

## Environmental brochure

# BAMBOOTouch®

### An ongoing commitment to the planet

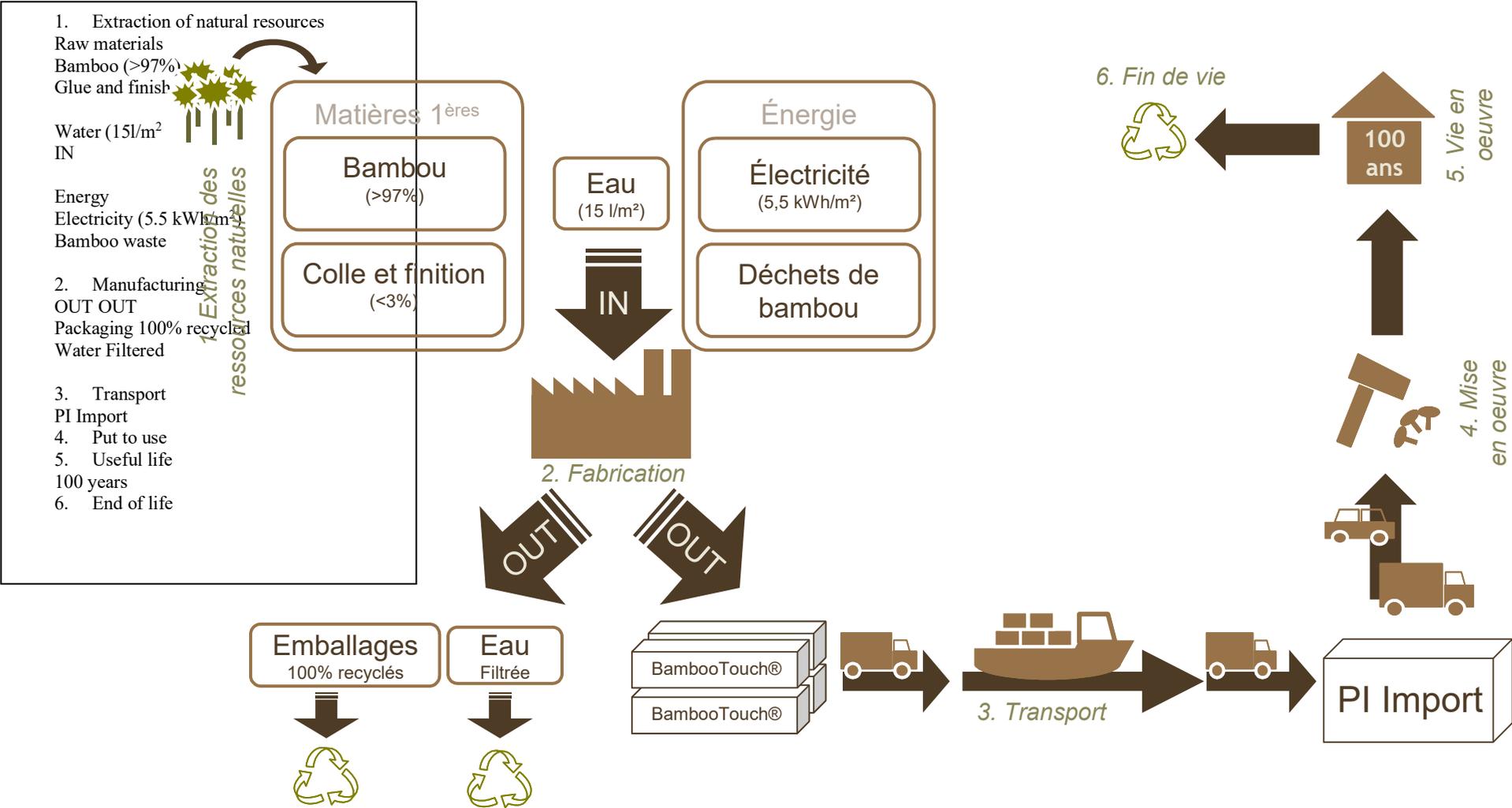
When you choose BambooTouch®, you are choosing a quality product that doesn't endanger the planet's equilibrium.

- ✓ A natural resource that is very rapidly renewable (in 5 to 7 years), whose growth produces more oxygen than most traditional species
- ✓ A manufacturing process that respects the environment and consumes a small amount of electricity and water
- ✓ A healthy product, with a low glue content (no more than 2 or 3%), producing minimal formaldehyde emissions (almost 90 times less than the strictest European requirements)



# Why BambooTouch®?

## BambooTouch® - an ecological product



# 1. Resource extraction

## Bamboo - an astonishing natural resource

Over 97% of BambooTouch® flooring is made up of an extraordinary natural raw material: bamboo.

Unlike traditional wood species, bamboo is a grass that is very **rapidly renewable**. In just 5 to 7 years, bamboo cane is mature enough to produce a quality floor. As well as this, bamboo **regrows on its own**, and so does not need to be replanted.

Species	Usable age	Species	Usable age
Bamboo	5-7 years	Lime	80-120 years
Chestnut	20-35 years	Scotch pine	80-150 years
Teak	25-80 years	Hornbeam	100 years
Maritime pine	35-50 years	Common oak	100-140 years
Ash	50-70 years	Beech	120-150 years
Douglas	50-80 years	Sessile oak	170-200 years
Wild cherry	60 years	Moabi	150-260 years
Maple	60-80 years		

Centre régional de la propriété forestière Poitou-charentes (<http://www.crfp-poitou-charentes.fr/-Documentation-.html>)  
Forest genetic resources in France. Michel Arbez and Jean-François Lacaze, 1998  
Website providing information about biodiversity in Wallonia (<http://biodiversité.wallonie.be>)

BambooTouch® flooring comes from **sustainably managed forests**, respecting local communities, flora and fauna:

- ✓ Only canes that have reached **maturity** are harvested, making sure that the forest **density** is maintained, in accordance with strict forestry plans. This means that there is never any clearcutting or clearing, which makes sure that the flora and fauna in the undergrowth are protected.
- ✓ As well as this, these forests are managed in a way that respects the planet, without the extensive or systematic use of insecticides or fungicides.

Lastly, bamboo forests help preserve the environment in different ways, both locally and globally:

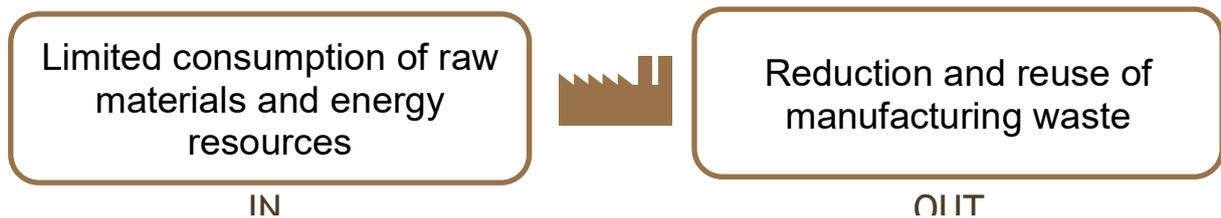
- ✓ Combating **the exhaustion of natural resources**: BambooTouch® offers an alternative to forest and fossil resources
- ✓ Combatting **soil erosion**: bamboo forests offer particularly effective protection against flooding, strong winds and strong light.
- ✓ Bamboo is a grass, just like your garden lawn: this means that it is constantly and permanently growing.

## 2. Production

### BambooTouch®: A manufacturing process designed to respect the environment

BambooTouch® is produced exclusively by companies that are ISO 9001 certified (quality management), meticulously selected for their know-how, their professionalism and their quality standards.

The manufacturing process has been carefully analysed to limit its impact on the environment from the beginning to the end of the production chain.



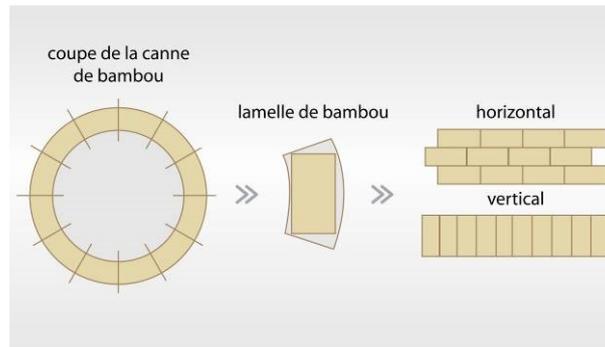
### Manufacturing process for BamWood® BambooTouch® flooring

1. Once the bamboo canes have been harvested, the green outer layer is removed.
2. The bare canes are then cut lengthways.
3. The strips produced are cut and calibrated.
4. They are then sorted by thickness, length and their natural shade.
5. The strips are treated to protect against fungi and insects by immersing them in oxygenated water (natural floor only, concentration <0.6%).
6. The strips then go into a drying chamber.
7. **After being heated using high pressure at 140°C, the strips of bamboo are partially ground, then glued and put into moulds, where they are pressed together for several hours. The glue used is a high quality Dynea glue, which complies with the E1 standard (to be confirmed). The system temperature is maintained via a closed oil circuit, heated by burning bamboo waste.**
8. The blocks produced are cut into floorboards, calibrated and sanded.
9. The last step involves shaping the chamfer, grooves and strips, and printing the BambooTouch® trademark on the back of the floorboards.
10. The floorboards can be left untreated or finished in the factory with a Bona® varnish or a Woca® wax oil.
11. One last quality check is carried out during packaging.

Packaged in cardboard boxes, the products are then sent by boat or road to Europe, before being distributed to retailers.

### Manufacturing process for vertical and horizontal BambooTouch® flooring

cross-section of bamboo cane  
bamboo strip  
horizontal  
vertical



1. Once the bamboo canes have been harvested, the green outer layer is removed.
2. The bare canes are then cut lengthways.
3. The strips produced are cut and calibrated.
4. They are then sorted by thickness, length and their natural shade.
5. The strips are treated to protect against fungi and insects by immersing them in oxygenated water (natural floor only, concentration <0.6%).
6. The strips can be kept pale, in their original shade, or they can be coloured by putting them into an autoclave furnace at a temperature of 120°C (caramel floor).
7. The strips then go into a drying chamber.
8. When they are dry, once their humidity level has been checked, they are calibrated once again.
9. The strips are again sorted according to their colour, to make sure that the future floorboards are a consistent shade.
10. They are then stuck together at a high pressure and a high temperature, with a high quality Dynea glue, in accordance with the E1 standard, on their widest side (vertical), or on their edge (horizontal).
11. These pieces are then sanded and cut to the preferred dimensions for floorboards, panels, accessories etc.
12. The last step involves shaping the chamfer, grooves and strips, and printing the BambooTouch® trademark on the back of the floorboards.
13. The floorboards can be left untreated or finished in the factory with a Bona® varnish or a Woca® wax oil.
14. One last quality check is carried out during packaging.

Packaged in cardboard boxes, the products are then sent by boat or road to Europe, before being distributed to retailers.

## Energy:

BambooTouch® is produced using a process that does not use much energy, and is essentially manual. All of the sawdust and bamboo offcuts are collected and used as a source of combustion energy to heat the drying chambers and caramelising autoclave furnace. Lastly, the only fossil energy consumed is electrical, and adds up to just 5.5kWh per square metre.

### *Did you know?*

Manufacturing one square metre of BambooTouch® flooring uses up just 5.5kWh of electricity.

- ✓ *Equivalent to 5 washing machine loads ([www.curbain.be](http://www.curbain.be))*
- ✓ *Less than a desktop computer with an LCD screen left on for 1.5 days (Wikipedia)*
- ✓ *Less than the energy consumed by a 100hp city car driving for 5 minutes (1hp = 0.736kW)*

## Water:

To produce one square metre of BambooTouch® needs an average of just 15 litres of water. (Which corresponds to approximately 1.7 litres of water per kg of BambooTouch® flooring)

### *Did you know?*

- ✓ *A bath uses up between 150 and 200 litres, so the same amount of water as you would need to produce between 10 and 13 square metres of BambooTouch® flooring.*
- ✓ *A washing machine uses between 70 and 120 litres per load, so enough to produce between 5 and 8 metres of BambooTouch® flooring.*
- ✓ *The domestic consumption of an average French person is around 137 litres of water per day, which is enough to produce 9 square metres of BambooTouch® flooring.*
- ✓ *The domestic consumption of an average Belgian person is around 112 litres of water per day, which corresponds to 7 square metres of BambooTouch® flooring.*
- ✓ *Having a shower instead of a bath during the week saves enough water to produce 50m<sup>2</sup> of BambooTouch® flooring.*
- ✓ *To produce one kg of cement, you need 35 litres of water, so 20 times more than to produce one kilogram of BambooTouch® flooring.*
- ✓ *To produce one kilogram of steel, you need between 300 and 600 litres of water, so 175 to 350 times more than to produce one kilogram of BambooTouch® flooring.*

*Source: Water Information Centre [www.cieau.com](http://www.cieau.com)*

## Hydrogen peroxide (H2O2)

Hydrogen peroxide, more commonly known as oxygenated water, is used as a disinfectant and bleaching agent when producing natural BambooTouch® flooring (concentration below 0.6%).

It breaks down quickly in WATER and OXYGEN, when it comes into contact with dust, oil and many other impurities. This means that it is an agent that biodegrades quickly, without producing any residue, which, at low concentrations, is in no way toxic for humans or the environment.

### ***Did you know?***

- ✓ *Hydrogen peroxide is used to treat wastewater and drinking water and to sterilise food packaging.*
- ✓ *It is also used in the pharmaceutical and cosmetic industries as a disinfectant for contact lenses, in toothpastes, tooth-whitening products (concentration of up to 6% hydrogen peroxide), and in some haircare products (~5%).*
- ✓ *Hydrogen peroxide is formed naturally in cells in the body as a metabolic by-product, by different enzymes. It is also spontaneously decomposed by the body's catalytic enzymes.*

*Source: MSDS FT123 published by the Institut National de Recherche et de Sécurité*

### **Glues and finishes**

The glues used for assembly and finishing make up no more than 2 or 3% of the end product. As well as this, BambooTouch® has selected glues and finishes that are both resistant and environmentally friendly, with very low levels of formaldehyde (rate of emission 87 times lower than the requirements of the strictest European category - E1)

### **Reuse of manufacturing waste**

All of the bamboo cane is used:

- Branches and leaves are used to produce brooms
- The outside of the cane is used to produce blinds
- The roots are used by local craftsmen to produce sculptures
- The top of the cane is used to make chopsticks
- The shoots are used in the food industry
- The sawdust and offcuts are collected by the factory and used as a source of energy

All of the packaging for the glues, varnishes and oils (metal pails) are recycled by specialist companies.

## **3. Transport**

### **Maritime transport - an environmentally friendly means of transport...**

Contrary to popular belief, maritime transport is the most environmentally friendly means of transport in terms of greenhouse gas emissions.

→ *Transporting one square metre of BambooTouch® flooring by boat is responsible for the emission of 0.39kg carbon equivalent greenhouse gases. This means of transport therefore produces less pollution than using lorries to import the same surface area of oak from Europe and the East.*

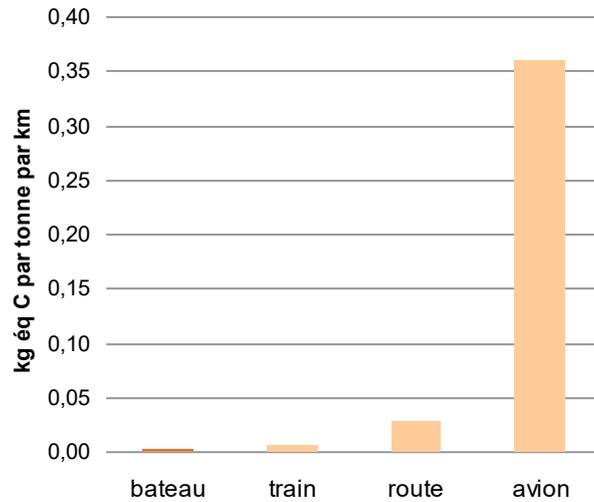
Emissions calculated using data

### Comparaison des émissions de GES par mode de transport des marchandises

provided by ADEME.

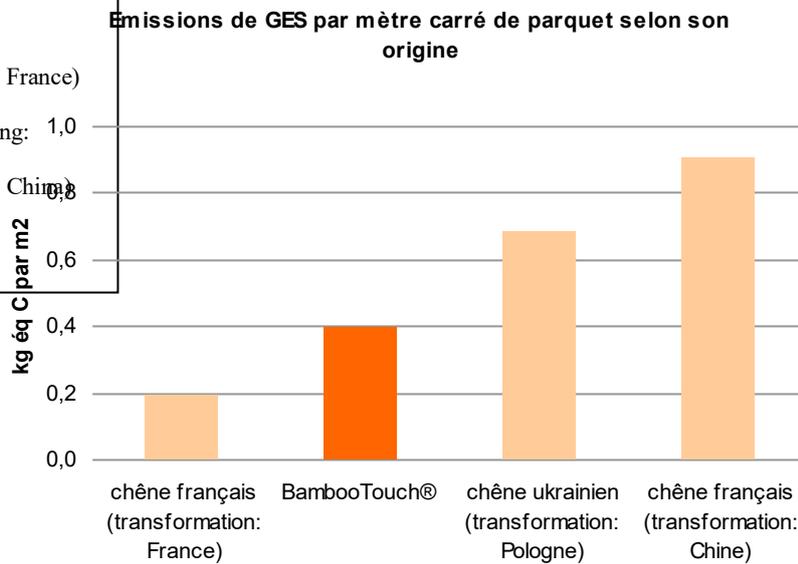
Comparison of greenhouse gas emissions by method of goods transport  
kg equivalent C per tonne per km

boat  
train  
road  
airplane



Greenhouse gas emissions by square metre of flooring according to origin  
kg equivalent C per m<sup>2</sup>

French oak (processing: France)  
BambooTouch®  
Ukrainian oak (processing: Poland)  
French oak (processing: China)



### Did you know?

- ✓ Transporting one square metre of BambooTouch® produces almost 85 times less pollution than the average Belgian in one day (the average Belgian emits 33kg carbon equivalent per day)
- ✓ Transporting one square metre of BambooTouch® flooring emits as much greenhouse gas as the average petrol car travelling 1.2km
- ✓ The footprint that the planet can cope with is 2,000kg carbon equivalent per year per person

Source: [www.climact.com](http://www.climact.com)