.

Akustik-Protect 200: Improved ambient noise insulation compared to Akustik-Protect 100.

Akustik-Protect 300:

Integrated moisture barrier, even better properties than Akustik-Protect 100 and 200 as well as an aluminium coated adhesive strip to seal transitions.

Other underlays: Uno-Protect – a highly resilient underlay for all dry subfloors Duo-Protect – compared to Uno-Protect also with integrated moisture protection Plan-Protect – practical impact noise underlay made of natural wood fibres.

When installing on mineral subfloors, an additional form of moisture protection using a PE film is essential so that no moisture can get from the subfloor into the HDF core board . In the case of underlays made of wood-based materials (e.g. OSB or chipboard), using a PE film is also essential. With these underlays (please make sure the subfloor is smooth), it is also necessary to glue the end edge.

Skirting boards and tools

Skirting board

For a perfect finish, the Parador assortment includes the right decor skirting board to match every floor design. Special plastic clips with integrated cable routing are available for fastening it to the wall. Caps and corners round off the assortment.

Tools

You will need the following tools and aids for installing Parador laminate flooring:

tape measure or hinged ruler, pencil, handsaw, Parador spacer wedges, Parador MultiTool, hammer, drill and jigsaw, crosscut saw or circular saw.

*Impact noise is directed downwards, in other words is perceived in the rooms on the floor below. Ambient noise is directed upwards and is perceived in the room where it occurs. Smart-Protect

Akustik-Protect 100

Akustik-Protect 200

Akustik-Protect 300

Basic rules for installation

These installation rules and the assembly process shown below are generally applicable. Other special or different rules and instructions, which are advisable and mandatory, may be listed in the pack leaflets inserted with the relevant products.

1. Checking the planks are intact.

The laminate planks should be checked thoroughly for material defects before and during installation. Planks with visible defects or damage must not be installed.

Assembly should only take place under daylight or with adequate lighting, as otherwise any damage or faulty planks cannot be detected in some circumstances.

2. Acclimatisation before installation

The laminate flooring elements must be acclimatised over a period of at least 48 hours at a room temperature of at least 17°C and a relative humidity of 35-60% in the room where they are being installed. That means that the sealed packages must adjust to the climate conditions in the room. If there are major climate differences between the storage area and the room of installation, the acclimatisation period should be longer preferably. If the climate conditions are almost the same, the period can also be shorter.

Please store the packages on an even base without opening them. It is essential that you comply with these points, especially in new builds where the humidity is usually very high.

3. Maintaining expansion joints / wall clearance

The core board on the laminate flooring is a wood-based material, which, like natural wood, is also subject to swelling or shrinking depending on climate conditions.

The installed laminate flooring therefore needs to be kept a suitable distance away from all fixed components, in other words walls, supports, radiators etc., which is known as the wall clearance or expansion joint. Furthermore, expansion joints must be maintained when a defined installation area is exceeded.

Too small a wall clearance is the most common installation error. This often only becomes noticeable in summer, as the increased humidity and temperature in the summer months makes the laminate flooring expand.

The expansion joint or wall clearance should be at least 8 mm^{*}, more on larger areas. The rule of thumb is: per metre of floor keep at least a 1.5 mm expansion joint at both sides of the room. (Example: room width 5 m = at least 8 mm edge joint at each side).









*Note: at least 15 mm in case of a relative humidity of >65%.

Even if the installed material only abuts a single point in the room, the floating material may start to push up and warp. "Popular" weak points in this case are door frames, joints to stairs, radiators and end rails.

4. Layout of expansion joints

As the laminate flooring will swell or shrink as just described depending on climate conditions, further expansion and movement joints of at least 8 mm are necessary under the following circumstances:

-) larger areas (over 8 x 12 m)
- > irregularly shaped areas
- > installation from room to room

These movement joints are covered with appropriate expansion joint profiles. Note: The installer is always liable if expansion or movement joints are omitted.

5. Installation pattern

Laminate flooring elements can either be installed in a regular or random fashion. In each case, care should be taken that the head joints are offset from row to row by at least 40 cm, with Trendtime 2 at least 15 cm, half the length for tile format.

6. Installation direction (incidence of light and room floor plan)

For optical reasons, the planks should be laid parallel to the incidence of light, i.e. the long side runs in the same direction as the light entering the room. If there is more than one window, please go by the largest window. If the floor plan of the room is very unusual, the direction of installation should also be judged according to how the room is divided.

Also for optical reasons, the long sides of the floor should be at right angles to the long side of the room. This makes the room appear squarer and bigger instead of long and "tube-like".

7. Installation in areas where water splashes or permanently damp areas / wet rooms

Laminate flooring must not be installed in areas where water can lodge on the floor for long periods. Standing water penetrates the HDF core board via the edges and causes permanent damage. In permanently damp areas or damp environments (sauna areas, small bathrooms etc.), laminate flooring should not be installed, as the risk of moisture penetrating cannot be ruled out.

If laminate flooring is expected to be installed in larger bathrooms, care must be taken that it is not installed in areas close proximity to areas where water might lodge and that the relative humidity of the room is kept within the recommended range of 35%-65%. The formation of puddles and the effects of damp must be prevented at all costs at the edges and in the joint areas as well as on the surface.











Subfloor requirements

The basic requirement for laying laminate is a firm, clean, dry and even subfloor.

- Uneven areas of more than 3 mm across 1 m must be evened out with a suitable filler.
- When installing on old wood planks and particle boards, loose planks must be screwed to the substructure to reduce any creaking. The floor should be laid at right angles to the lengthways direction of the wood planks.
- For reasons of strength and from a hygienic point of view, carpets are not suitable as a subfloor and must be removed.
- We only recommend an installation on older PVC, CV or linoleum coverings if the floors are glued in place, have no loose areas and there is no underfloor heating. A suitable underlay must be installed to compensate for uneven areas.
- In case mobile appliances such as office chairs or containers are expected to be moved on the floor area, the subfloor must be appropriately pressure-resistant. The maximum weight per wheel must not cause the floor to be deformed, as this will damage the plank locking mechanism and the plank surface. Protective underlays are necessary depending on the type of rollers. Only objects with soft rubber rollers should be used.
- > Screeds must not exceed the following moisture levels:

	Anhydrite screed	Cement screed
without underfloor heating	max. 0.5 CM %	max. 2.0 CM %
with underfloor heating	max. 0.3 CM %	max. 1.8 CM %

Generally speaking, the screed moisture must be checked using a suitable test measuring device. A test sample must be taken from the bottom third of the screed composition, whereby the thickness of the screed must be measured and documented at each test point. The figures only apply to screeds without additives. For screeds with additives, or quick-drying screeds, the figures specified by the manufacturer should be observed.

With mineral subfloors*, as a precautionary measure a 0.2 mm thick PE film must be placed underneath as a moisture barrier (allow strips to overlap by at least 30 cm, apply adhesive tape, allow to protrude at the edges to form a trough and cut off the excess with a knife after attaching the skirting board). Or you can use Parador underlays with impact noise insulation and integrated moisture protection. If moisture keeps on rising from the subfloor, please seal the floor area with a suitable liquid sealer. Under no circumstances use a moisture barrier on wooden installation subfloors.







Installation variations

1. Floating installation

If the laminate flooring is installed without a fixed connection with the subfloor, i.e. only the planks are joined to one another, we call that a "floating installation". Parador laminate floors can be installed quickly and easily thanks to the simple click technology and are designed for floating installation. This installation type is the most popular installation method.

2. Gluing the whole area

Based on the principle that the laminate flooring elements are designed for a floating installation, Parador advises against gluing the whole area.

3. Installation on underfloor heating

Parador laminate floors are suitable for floating installation on hot water underfloor heating systems. For installation on electric underfloor heating, please consult the individual electric underfloor heating manufacturer for their recommendation. However, as a general guide:

> installation only with systems that have temperature sensors and controllers

> no installation on older design electric underfloor heating systems (installed before 2000)

> no installation on night storage heaters.

On the technical data sheets you will find further information, for example about the heat transmission resistances of our laminate floors.

When it comes to installation/application, please also bear in mind the "Checklist for installation on hot water underfloor heating" in the appendix.

4. Use of floor cooling

According to prevalent expert opinions, cooling a room by maximum 5 °C is easily possible at a maximum relative humidity of 65 % (According to the workplace directive, the lower floor temperature limit of 19 °C should also be maintained in "normal" housing. People are more prone to ill health in areas with cold floors).

The Parador floor coverings can be used without restrictions if these specified conditions are complied with (whilst bearing in mind the main Parador installation and fitting instructions).

When installing on underfloor heating or cooling systems, it is essential to seek approval from the system manufacturer. The specified parameters for installation on such systems must be complied with. Installation on heating systems with a night storage function is out of the question.

Assembly

For assembly purposes, please also take note of the instructions on the pack leaflet in particular.

Preparation

Once you have taken note of the basic rules and the underlay is installed, it is possible to start with the actual installation of the floor covering.

In order to achieve an even appearance of the first and last row, measure the width of the room at right angles to the direction of installation and work out the width of the first and last row of planks (in each case at least ½ plank width) (Figure 1).

Install elements mixed from several packs so that you get an even decorative appearance across the area.

The last element of each row is cut to length and the remaining piece, which should not be shorter than 20 cm, is used to start the next row.

The cross joints should be offset from row to row by at least 40 cm (half the plank length with tile format) ("random bond").

Please bear in mind when gluing the whole area that any expansion joints (so-called construction joints) in the subfloor must also be adopted in the top layer.

Please check each plank in daylight or adequate lighting for defects before installation and only lay planks that are in perfect condition.



Assembly

For assembly purposes, please also take note of the instructions on the pack leaflet in particular. A Parador installation video is available on the Internet.

If the wall is not straight, adopt the contours of the wall e.g. with the Parador MultiTool and trim the first row of planks accordingly (Figure 2).

The first row of planks is laid so that the groove of the end side and the long side (former tongue side) face the wall (Figure 3).

Start in the left-hand corner of the room. The required wall clearance is at least 8 mm and is achieved using the Parador spacer wedges.

Start by pushing together the end joints of the first row of planks.

Align the long sides of the planks.

Please insert the first plank of each subsequent row diagonally into the long edge of the installed row (angle $15 - 25^{\circ}$) and position the Parador MultiTool (Figure 4).

To install the subsequent planks, please proceed as follows:

- > Place tongue on the end side into the groove on the long side
- Place groove on the end side up to the level of the green dot on the tongue on the end side (Figure 5)
- > Pull/push plank up to the installed row in one movement (Figure 6)
- > Check whether all joints are closed (Figure 7)
- > The continuous use of the Parador MultiTool ensures an optimal angle setting













Alternatively, from the second row onwards you can use the following installation technique:

- > Push the plank on the floor up to the first row
- > Tilt the plank slightly (15 25°) up to the click-in point (Figure 8)
- > The plank clicks in when lowered, resulting in a tight fit with no play
- > Set in place, i.e. by hitting with a hammering block (Figure 9 and 10)
- After measuring and cutting the piece on the end of the row to length, this is inserted carefully (bear wall clearance in mind) (Figure 11)









If you are using a jigsaw to cut the elements, it is best to guide the saw along the bottom of the plank. If using a bench saw, place the plank on the bench with the decor side facing up. In this way you will get the best quality cut (Figure 1).

If, when fitting the piece on the end of the row, it is no longer possible to place it at the level of the green dot, push this end piece on the tongue of the end edge into the long edge (Figure 2), remove the Parador MultiTool and lock the long edge in place (Figure 3). Check that all joints are closed and use the Parador MultiTool as a hammering block if necessary (Figure 4).

Cut the last row of planks to the required size by using e.g. the Parador MultiTool or a leftover piece of plank to transfer the width. Please also bear in mind the required wall clearance of at least 8 mm in doing so.

The floor is ready to walk on as soon as it has been installed. Now you just have to remove the spacer wedges and attach Parador skirting boards with clip technology.









Dismantling tips

To take up the planks without damaging them, proceed as follows:

The complete row of planks is lifted on the groove side past the click-in point and pulled away in one piece. After that, lay the row of planks back on the floor. The end joints are not undone by pulling longways, but by pushing the planks crossways. Use a hammering block or the Parador MultiTool to unlock the end and long edge for good.

DIY tips

Replacing a damaged laminate plank

In the event of a damaged laminate plank in the middle of a room, it is possible for you to replace this with some handicraft skill. To do so, please cut right through the damaged plank and remove the damaged plank. Use the plank height of your installed laminate flooring as guidance. Apply adhesive tape along the cut edge. To do so, please slightly lift the installed area and place a wide adhesive strip with the sticky side facing up half way under the installed area. Remove the parts of the click geometry marked from a new, undamaged plank.

Now insert the adjusted piece of plank into the gap from above and press the planks firmly around the edges onto the adhesive tape. You can achieve additional stability by applying adhesive to the edge beforehand. Place a weight onto the replaced plank so that it lies flush with the adjacent planks. Place the weight beyond the plank area.



How to shorten a door frame

Lay a leftover piece of plank incl. underlay with the decor side facing down against the frame and saw it off along the plank as shown.

How to make pipe holes

Make the diameter of the pipe holes 10 mm bigger than the pipe is (play/movement joint). Mark the holes, drill out and saw off at an angle of 45° as shown. Glue the sawn out piece. Do not forget the wall clearance here either.





Value retention, cleaning and care

Parador laminate floors are coated with melamine resin and are extremely durable. So that you enjoy your floor for years to come, here is some information about value retention, cleaning and care:

Preventing damage

As with all other floor coverings, you should protect your new laminate floor from dirt particles by using suitable dirt-trapping zones (mats).

To protect the laminate floors from scratches, suitable soft felt pads must always be fitted under chair and table legs and under pieces of furniture.

Rollers on office chairs, file trolleys and roller containers should be fitted with soft treads/rollers. There is also the option of protecting the floor in these heavily used areas with suitable mats. (available in office equipment stores).

It is not necessary to wax the laminate flooring or give it an additional seal, as such measures can in no way improve the floor's looks or benefits of use.

We recommend that you clean your laminate floor regularly with a vacuum cleaner (attached brushes) or broom. Cleaning with a slightly damp cloth should only be done in case of stubborn dirt. It is important in this case that the cloth is well wrung out and that no puddles form with standing water.

Value retention

General information for retaining the value of your laminate floor:

- 50-65% relative humidity is ideal for Parador laminate flooring and also recommended for people's well-being.
- Avoid sand and dirt as both act like sandpaper.
- > Immediately wipe up liquids resting on the floor.
- > Only wipe with a slightly damp cloth.
- Do not use any abrasives, floor wax, steam cleaners or polishes.
 Among other things, they tarnish the floor's appearance.
- > Fit chairs and tables with soft felt pads. Office chairs should have soft rollers, otherwise use suitable floor mats in these heavily used areas.
- Do not use steam cleaners.

Cleaning at the end of installation

- > Remove drilling dust and loose particles with a broom or vacuum cleaner.
- Remove glue smears and residue with the Parador glue remover. To do so, apply some glue remover to a cloth and clean the affected areas.
- > To finish with, wipe damp. (Wring out cloth well and avoid puddles of standing water)

Regular cleaning

- Remove dust, fluff and loose particles with a broom or vacuum cleaner (attached brushes).
- Wipe off dirty marks with a damp cloth.
- In case of stubborn dirt, wipe the floor with a damp cloth using standard detergent. Make sure that no puddles of water form.

Stubborn dirt

Dirty marks caused by substances like shoe cream, varnish, tar, oil, grease, ink and lipstick are best removed using a cloth soaked in solvent. Acetone, nail varnish remover or white spirit, for example, are suitable for this purpose. In this respect, the safety guidelines should be observed and the products only used carefully in the affected area with a little solvent.

Touching up minor scratches

To touch up minor scratches use the Parador touch-up set. In this respect pay attention to the application description. Repeat this process if necessary. To finish with, wipe with a damp cloth.

Repairing more serious scratches and other types of damage

The damaged areas can be repaired by filling with a repair paste.

Frequently asked questions

What is the reason for the planks warping and cupping?

Warping and cupping occur if the laminate planks are not sufficiently acclimatised before being installed. Please remember to acclimatise the planks! In other words acclimatise the laminate flooring for at least 48 hrs before installation in sealed packaging on an even surface in the place of installation.

What is the reason for open joints?

The cause of open joints on laminate floors often lies with the humidity, which is (much) too low (material dries out). It is essential to maintain the required humidity here. During the heating period, a humidity of at least 50-65 % at a temperature of 20 to 22°C is ideal.

What is the reason for the floor bulging upwards?

If the floor bulges upwards, this usually means that the floor area is abutting the wall in some place, or the expansion joint is no longer adequate somewhere. (radiator pipe, door frame, floor profiles, etc.). Please check everywhere to see whether there is still room for movement. Even minimal contact is enough to make the floor bulge up in another place.

What is the reason for the edges swelling?

If floors are cleaned too often with too much moisture, or if liquids are left standing and not removed immediately, this often leads to swelling around the edges. This is because moisture penetrates the joints and makes the wood-based material swell.

This can be prevented reducing the frequency of damp-mop cleaning and removing liquid (puddles) immediately.

What is the reason for the laminate flooring looking "murky" and obscured?

This problem often occurs due to the wrong cleaning agent. These cleaning products form layers that build up on the floor like a film over time and hence dull its appearance. Refrain from applying cleaning products that form layers, therefore, such as polishes or floor wax.

Checklist for installation on hot water underfloor heating systems

As a matter of principle, all mineral subfloors must be heated before installing laminate flooring so that damaging moisture can no longer escape. This heating process applies to all times of the year, winter or summer.

The screed must be professionally laid according to the generally acknowledged rules of the trade (DIN). It must dry out for at least 21 days before the heating process can begin. We recommend heating the screed according to the following diagram or using the "heating protocol" template. Please observe additional information given by your screed layer and heating engineer.

Heating diagram for a hot water underfloor heating system



Please bear in mind: The surface temperature of the laminate floor should ideally not exceed 25°C (max. 28°C).

Heating protocol for hot water underfloor heating systems (template)

It is essential to keep a heating protocol for newly installed hot water underfloor heating systems.

1. a) The screed work was finished on
b) It is a cement ,anhydrite screed.
c) The thickness of the screed is cm on average.
2. a) The underfloor heating system was put into operation on and heated up to 45°C with a daily temperature increase of 5°C (supply temperature).
b) This maximum temperature was maintained for days (target: 7 days) without being reduced at night.
c) From to (target: 4 days) the supply temperature was reduced by 5°C a day.
d) From to (target: 7 days) the heating was switched off.
e) On the heating was turned back on and on the supply temperature of 45°C was reached.
f) After reaching the supply temperature of 45°C, the supply temperature was reduced in stages of max. 10°C a day (max. 25°C) until the room temperature reached approx. 18-20°C for the installation of laminate and engineered wood flooring.
3. During the heating and cooling off period, were the areas ventilated but draughts prevented?
 The last moisture measurements at the measuring points marked showed % residual moisture. (Permitted values: anhydrite screed max. 0.3 CM %, cement screed max. 1.5 CM %)
5. The heatedfloor surface is hereby approved for the installation of wear layers/floor coverings.
For the builder/client:

Place / Date / Signature / Stamp

The notes are used to advise the installer/heating engineer and the builder. Warranty claims cannot be derived from this. In case of doubt, corresponding regulations stipulated by the screed layer / heating engineer must be followed.

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