



HIRAM FLOORS

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# Hiram Floors Plank Floors – Glued on Screed/Concrete (With/without Subfloorheating)

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## 1. General Information

A plank floor by Hiram Floors can, if installed correctly, bring is a sustainable and impressive floor for many decades. The following guide will explain the preparation and the installation on top of concrete substructures and shall give a general overview of the most important aspects of the installation.

Since every building project is different, the installation of our plank floors has to be done carefully. This is why we usually recommend an on- site consultation by a professional floor layer, no matter if the installation is done by the costumers themselves or by the floorlayers.

## 2. Movement in the Wood

Wood is a hygroscopic or breathing material, which means that it will shrink with very low room humidity and swell with high humidity. In our production our plank floors are Kiln dried to 8- 10 % wood moisture, which corresponds with a relative room humidity of 40 – 50 %. This is why the humidity should never be below 35 % or above 65 % room humidity, as the wood can otherwise be damaged significantly. Please find further information on the different impacts of humidity in below table.

The room climate is usually dependant on the season, which is why changes in climate are not completely controllable. Even with correct installation the wood is prone to move and form small gaps in between the boards, especially in winter season, where the air is usually drier. These gaps can close again with increasing humidity. It is therefore most important to provide a relatively stable and not extremely varying room climate.

## 3. Impact of Humidity on the Plank Floors

**Under 20 %** strong cupping and fissures. Leads to permanent damage on the planks

**20 – 40 %** Probable forming of small gaps and light cupping

**40 – 50 %** ideal stage of humidity. No cupping, no gaps

**50 – 70 %** weak to light cupping of the wood possible.

## 4. Preparation of the Rooms

Before installation, we recommend placing the planks in rooms with stable humidity and temperature, so that the boards acclimatise for a minimum of 1- 2 days before installation. This prevents strong movements of the planks and therefore cupping or fissures after installation.

The wood of the planks moves all year round and adapts to the room humidity constantly, which is why the gap between the planks and the wall should be between 10 and 15 mm wide. On the gap, we recommend placing skirting boards.

The floors and walls of the building, particularly in a new built, should be completely dry and prepared for the installation. All works in the building have to be finished beforehand, the concrete or wooden substructure completely dry, equilibrated and clean.

Our planks are supplied with 8 – 10 % wood moisture, which corresponds to about 50 % relative room moisture. That is why the room's humidity should stay between 35 – 65 % and room temperature between 18 ° C – 25 ° C. If you are uncertain about the climate changes in your room, we recommend buying a hygrometer to measure and control the room climate.

Especially in new builds, it is important to check for rest moisture of the substructure (Wood, screed, concrete etc.). Sometimes controls of the rest moisture in the substructure are not conducted in a correct manner, which is often the reason for delay of further works in the building or worse, damages on the plank floor. We recommend consultation and measurement of the substructure by a professional floorlayer before installation.

## 5. The Installation

The dimensions of each room have to be measured precisely, especially when room-long planks are to be installed. This can easily be done with special laser measurement devices.

The planks have to be pushed together with a hammer and a piece of wood or „cushion“ in between. Avoid direct contact with the hammer, since this can damage the planks. The planks have to be tightly placed together. If higher room humidity is expected, place them with a distance of 1- 2 mm alongside the width between one another.

The substructure has to be leveled perfectly, which can be achieved with putty, sanding or a wooden substructure. The height variance should be maximum 1 mm on a length of 1 m. We recommend the measurement to be done by a floor laying expert.

## 6. Preparation Overview

- I. Protocolled measurement of room humidity & room temperature
  - a. Room Moisture between 35 – 65 %, in Winter approx. 50 %.  
Recommendation: Hygrometer for controlling humidity
  - b. Room temperature between 18° - 25° C
- II. Protocolled measurement of humidity of substructure on several spots in the rooms
  - a. Screed 2,0 CM
  - b. Screed with subfloorheating 1,8 CM
  - c. Anhydrite Screed 0,5 CM
  - d. Anhydrite Screed with subfloorheating max. 0,3 CM
  - e. Wooden substructure: 8- 12 %
  - f. Planks: 8- 10 %

- III. Measurement of room dimensions
- IV. Substructure has to be leveled, clean, dry and without cracks or fissures.
- V. For acclimatisation, the planks have to be placed in a dry and clean room for minimum 1- 2 days before installation begins.
- VI. Leave 10 – 15 mm gap between planks and wall, depending on width of the floorboards. With more than 6 m long planks, leave 15 mm gap alongside the planks and the wall.

## 1. Hiram Planks glued on top of Screed/ Concrete |with/without subfloorheating

### a. Important Conditions

The use of glue for the installation of our plank floors is one of the more common installation methods. It is important that the screed/concrete is dry, leveled and clean. There should be no fissures or cracks in the substructure.

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### b. General Installation Hints:

First, we recommend to apply a primer on the screed first. This will bind all the remaining dust and therefore reduces the chance of the planks loosening themselves from the substructure over time. The primer also serves as a moisture barrier for any kind of moisture from below.

For specific information on the application of primer and glue, we recommend asking the appropriate producer.

In case there is an integrated subfloorheating in the concrete, we recommend the heating to run for a minimum of 30 days before installation. The heat will evaporate all remaining moisture in the substructure.

24 hours before the installation the subfloorheating has to be turned off and only turned on again minimum one week after installation. The heating has to be slowly turned on again, so that the heat won't cause cracks or fissures in the wood.

*This brochure will serve as a general guide for the above installation methods. Since every building project varies in its requirements, we recommend installation and/or consultation by a professional floorlayer.*