



CROWNSWIFT – INT’L. LIMITED
CROWN BAMBOO® Products

A locked gluing is simply more solid.....

CROWN BAMBOO® – parquet has been optimised in about 1 year development for the German and European market. Our product has no chamfers (rounded edges) as it often can be found at bamboo parquet. The fitting exactness has been optimised and permanent quality controls before, during and after the processing guaranty a constant quality. Additional we have the locked gluing – the very form stable product bamboo parquet receives that way an extra stability.

„Locked is simply more solid...“

or: why CROWN BAMBOO® – parquet?

The precise „Pre-Finish“, so the very good surface, allows it at ideal case to lay our CROWN BAMBOO® – parquet with a minimum of grinding.

You decide by yourself, which materials finally are used. Choose from our collection of tested waterborne coatings or natural oils and adhesives.

So as producer and importer we reach with our experts a constant quality, which surely will satisfy you.

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- Completely innovative design in colour as they are entirely trendy.
 - Harder as Oak, Brinell hardness: 4,0 by 10% wood moisture
 - The abrasion resistance is comparable with oak or beech.
 - The gross density (an important characteristic value for the strength) is e.g. surpassed by oak.
 - At gradual long term change of the room climate the dimensions of CROWN BAMBOO® – parquet change only 1/3 as much as at not locked parquet and even 50% less than at a traditional parquet of oak.
 - Keen stamina and great form-stability.
 - CROWN BAMBOO® –parquet reacts on Short-term climate variations lazier than the comparative species beech and oak.
 - Bamboo generally keeps its original colour longer than other kind of woods. (Numerous Tests in UV-laboratories resulted in this).
 - Installation full planed glued or screwed.
 - **For a swimming installation** use please our bamboo parquet extra large. (CROWN BAMBOO® solid wide).
 - Thickness: 15mm solid, 3-layer glued,
 - **New:** 10mm, small installation height, 4 mm using layer, easy and quick installation, very exact fitting. Ideal for renovations and modernising of older buildings as well in case which require a small height of flooring.
 - Bamboo includes on any tannic or resins
 - Small shrinkage and swelling dimensions.
 - Bamboo – the quickly growing plant of the world. (some species of the bamboo are growing up to one meter a day).
 - No destructive exploitation of resources.
 - Bamboo is a grass. The first hardwood pavement of the world, for which not one single tree has to be felled. After only five years the bamboo log is matured and can be used for production.
 - A reforestation, of the Chinese government rented bamboo forest, is for us a matter of course to protect the environment and to ensure a constant quality



Installation instruction for CROWNBAMBOO® – parquet

- Install our CROWNBAMBOO® – parquet only on even and dry sub floor. Bay possibility the parquet should be glued full-faced.
- Check the type and consistence of the sub floor, e.g.: anhydrite flooring, cast asphalt flooring, particle board, cement flooring (see DIN 18356)
- The type of support determines how it should be pre-treated, and the proper choice of adhesive to be used. Please only use the recommended adhesives for gluing down flooring. Our sales team will be happy to advise you.
- Before installation, your sub floors should have the following characteristics: even, free of cracks, dry, clean, solid surface (lattice scratch test). In case these characteristics are not given, a matching pre- treatment has to be realised.
- For full faced gluing of the bamboo parquet on anhydrite flooring, sanding, porous or/and highly absorbing sub floor generally a pre-coating has to be realised. This has to be selected in regard of the sub floor and the to be used parquet glue. If necessary ensure the parquet qualification with levelling compound.
- The temperature of the surface of the sub-floor should not be below 15°C at the time the flooring is laid down. The ideal relative humidity level is 60%.
- The moistness of the different sub floors should not exceed the values shown in the following table. Measurements by means of CM measuring device have to be made:
Type of sub floor: Max. acceptable moistness
Cement flooring: (1,8 weight. -%): 1,8 – 2,0 CM-% Anhydrite flooring: (0,3 weight. - %) below 0,5 CM-% Plaster flooring: (0,3 weight. -%): below 0,5 CM-% Particle board: 9,0 ± 3,0 weight. - % Butment woods: below 15,0 weight. - % Filling material: 2,5 – 3,0 weight. -%
- You need approx. approx. 800 – 1200 g/sqm glue. The exact quantity of glue is given by the producer’s defaults of the respective glue.
- Please do not forget to arrange sufficient border joints as well to the wall as to all other fix constructions inside the room. The boarder joint should be approx. 8-10 mm. Best is when you use suitable wedges. The wedges are removed immediately after installation.
Please consider that bamboo tends differently to timer to swell resp. Shrink rather in the length than in the width. Bamboo reacts generally very slow on moisture variations.
- The installation should always start with the groove to the wall.
- For the swimming installation it is recommended to use a suitable interlacing, as e.g. polyethylene foam, cork, woollen felt card board and similar.
- For swimming installation the glue application is made inside length and head groove at the upper part of the groove. The shift of the parquet blocks of at least 25 cm has to be kept.
- In laying down flooring over floor heating we absolutely recommend the leaflet *Preparative measures for laying down parquet, elastic and textile flooring on heated floor constructions*, and ordering the accompanying protocol for the measures. The publisher is the Zentralverband Parkett und Fußbodentechnik (**Union for Parquet and Flooring Techniques**), Bonn.
- The climate of the room should be kept as possible constant. Optimally is a temperature between 55% and 65%.

Surface treatment:

- After installation the parquet is grinded with a single disk machine (grinding lattice K120) or platen-grinding machine (K80 und K120). The floor is cemented after the grinding with the dust of K80.
- The floor can be protected with sealing or oils / waxes. Use for this the recommended sealing resp. oils and waxes of our accessory leaflet.



Technical details of CROWNBAMBOO® – parquet

3-layer CROWNBAMBOO® – parquet 15 mm solid bar parquet

- Body: horizontal, all around groove and tongue. 3 layer glued bamboo
At upright lamella: bamboo vertical, all around groove and tongue. Upright glued.
- Total thickness: 15 mm
- Running base horizontal: 5 mm running base, vertical 5 mm
- Bar width: 96 mm
- Bar length: 960 mm
- Surface: rough, pre-grinded
- Installation: full-faced gluing, screwing or clamps for a swimming installation, please use our bamboo parquet extra large in a size of length 1860 mm and a width of 162 mm
- Installation pattern: irregular pattern, regular pattern
- Surface treatment: sealing or oiling and waxing
- Brinell hardness: \varnothing 40N/mm²
- Differential swelling value: $\leq 0,15\%$ referenced to 1% variation of wood moisture.
- Gross density: approx. 700kg/m³
- Weight: approx. 10,5kg/m²
- Content of packing: 2,21 m² per carton

2-layer CROWNBAMBOO® – parquet 10 mm solid.

- Body: Horizontal, all around groove and tongue. 2-layer bamboo, horizontal or vertical glued.
- Total thickness: 10 mm
- Usage layer: approx. 4,0 mm
- Bar width: 92 mm
- Bar length: **460 mm** or also **920 mm**
- Surface: rough, pre-grinded
- Installation: full – faced gluing
- Installation pattern: irregular pattern, regular pattern, pattern as fish bone, double fish bone, cubes a.s.o.
- Surface treatment: sealing or oiling and waxing
- Brinell hardness of bamboo: \varnothing 40N/mm²
- Differential swelling value: $\leq 0,15\%$ referenced to 1% variation of wood moisture
- Gross density: approx. 700kg/m³
- Weight: approx. 7,5 kg pro m²
- Content of packing: 3,047 m² per carton

Technological details

Brinell hardness	approx. 4,0 N/ mm ²
Differential swell value	0,14% per 1% alteration of wood moisture
Moisture content:	10% at 20° C and 65% relative air humidity 8% at 20° C and 50% relative air humidity
Gross density:	700 kg/ m ³
Fire protection norm:	construction material class B1 (CH 5,3) (Great Britain: norm BS 476 part 7) class 3 according to Belgian norm NBN
Thermal conductivity:	$\lambda = 0,17 \text{ W} / (\text{m}\cdot\text{K})$
Heat transfer resistance:	$R = 0,08 \text{ m}^2\text{-K/W}$
Emission class:	0,01 mg/m ³ (E1 Norm : max. 0,124 mg/m ³)



Maintenance instruction for sealed CROWNBAMBOO® floorings

14 days close season:

Let dry fresh sealing for 24 hours, do not step on it before. The first 14 days only gentle manipulation.

Beginning of maintenance:

For finished parquet you may start with maintenance immediately. For all other fresh sealed flooring start earliest 14 days afterwards with maintenance, the sealed parquet, board and paving floorings are cleaned with a mop, broom or a vacuum cleaner. Slight footstep traces and sticking dirt are removed with a wet good wrung out cloth. Do not cover the flooring with carpets in the first 4 weeks.

More comfortable it's not possible:

Frequency of cleaning and maintenance

- a) Moderate used flooring in flats, according to requirement, approximately every 2 months.
- b) Medium heavily used flooring (staircases, offices, corridors) every 2-4 weeks.
- c) Heavily used floorings as in restaurants, schools or shops every 14 days.
- d) Mostly used places in front of doors, elevators and in corridors possibly maintain more frequently. A gauzily wax film should exist.
- e) Gymnasiums: see separate maintenance instruction.
- f) Apply the maintenance agent very sparingly, 1 litre should be sufficient for 80 sqm.

Cleaning:

During the continuous maintenance cleaning the maintenance agent can be added to the cleaning water with a dosing of 0,3-0,5 litres in 10 litres water. The floor is cleaned and maintained at the same time. A mechanical and manual basic cleaning is only necessary if the flooring has strongly adhering soiling, which cannot be removed by the maintenance cleaning. Suitable for the basic cleaning is our CROWNBAMBOO® basic purifier. Do not flood the flooring with water during the cleaning, because else damages by swelling can occur.

Therefore take up the cleaning solvent liquid immediately. Following maintain with the maintenance agent pure or thinned with 0,3 – 0,5 litre on 10 litres water.

Please pay attention to:

Bamboo is a natural material, which can be affected by the respective temperature of the room and the prevailing air humidity.

One says bamboo is respiring, that means, material and room climatic interactions occur. At relative high moistness of the environment the bamboo flooring takes up moisture and increases its volume.

At relative low moistness of the environment the bamboo flooring releases moisture, so that the volume gets corresponding reduced and joints occur. For bamboo this reaction is markedly lower as for our domestic woods resp. as for us known wooden floorings.

Just a positive speciality of bamboo!

As we have no influence over the level of humidity in your home, the formation of gaps and swelling of the wood are excluded from the guarantee. On hot summer days and during the heating period, the humidity can reach very low levels (without appropriate humidification), which necessarily leads to further drying of the bamboo, thus causing the formation of gaps in your parquet or floorboard. We thus strongly recommend using a humidifier.

- Unfamiliar fresh air
- A lowering of your heating expenses
- Dust, polls and bacteria are nearly completely eliminated.
- Smoke of cigarettes and smells are eliminated.

Important hints:

The protection effect of the sealing can only be retained for heavily used surfaces as in offices, dance halls, and restaurants and similar by timely grinding off and new sealing. The legs of movable furniture have to be protected with matching under layers (e.g. felt pads). At usage of chairs with rollers the use of suitable chair under layers is necessary. Mud flaps resp. clean running zones avoid the intrusion of dirt and therefore are recommended.



Maintenance instruction for oiled CROWNBAMBOO® floorings

By the surface treatment with oil the bamboo parquet already received a protection and is largely resistant against intrusion of water and dirt.

According to the stress, each type of surface treatment is subject to a natural wear and tear. For this reason a periodical cleaning and maintenance is necessary.

Damages or coarse soiling can be partially repaired by chipping with steel wool, grinding or by treating with a green pad and once more treatment with maintenance oil..

Tables and chairs have to be equipped with suitable felt pads. Sufficient large clean running zones should be arranged.

At usage of chairs with castors use only soft rolls according to DIN 68131, additional recommended is the usage of suitable base plates, e.g. roll mats.

The maintenance cleaning is always out, when the flooring is dirty.

Thereby the coarse dirt is removed with a mop, broom or a vacuum cleaner because these soiling take effects like sanding paper and having to be removed immediately.

Remove fine dirt or dust with a slightly wet cloth. Add to the cleaning water a suitable cleaning agent. The maintenance is carried out with maintenance oil.

The oil is implicated thinly and equally spread. Let no over plus stand on the surface. The surface are cleaned and new impregnated at the same time. After 12 hours drying time the surface can be used again.

The maintenance with maintenance oil is always then carried out, when the flooring shows wear and tear characteristics on the surface treatment.

In the living area the maintenance often is only two to four times necessary. In schools, restaurants or corridors according to the stress under circumstances every 14 days

Maintenance oil contains inflammable solvents. Care for good air ventilation.

Saturated cloths or pads can inflame themselves. Therefore it is imperative to clean the tools immediately after usage and to store them in closed vessels or under water. After the drying the cloths or pads can disposed to normal garbage.

This maintenance instruction is valid for bamboo parquet, which has been installed according to DIN 18356-parquet work and DIN 18367 for woodwork, which has been oiled and is maintained with maintenance oil.

By means of the not film flooring and permeable surface treatment, the bamboo is not hindered in its respiratory activity. But pay also attention to, that bamboo is a natural material, which is influenced by the respective temperature and air humidity, so that material and room climatic caused interactions take place.

At relative high moisture of the surrounding the bamboo flooring takes up moisture and enlarges its volume. At relative low moisture of the surrounding e.g. during the heating period in winter, the bamboo flooring releases and joints occur. However rate this behaviour not the bamboo parquet. Care for additional air moistening during the heating period. This helps not only the parquet flooring but also the well being and the health of the residents.

At a temperature of 18°C to 20°C and a relative air humidity of 50% - 60% the ideal room climate is reached.



It's a Myth...

...that only ceramic flooring can be laid over under-floor heating. Go for what you really want; to save energy through under-floor heating and still have parquet flooring. Wood – and therefore parquet – has a low thermal resistance, and is therefore recommended for laying over under-floor heating.

According to heating experts, the thermal resistance of the floor covering should not exceed 0.17m² K/W. 2-layer ready-to-lay parquet, with its 9 - 11 mm, dual-layer structure, is therefore particularly suitable.

3-layer ready-to-lay parquet with a thickness of 14 - 15 mm is suitable for use with under-floor heating only under certain conditions. Solid parquet in general and multi-layer parquet over 15 mm thick are not suitable for under-floor heating.

Ready-to-stick parquet (2-layer strip parquet, 2-layer “country house”-style parquet) and 2-layer tongue and groove flooring are suitable for use with under-floor heating.

The new cement screed must be cured for at least 21 days. After that, the under-floor heating is slowly put into operation, i.e. the temperature should be increased by 5 °C each day until it has reached its maximum operating temperature.

This maximum temperature must be maintained for at least one day for each centimetre of screed thickness and must not be reduced at night.

After that, the heat should be reduced by 5 °C every day until the surface temperature of the screed is 15 - 18 °C. The parquet should be laid at a screed temperature of > 15 °C and a relative humidity of 50 - 60 %.

The moisture in the screed must not, at this point, exceed 1.5 %. The official standard bake-out protocol must be presented to the builder by the installer and confirmed. Once the floor has been laid, the conditions mentioned above must be maintained for approximately a week.

Heating the screed before the parquet is laid is extremely important because this procedure releases moisture which would otherwise be heated into the parquet flooring. Heating must always be performed immediately before the floor is laid, even if old floor coverings must be taken up first, for example when old buildings are being renovated.

You should, however, note that lengthwise and widthwise gaps will form during the heating process, even with sealed, ready-to-lay parquet.

As a general rule, the parquet should be glued when laying it on screed over under-floor heating!

Floating floor installation is not recommended due to the higher thermal resistance (insulating underlay plus any air cushion formation and the risk of gaps forming along the weaker seams).

Once the floor has been laid, the heating should not be turned on fully immediately. Instead, it should be run at a low temperature for approximately a week.

With proper handling and by sticking to these guidelines, you will have a great deal of enjoyment from your parquet flooring.



Ecological aspects,

Because we have the intention to meet the idea of environmental protection with our **CROWNBAMBOO®** products, by us and our recommended partners we have developed own products in the field of gluing and sealing.

Packaging:

The packaging consists of cardboard on the outside and PP shrinks film on the inside, to protect against humidity. Both materials can be disposed of in an environmentally friendly way. The size and weight of the packaging are designed for easy transportation and handling.

Maintenance instruction / cleaning

General hint: The treatment of the surface of all bamboo products is subject to a natural wear and tear according to the stressing. Therefore a regular cleaning and maintenance is necessary. The warranty for the treatment of the surface is given only then, when by the producer the recommended maintenance system is used.

Complaints:

Prior to installation, all elements should be controlled for defects. Complaints must be made immediately in writing, and you must await a decision from us.

No costs can be reimbursed for defective parts that have been installed.

Liability,

Bamboo is a grown natural product; variations in structure and colour are caused by the material and are not a reason for complaints. Technical and constructive modifications as well as modifications of the collection remain retained. At storage, installation and maintenance please pay attention, that the rooms are suffixations tempered and dry and that the work is done properly and competently.

The product liability amounts to 5 years and is taken over by us, if the recommended materials and techniques are used. Please pay attention to the **CROWNBAMBOO®** products information and installation and maintenance instruction.

As at July 2004

All statements are not binding and do not constitute grounds for a contractual legal link, as the respective working conditions may vary considerably. All recommended products were tested according to the above-mentioned recommended conditions for laying down flooring, and classified as good. We always recommend several trials, especially when unfamiliar products are used.