

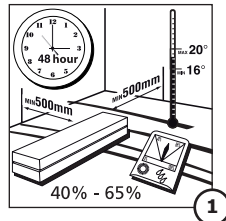
Solidfloor™

- Installation instructions
- Maintenance instructions
- Heating and cooling
- Guarantee provisions

INSTALLATION INSTRUCTIONS

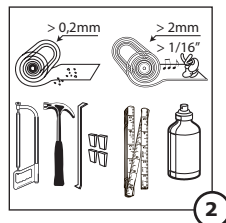
Carefully read these instructions before you start work. Check whether the floor panels are undamaged and fault-free, since the guarantee only applies to hidden defects.

Important note: Place the material in the room in which the installation is to be done, without opening the packing, and allow it to acclimatise for at least 48 hours. The material should be placed flat on the floor in the horizontal position, at a distance of at least 50 cm from the wall (**see 1**).



WHAT YOU WILL NEED

The floor panels have a tongue and groove on all 4 sides, that enable the floor panels to be fitted into each other mechanically. The only tools that you need is a hammer, a fine-toothed saw, a folding ruler, a tensioning wire (cord) along the length of the room, a set square, and an installation set that consists of a stop block, a stop iron and spacer blocks (**see 2**).



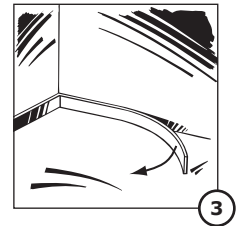
STORAGE

The room in which you will be installing the floor panels should be dry. In case of new buildings, wait until the concrete floor, if any, is dry. The floor panels should be installed at a room temperature of at least 16° C, and a maximum of 20° C. The relative air humidity in the room, to be measured using a hygrometer, should not be less than 40% and not exceed 65%. The humidity should also remain within these limits during and after the installation. If the floor panels are going to be stored (in the packing) for long periods of time, such storage should always be at room temperature. The storage space should have an average relative humidity not exceeding 65%. The floor panels should not be stored in a room with a high level of humidity.

BEFORE STARTING INSTALLATION

Your floor has been manufactured with the best possible care. However, we would still advise you to check the floor panels for visible deviations such as damage, extreme colour differences and shape or dimensional deviations. Contact your dealer for the correct specifications of your floor. Complaints

concerning visible deviations will not be entertained after floor panels have been installed. Ensure good lighting when installing the floor.



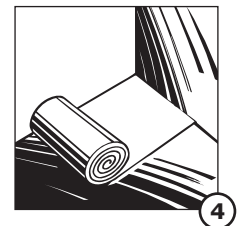
SKIRTINGS

You may remove the existing skirting boards and reinstall them after installation (**see 3**). To enable the floor to shrink and expand freely under the skirting boards, end-piece and transition skirting boards should be fixed on the walls. In other words, these skirting boards should not be fixed on the floor panels. Flat, self-adhesive skirting boards may be affixed to the floor panels.

SUBFLOORS

Floor panels can be installed on practically any subfloor. This subfloor should however be permanently dry, hard, flat, clean, and have adequate load-bearing capacity.

A floor is flat if there is less than 2 mm height difference over a distance of one continuous meter. Unevenness exceeding 2 mm/ meter should be levelled out.



CONCRETE SUBFLOORS

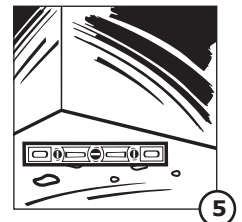
A concrete floor should not contain more than 2% moisture. You should install an insulating layer on top of this. A 3 mm underlayment will be adequate from the technical point of view (**see 4**). You should also always install a moisture insulation foil (for example building foil). Joints should be thoroughly sealed. The foil should extend behind and up the full height of the skirting board.

WOODEN SUBFLOOR

If the subfloor is from wood (moisture content of wood 10%, with a tolerance of $\pm 2\%$), check it for loose parts and tighten the same in place (**see 5**).

Your supplier can carry out the required measurements using an wood humidity meter. You may level the floor by sanding it down or installing a chipboard sheet.

A 3 mm underlayment will be adequate from the



INSTALLATION INSTRUCTIONS

technical point of view. But a 7 mm soft board plate has a better levelling effect and is recommended for floors with slight differences in height. Do not lay the boards if the crawl space is wet. Always make sure there is sufficient ventilation to allow the sub-floor to 'breathe'. Do not install floor panels in a wet crawl space.

UNDER FLOOR HEATING (UFH) AND COOLING

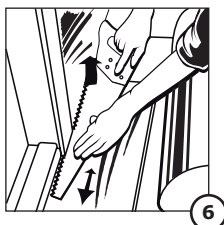
If you want to lay a wooden floor on top of under floor heating and cooling, there are certain guidelines you must follow. It is important to know what type of system is being used, also the type of sub-floor underlay and the type of parquet. Beech, Ash, Maple and Jatoba are wood types that easily warp and, therefore, are not recommended for use in combination with under floor heating or cooling. The guarantee will not apply when these wood types are installed in combination with under floor heating or cooling. For more information about the guidelines: www.solidfloor.com

REQUIREMENTS WITH REGARD TO NOISE REDUCTION

There are situations where a sound-damping sub-floor is required. Your supplier has various kinds of sub-floor underlay that meet these requirements. Ask for the test report.

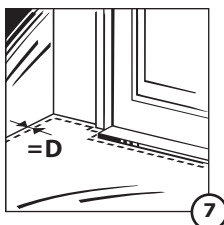
MODIFICATION OF DOORS

Check whether your doors can open and close with the combined height of the flooring and your subfloor if any. If not, you may modify (shorten) your doors according to the changed situation (see 6).

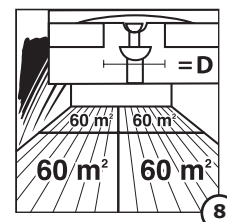


LAYING INSTRUCTIONS: FLOATING OF ENGINEERED PLANK WOODFLOORING

The boards are laid 'floating' by gluing the panels together using water-proof PVAC wood glue (D3 wood glue). If the humidity level and temperature change, the floor may shrink or expand to some extent. For this reason, a play of the thickness of the floor (D) should be maintained with respect to all fixed boundaries such as: walls, thresholds, columns and central heating pipes (see 7). Movement joints should be installed if floors are more than 12 m long or more than 6 m wide, as well as near door openings, between rooms, at turns in passages,



etc (see 8) These movement joints may be finished using specially developed dilatation joint profiles. There should be an offset of at least 40 cm between the top ends of the floor panels in consecutive rows.

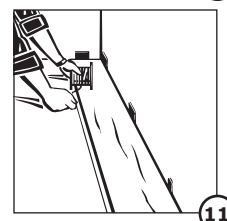
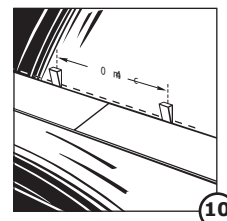


1. After the sub-floor underlay has been laid, the next step is to start laying the boards. We recommend that you start in a corner of the room which is immediately visible when entering the room (see 9). First calculate the number of tracks that you will be laying.

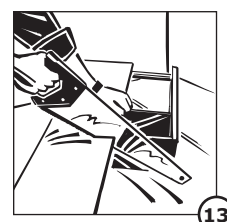
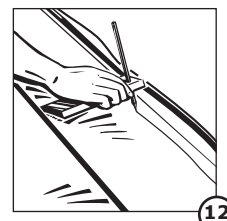


You will obtain best results if the first and the last track are of approximately the same width. Now, lay the first panel with the groove of the length facing the wall. Usually, the panels are laid lengthways in the house (in the direction of the light).

2. An expansion joint of around the thickness of the floor should be installed all around the floor. Place a spacer block at every 40 cm (see 10). Remove them 24 hours after the floor has been laid. Now place the second floor panel, and so on, until the installation of the first row of floor panels is completed. Now check whether the first row is fully straight by tensioning a rope along the length (see 11). After the third row has been laid, check again if the floor is level.

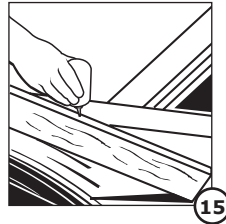
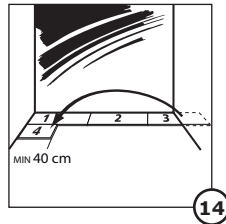


3. If the wall is not fully straight, you should transfer the unevenness to the floor panels. This may be done using a spacer with a lead pencil (see 12). After the floor panels have been marked out, saw the same as required so that the recesses, etc., fit together. Keep in mind the expansion joint. Use a fine-toothed saw for the purpose. If a hand saw is used, make sure the décor side is facing upwards; if a jigsaw is used, keep the décor side facing downwards (see 13).

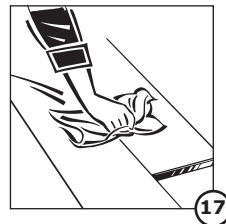
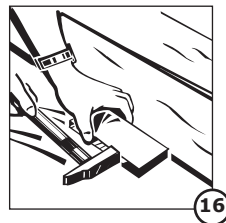


INSTALLATION INSTRUCTIONS

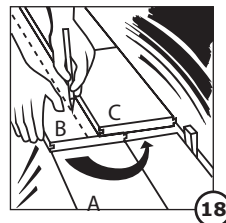
4. Lay the first row of panels by gluing each subsequent panel on the short side. In the second row, start with the remaining part of the first row (**see 14**). This part however, must be at least 40 cm in length, so as to ensure that the floor has optimum stability and also to ensure minimum loss of material. The panels should be glued along the entire length and width. Do not use too much glue! (**see 15**)



5. To tighten, use the stop block of the Solidfloor parquet-laying set. You can also use a wooden fillet of at least 30 cm (**see 16**). This is to avoid damage to the panels. After the panels have been tightened, remove any residual glue immediately with a slightly moist cloth (**see 17**). After the glue has dried, it will be almost impossible to remove any residue.

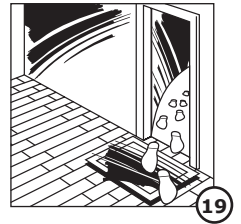


6. While fitting the last row of floor panels, lay the floor panels with the decorative side down with the groove against the wall. Now make the required markings and cut with the saw (**see 18**). Also keep in mind the prescribed expansion joint of 15 mm, and that the floor should be free all round. If it is difficult to reach the last row, lay the boards one by one as close as possible against the boards of the last row but one. Then push them together lengthwise using a pull iron and a hammer. The cross-cut ends are tightened using a stop block or a pull iron and hammer.



MAINTENANCE

Good maintenance will increase the life of your floor. For proper maintenance, we refer you to your supplier. Protect your floor by placing a good floor mat near the door in order to prevent the entry of sand. We also advise you to protect your furniture and chair feet with felt (**see 19**).



HUMIDITY

Wood is a natural product and reacts to the conditions of the room in which it is installed. Shrinkage or cracking can occur when the humidity is too low. The best condition for a wooden floor is a relative air humidity of between 40% and 65%. Shrinkage may occur when the relative air humidity is lower making the use of a humidifier a requirement. Despite these measures, there is a small chance that gaps, cracks or checks may occur when under floor heating is used especially in the winter, or when the relative air humidity is low.

GUARANTEE:

This engineered floor has been manufactured with due care. If however, hidden material and/or manufacturing defects appear within 10 years of the date of purchase, you may contact your supplier on presentation of your payment receipt. Check our guarantee provisions for all details!

Important: Preserve your payment receipt, as well as the guarantee certificate which is included in each pack.

AFTER INSTALLATION

You may start using the floor immediately after installation. You may now start finishing operations on the floor. The spacer block should be removed immediately. You may also start installing the skirting boards. In the case of pre-oiled floors, it is advisable to apply Solidfloor™ Hardwax oil to the floor after installation.

MAINTENANCE INSTRUCTIONS



IT IS IMPORTANT TO PROTECT AND MAINTAIN YOUR FLOOR! REGULAR MAINTENANCE WILL PROLONG ITS LIFESPAN.

Within the Solidfloor collections, two types of floors can be distinguished with regards to the type of finish:

O₂ Oxidatively oiled floors (O₂) **HS** High Solid oil oiled floors (HS)

All oxidatively oiled floors need to be treated with Solidfloor™ Ultimate Hardwax oil after laying the floor. This is not the case with the so-called High Solid floors; these floors only require the first oil-treatment maintenance after one year, or earlier in case of intensive use. These floors are already oiled in the factory. Please consult the technical information on www.solidfloor.com to determine which treatment for your floor is needed. Make sure to acquire information as to whether to use a white or natural coloured oil! Please also refer to the instructions maintenance further on in this document. Before applying the oil, make sure that the floor is completely clean and free of dust.

Please take the following precautions:

- Regular vacuum cleaning or sweeping with a soft broom will reduce the risk of scratches.
- Use a good quality doormat. Dirt is the main cause of wear on wood floors. Placing a doormat outside and inside will help to catch dirt and sand that might otherwise leave scratches in the surface of the wood.
- Put protective felt pads under your furniture to reduce the risk of scratches.
- Lift rather than drag heavy furniture when moving it.
- Any water or other spills should be mopped up immediately to prevent stains and discolouration.

MAINTENANCE SCHEDULE:

Type of maintenance	Vacuum clean or sweep	Clean with Solidfloor™ Wood cleaner***	Clean with Solidfloor Wood Cleaner and oil with Solidfloor™ Ultimate Hardwax oil natural or white***	Contact your supplier
Maintenance interval				
After laying the floor (only oxidatively oiled floors)	X		X	
Daily	X			
Fortnightly or monthly*		X		
Periodically / when dirty**			X	
When the floor looks rough**			X	
When the floor is damaged				X

* Use a damp and lint-free cloth. Using too much water when cleaning can damage the floor as it causes the wood to swell and expand. Never use water without wood cleaner!

** If some parts of the floor start to look rough over time or if the floor is difficult to clean, clean the floor with Solidfloor Wood Cleaner and treat it with Solidfloor™ Hardwax oil. If the floor is well maintained, you should not need to do this more than once a year. But do not wait until the oil coating is worn or abraded before maintaining your floor.

*** For cleaning and oiling instructions check the label of the specific wood cleaner and wood oil.

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MAINTENANCE INSTRUCTIONS

Solidfloor™ ...forever yours



SOLIDFLOOR™ WOOD CLEANER (Artnr.: 1171467) CLEANING AGENT FOR ALL LACQUERED AND OILED PARQUET FLOORINGS



APPLICATIONS

Solidfloor™ Wood Cleaner cleans all varnished and oiled wooden floorings.

CONTAINS

Solidfloor™ Wood Cleaner is based on polyethylene glycols.

TECHNICAL DATA

Working temperature: 10 – 25°C.

Delution: with water, depending on the amount of dirt 1:100 to 1:50. Warm water improves the cleaning result.

Storage: away from frost.

Packing: 1 litre.

INSTRUCTIONS FOR USE

Add Solidfloor™ Wood Cleaner to warm water (100 up to 200 ml to 10 liters). Clean with a damp cloth or mop. Let dry properly.

IMPORTANT:

Use not too much water when cleaning, too much water can damage the floor as it causes the wood to swell and expand. For cleaning instructions check the Solidfloor™ Wood Cleaner label.

Above product information and recommendations are given in good faith and based on practical tests following long term research and development. We cannot assume responsibility for any work as the ultimate results depend on factors beyond our direct control. In cases of doubt always test the product in advance.

MAINTENANCE INSTRUCTIONS



OILING YOUR FLOOR WITH SOLIDFLOOR™ ULTIMATE HARDWAX OIL HARDWAX OIL WHITE (Artnr.: 1138025) HARDWAX OIL NATURAL (Artnr.: 1138024)

You will need:



SOLIDFLOOR™ ULTIMATE HARDWAX OIL IS A MAINTENANCE OIL BASED ON VEGETABLE OILS AND WAXES

CHARACTERISTICS

Solidfloor™ Ultimate Hardwax oil is a high quality product for the maintenance of all oiled surfaces. Ultimate Hardwax oil is resistant to wine, beer, cola, coffee, tea, fruit juices, milk and water according to DIN 68861 1A. Resistant to saliva and sweat according to DIN 53160. Meets all the demands of children's toys according to EN 71.

APPLICATIONS

All kind of oiled wooden floorings.

CONTAINS

Aliphatic hydrocarbons, castor oil, natural resin-ester, silicic acids, silicate pigments, zinc carbonate, microwax, bentonite, cobalt, zirconium, zinc and manganese octoate as drying components.

TECHNICAL DATA

- | | |
|------------------------------|---|
| Working temperature : | Not below 16°C. |
| Drying time | : 6 to 12 hours (depending on temperature and ventilation). |
| Usage | : 1 litre = approx. 70 m ² in one layer. |
| Cleaning tools | : With Solidfloor™ Wood Cleaner. |
| Storage | : Cool and dry. In case of an already opened packaging skin forming could appear. The skin has to be removed before using the product. |
| Warning | : Put clothes drenched with Ultimate Hardwax oil in water (danger of spontaneous combustion!). Afterwards they can be disposed off with normal garbage. EU-limit for this product (cat. A/f): 700 g/l (2010). This product contains max. 690 g/l VOC. |
| Packing | : 1 litre. |

INSTRUCTIONS FOR USE

Stir well. Ultimate Hardwax oil is ready to use. The ground surface must be dry and free of dust and grease. First clean the surface with a neutral cleaner (such as Solidfloor™ Wood Cleaner). Let dry properly. Apply Ultimate Hardwax oil onto small areas in a thin and even layer with a cloth with the grain of the wood. Please spread out with a brush any excess oil which you may find in the bevel. For the rough surfaces we advise to use a mop instead of a cloth. For larger areas we recommend using a buffing machine. Dribble the Ultimate Hardwax oil on the surface in the shape of a snake and polish it in with a buffing machine with a thick white pad. Ask your Solidfloor dealer for the Solidfloor maintenance products.

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GUIDELINES UNDER FLOOR HEATING AND COOLING



Installing a Solidfloor floor in combination with under floor heating and cooling can be easily achieved and will ensure your home is as comfortable as possible.

When installing a wooden floor in combination with under floor heating and cooling you must, however, follow a number of specific guidelines.

The Solidfloor guarantee applies to wooden floors that are installed in combination with an under floor heating or cooling system as long as the points below are observed and implemented.

The Solidfloor guarantee will not apply if the guidelines for floor heating and cooling as given in this document have not been followed and implemented.

Wood is a natural material and may warp (shrink or expand) when the temperature or humidity level changes. It is, therefore, very important that the under floor heating and cooling system is correctly operated. This will ensure that a wooden floor is not negatively influenced.

GUIDELINES FLOOR HEATING

- All floors in the Solidfloor collections, up to a maximum width of 26cm are suitable for underfloor heating. We always recommend to install a system for the recording of the humidity and temperature. We advise to install a Fidbox for this. For widths of 26cm in every room and at each 50m² in a room a Fidbox needs to be installed. For more information www.solidfloor.com/fidbox.
- With under floor heating using hot water: The thickness of the concrete floor screed/anhydrite floor that is poured/applied over the heating pipes must be 30mm at least.
- The prescribed heating protocol must be followed regardless of the season to achieve the allowed moisture percentage of the screed. The screed must be at least 28 days old before the under floor heating is turned on.
- The moisture percentage of the concrete screed may not be higher than 1.5% before the wooden floor is installed. This moisture percentage may not be higher than 0.3% with regard to an anhydrite floor.
- The wooden floorboards must be allowed to acclimatise for at least 48 hours in their unopened packaging in the room where they are to be installed.
- Switch off the central heating system two days before the wooden floor is to be installed. The room temperature, however, may not be lower than 18°C when the floor is installed.
- We recommend using a perforated underlay when installing a floating floor and, if gluing, use a suitable water-free adhesive. For more information consult your adhesive supplier. Nails cannot be used when installing a floor on under floor heating.
- When the wooden floor has been installed, the under floor heating can be put into operation in accordance with the prescribed heating protocol.
- In principle, the temperature of the surface of the floor has to be as low as possible. To avoid overheating of part planes you should heat the entire surface as much as possible. Up to 30% of the floor area may be covered by furniture and rugs.
- In the dry periods of the year, you must use a humidifier to keep the humidity in the room at least at 40%.

GUIDELINES UNDER FLOOR HEATING AND COOLING



GUIDELINES FLOOR COOLING

Regarding to floor cooling systems, it is important that an advanced control and protection system is used to prevent internal condensation (dew point control).

To prevent damage to the floor, the temperature of the incoming cooling water is not unlimited and must not come below the dew point temperature. Lower temperatures cause condensation in the floor and can cause damage to the flooring, such as dishing, deformity, swelling and opening of the seams.

A good safety system includes automatic sensors that detect when the dew point (= start of condensation) is achieved in the parquet and then switches off the cooling.

Room thermostats should never be set to a temperature lower than 24°C. In addition, the thermostat is not set to a temperature 5°C lower than the room temperature. E.g. when the room temperature 32°C, the room thermostat can't be set lower than 27°C.

For effective floor cooling, there is a maximum heat resistance of $<0.09\text{m}^2 \text{ K/W}$ is preferred. The heat resistance of the floors in the Solidfloor collections vary and can be higher. Keep into account a certain loss of capacity.

THE HEATING PROTOCOL DURING FIRST TIME THE SYSTEM IS USED

- The first day the under floor system temperature should be set to 20°C. The temperature must subsequently be increased by 5°C every 24 hours. The system temperature may not be higher than 45°C and the floor temperature may amount to no more than 28°C. Note: the same applies under furniture, carpets and heating pipes. This maximum temperature must be maintained for a few days. It is important to know the thickness of the screed to be able to calculate the exact number of days. If the screed is 5cm thick, this means that you must maintain the maximum temperature for 5 days. The number of days is, therefore, the same as the number of centimetres that your floor is thick.
- The procedure must be followed in the reverse order when the system is switched off.
Recommendation: do not set the thermostat to a low level in the evening and again to a high level in the morning to ensure temperature fluctuations are avoided as much as possible.
- The total procedure will take approximately 14 days. During this procedure, ensure that there is good ventilation in all the rooms so that any moisture that is released can be properly discharged.

HUMIDITY

Wood is a natural product and reacts to the conditions of the room in which it is installed. Shrinkage or cracking can occur when the humidity is too low. The best condition for a wooden floor is a relative air humidity of between 40% and 65%. Shrinkage may occur when the relative air humidity is lower making the use of a humidifier a requirement. Despite these measures, there is a small chance that gaps, cracks or checks may occur when under floor heating is used especially in the winter, or when the relative air humidity is low.

Beech, Ash, Maple and Jatoba are wood types that easily warp and, therefore, are not recommended for use in combination with under floor heating or cooling. The Solidfloor guarantee will not apply when these wood types are installed in combination with under floor heating or cooling.

Note:

A wooden floor may not be installed on under floor heating systems that have been installed before 1990. These systems, generally, produce temperatures that are too high. Ensure that you know that your under floor heating system is suitable for use in combination with wooden floors.

GUARANTEE

You shall have a 10-year guarantee on a wooden floor from the Solidfloor collection as from the purchase date on the basis of the terms and conditions below:

- We provide a guarantee with regard to defects and/or shortcomings that were already present when delivery took place but that were not visible to the naked eye.
- We provide a guarantee with regard to normal use in residential properties and with regard to contract work such as offices, hotel rooms and boutiques. Humid or wet rooms are expressly excluded from this guarantee.
- We provide a guarantee if the floor has been installed in accordance with the Solidfloor installation instructions and is maintained well using the Solidfloor maintenance products in accordance with the maintenance instructions given.

PROVISIONS

- The guarantee shall apply if a complaint has been reported to the Solidfloor supplier where the floor was purchased within 30 days after the issue of the complaint has been discovered or should have been discovered in all reasonableness. Please report complaints in writing and include the original invoice and warranty certificate.
- Should it be deemed that the guarantee applies, either the faulty floor section shall only be replaced or the faulty floor sections shall only be reimbursed in accordance with the provisions made in this guarantee certificate.
- Should the relevant wooden floor from the Solidfloor collection no longer be available, an equivalent alternative shall be provided.
- This guarantee only relates to the supplied floor sections and, therefore, not to labour costs, additional materials and any other consequential damage that may ensue.
- The guarantee period shall remain in force unchanged in case of acceptance and resolving the complaint and shall never be extended.
- Should a dispute arise related to the guarantee with regard to your "Solidfloor", either party may appeal to an independent expert who shall issue a binding decision provided that consumers who do not act in a professional or commercial capacity shall be entitled to bring this dispute to the normal court within one month after we have invoked this stipulation.
- Should this clause be applied, the costs must be agreed upon in advance in writing amongst the parties. This guarantee is an addition and not an exclusion of the statutory rights that the consumer who does not act in a professional or commercial capacity has.

THE GUARANTEE SHALL BE NULL AND VOID IN THE FOLLOWING CASES:

- If the floor has not been installed in accordance with the installation instructions.
- If the defects could already be seen before the floorpanel was installed.
- If the defects and/or shortcomings occurred due to moisture and/or water damage and/or other causes that cannot be attributed to us as the manufacturer/supplier of the floor.
- If the defects and/or shortcomings occurred due to incorrect use or negligent acting and when used for another objective that for what it is intended as well as if installation, maintenance instructions or guidelines regard to humidity and under floor heating or cooling have been ignored.
- If there are visual shortcomings that occurred due to deformation of the boards due to changing climate conditions, in case of colour differences due to the influence of sunlight and the consequences of normal aging and/or wear phenomena of the finishing layer.
- This guarantee shall only apply with regard to the first owner and the first installation of the floor.
- If there are stains or mechanical damage to the surface (dents, scratches, etc.) due to negligent treatment during transportation and storage and in case of damage as a result of stilettos, furniture, stones, sand, pets, etc.
- This guarantee certificate shall only be governed by Dutch law. All disputes arising from this agreement shall be submitted to the competent court in Amsterdam.