



Have a clear understanding
of wood use classes

B+

Wood treated
to last...



Wood preservation : the key points...

In Europe, and France in particular, the durability and preservation of wood are areas well covered by standardisation and regulations.

The standards define the specifications to which the wood must comply, so that resistance to wood-destroying insects, fungi and marine organisms is ensured in service.

End performances are defined by the fitness for purpose within a determined use class, that corresponds to the area of use of the wood.

THIS OBJECTIVE CAN BE REACHED :

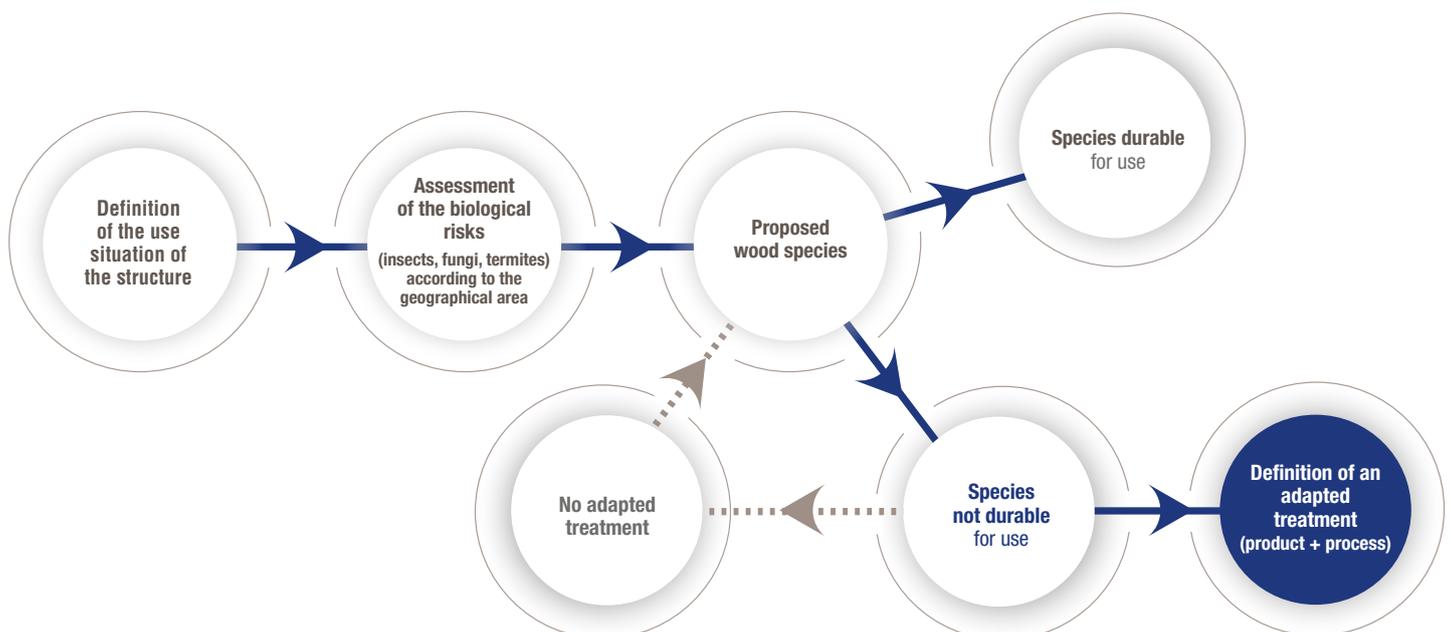
- either by sufficient natural durability,
- or by using a preservative treatment,
- or by a combination of both of these requirements.

The role of the advisor is to assess the risks to which the wood structures are subjected. The standards to which advisors should refer are essentially EN 335 and NF B 50-105-3, as well as FDP 20-651.

Misuse of terms

"Class 3 or class 4 treated wood" is a misuse of terms, this denomination is not proof of performance and fitness for purpose. Wood "treated for fitness for purpose in use class 3 or use class 4" is correct.

The required steps for a durable wood structure



Use class

1 INTERIOR wood



Wood uses

Examples of structures in this class: furniture, parquet flooring, panelling, woodwork and interior fittings, etc.



Biological hazards

The risks are limited to wood-destroying insects and termites.



Choice of wood species

In these essentially non-structural uses, there are no regulatory requirements for the choice of wood species. Certain species that have been stripped of sapwood do not require treatment and are durable in terms of resistance to attack from insects (except termites).



Use class

2 INTERIOR wood or under cover



Wood uses

Examples of structures in this class

- Roof structures,
- Frames, etc.



Biological hazards

Risks of attack are mainly related to wood-destroying insects.

The risk of the appearance of fungi is not totally excluded, but it is limited to the surface of pieces of wood at risk of occasional wetting (typically through condensation).



Choice of wood species

In these mainly structural uses, the wood should (in accordance with Decree 2006-591 and 2014-1427) :

- be either naturally durable with respect to the risk of attack from insects: for example, some species without sapwood, heartwood of oak, chestnut, larch, Douglas fir,
- or made durable by means of the application of a treatment.

NB: for obligations related to the risk of attack from termites, please refer to the Decree in force (2014-1427).



Use class

3

EXTERIOR wood not in contact with the ground, exposed to the weather

Use class 3.1 – **EXTERIOR** wood that dries quickly

Use class 3.2 – **EXTERIOR** wood exposed to prolonged wetting



The level of durability conferred can be chosen according to the severity of exposure, the amount of time the wood is exposed to wetting, the section of the wood pieces.

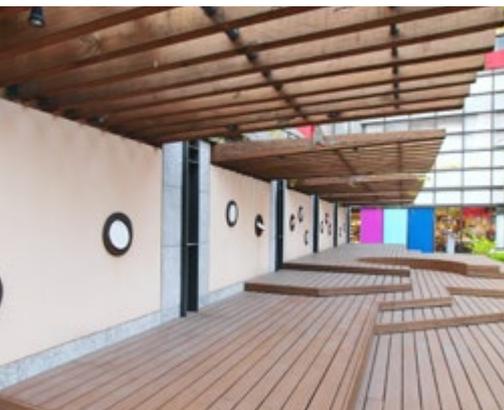
In conditions of low exposure, where the wood is not very thick (class 3.1) and is only subject to wetting for short periods (as it dries quickly or because the structure has been designed to promote water drainage), superficial protection may be sufficient (achievable by all the procedures). To guarantee a longer service life, it is strongly recommended to also apply surface coating products (timber preservative, paint) and to ensure they are maintained.

In highly exposed conditions (class 3.2), where the wood is subject to frequent wetting over long periods, but not continuous, water can accumulate and the wood dries more slowly after wetting, deeper protection is required (achievable by autoclave).



Emplois du bois

The wood is not in contact with the ground and is directly exposed to the weather, especially rain. Examples of structures in this class: windows and other exterior woodwork, external coatings, (cladding in general), parts of frames exposed to the weather (such as certain parts of roof structures), certain elements in poorly ventilated bathrooms, etc.



Biological hazards

- Fungi and mould in one or more parts of the structure where the moisture content exceeds 20% over potentially fairly significant periods of time.
- Wood-destroying insects. In class 3, there is no simple and universal response in terms of how to protect the zones. Rather, in each case, specifications that are specific to the given structure are required. The design of the structure plays a big role.



Choice of wood species

In these uses, certain species stripped of sapwood do not require treatment (except for protection against termites). This is the case, for example, with the duramen, or "heartwood", of oak, chestnut, pine, larch, Douglas fir and other species of tropical origin. When treatment is required, it is only applied to species that are sufficiently impregnable (cf. EN 350-2 and NF B 50 105-3).

Use class

4 EXTERIOR wood not in contact with the ground or fresh water



Emplois du bois

This class includes all wood that is in contact with the ground or fresh water. By extension, structures susceptible to water retention are also assigned to this class.

Typical examples of structures in this class are: pillars supporting overhead lines, beams, poles, water body constructions (stilts, pontoons, embankment supports, etc.)

With designs that are conducive to water retention, a majority of exterior joinery applications, outdoor play areas, green area developments, agricultural buildings, decking and duckboards, safety barriers and logs placed horizontally, are assigned to this use class.



Risques biologiques

This includes all wood-rotting fungi and wood-destroying insects including termites. The attack the entire wood volume, as it gets wet.



Choix des essences

There are several species that have been stripped of sapwood that are naturally durable in these uses (mainly of tropical origin). The need to protect a significant volume of the wood requires the use of very impregnable species. Native species, such as pine trees, are ideal for this use class.

Simplified table of use classes (Mainland France)

Classes d'emploi				
1	2	3.1	3.2	4
Interior, entirely protected from the weather, not exposed to wetting	Interior or under cover protected from the weather, occasional, not continuous wetting (condensation)	No contact with the ground, subjected to frequent wetting over short periods. Completely dries out between two periods of wetting.	No contact with the ground, subjected to frequent wetting over long periods, but not continuous. Completely dries out between two periods of wetting.	Exterior in contact with the ground or a surface subjected to recurrent wetting or immersion in fresh water, design conducive to significant water retention, leading to very significant wetting.

NB :

- For all use classes, attacks by wood-destroying insects, including termites are possible.

- Reference to standards: EN 335, EN 350-2 and NF B 50-105-3, FD P 20651

To ensure the durability of your structure, choose



CTB-B+ certified wood : Fitness for use

Standards NF B 50-105-3, EN 335 and EN 351 form the basis of this certification. They set out the approach to be taken to obtain material the durability of which meets the requirements of the use class. This approach involves:

- **assessing the biological hazards**, in particular those related to the moisture content of the wood, to determine the use class of the wood,
- **determining the need for treatment** according to the natural durability and impregnability of the species that you want to use,
- **define the treatment** according to the specifications laid down in the standards: choice of species and its moisture content, choice of treatment procedure and choice of preservative.

CTB-B+ is an FCBA collective certification mark, under COFRAC accreditation COFRAC no. 5-0011, that attests to the performance of wood in service in terms of durability.

CTB-B+ : A network of professionals committed to :

- providing a service in line with the demand,
- **the quality of the service by the issuance of a preventive treatment certificate** (see below).

ATTESTATION de TRAITEMENT PREVENTIF N° 01702
 Suivant NF B 50-105-3

Classe d'emploi selon EN 335	1	2	3	4	4 SP
Rétentions					
Traitement contéré	<input type="checkbox"/>				

France métropolitaine : France métropolitaine et DOM :
 Traitement antitermites : Traitement anti-bleu en service :

Nom du client :
 N° et date de la facture :
 Références du lot :
 Essences de bois :
 Procédé de traitement :

Produit utilisé : (voir informations au verso)
 Fabricant :

QUALITE CERTIFIEE MATERIAU BOIS



Bearing the logo confirms the certification of the wood



The owner of the right to use the CTB-B+ Mark attests to the quality of the services provided

Must be CTB-P+ certified



3 inseparable parameters

The use of a single treatment process or single treatment product does not ensure the durability of the structure.



A species chosen relative to its impregnability

Different wood species are individually characterised by a natural durability and by an ability to receive additional protection, called impregnability, which is used to assign them to a specific use class.



SPECIFIC CASE OF TERMITES

Wood that is CTB-B+ treated and certified is protected against attacks from termites (except for furniture). Commitment to this protection is indicated on the treatment certificates.



A preservative that is effective and safe

The performance of the product is attested to by CTB-P+ mark, on the basis of standardised tests and fitness for purpose criteria. The producing company's Quality Plan enables the constancy of these performances to be verified throughout the manufacturing chain. Furthermore, this mark also incorporates requirements pertaining to compliance with health and environmental criteria.



A quality treatment process

CTB-B+ attests to the performance of the impregnation process by verifying the compliance of the various factors affecting the quality of treatment:

- the preparation of the wood and especially moisture,
- the quality of the material and the impregnation cycles,
- compliance with the regulations concerning the installations,
- the dilution, penetration and retention of the preservative.

The monitoring of these three parameters (species, product, process) is carried out on site on a regular basis by auditors from the FCBA Technological Institute



Choosing CTB-B+ certified wood ensures an effective treatment for the intended use and service life.

B+

Treated wood
made to last...

