PRODUCT CERTIFICATION RULES

TECHNICAL REQUIREMENTS

CTBP+
CERTIFIÉ PAR FCBA
PRODUITS PRÉSERVATION BOIS
ctbpplus.fr

This certification applies to the following documents:

- Rules of use of the CTB trademark
- General rules for the operation of product and/or service certification under the Consumer Code
- CTB-P+ certification rules for wood preservation products:
  - Management rules
  - **Technical requirements**

In case of dispute, only the French version is the authentic text.

Information on this certification can be found on the ctbpplus.fr website

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PREAMBLE

The technical requirements distinguish between the following 2 cases depending on the situation of the product with regard to the Biocidal Products Regulation [BPR, Regulation (EU) No 528/2012]:

Case 1:

Biocidal product without Marketing Authorization (MA) or non-biocidal product

The following must be provided in the certification file:

- Required test reports
- A summary containing the following elements for each of the tests:
  - The method
  - The reference of the report
  - The result
- Optional: Any additional supporting documents

Case 2:

Biocidal product with Marketing Authorisation (MA)

Certification recognizes evaluation findings

(PAR (product assesment report) / SPC (summary of Product characteristics) / BPR MA)

The following must be provided in the certification file:

- Required test reports not listed in PAR
- A summary containing the following elements for each of the tests:
  - The method
  - The reference of the report
  - The result

Optional: Any additional supporting documents

ARTICLE 1 TECHNICAL PRODUCT REQUIREMENTS

PARTIE 1 PREVENTIVE WOOD TREATMENT PRODUCTS

1.1 TECHNICAL REQUIREMENTS FOR INSTRUCTION

1.1.1 Chemistry and Physico-Chemistry

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Method validation of detection and identification of each of the product's active ingredients
- Characterization of the following properties (test values):
    - Density
    - Flash point
    - pH
    - Viscosity
    - Surface tension

- A storage stability study:
    - According to accelerated test
    - At low temperatures

In the absence of BPR MA, stability testing must meet the following specifications:

- Concentrates:
  No deposition or phase separation greater than 1.0% of the concentrate quantity shall be observed at the end of the test.

- Ready-to-use:
  No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.

- Analysis of active ingredients:
  The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

Depending on the results, the certification may be required to prescribe reserve phrases in the technical documentation associated with the product.

1.1.2 Biological efficacy

1.1.2.1 Determining the critical value of a product

For each type of product, depending on the class of use envisaged, the criteria set out in standard NF EN 599-1+A1 and the criteria required by these technical requirements must be applied.

The table below specifies (for each use class and type of application process) the biological reference values (BRVs) to be taken into account for the establishment of critical values (CVs);

Use class	Application process	CRITICAL VALUE (CV) = highest value
1	Surface treatment	VRB Insect: efficacy (1) (2)
	Deep impregnation	VRB Insect: Threshold (1) (2)
2	Surface treatment	VRB NF EN 113-1 or NF EN 839 (PP-CP-GT) (3) and VRB Insect efficacy including termite
	Deep impregnation	VRB NF EN 113-1 (PP-CP-GT) and VRB Threshold insect of which termite
3	Surface treatment	VRB NF EN 113-1 or NF EN 839 (PP-CP-GT-CV / Beech) (3) (4) and VRB Insect efficacy including termite
	Deep impregnation	VRB NF EN 113-1 (PP-CP-GT-CV / Beech (4)) and VRB Threshold insect of which termite
4	Deep impregnation	VC use class 3 and VRB XP ENV 807 on Beech and/or Pine (5) and VRB Threshold insect of which termite and VRB NF EN 252 at a minimum of 5 years (retention 4 Sp) (see details of use class 4)

(1) Of which VRB termite if necessary

(2) In use class 1 and for hardwoods, if the Lyctus test has been carried out, the critical value calculation is as follows:

- VRB Lyctus > VRB Capricorn: The critical value is based on the Lyctus assay.
- VRB Lyctus < VRB Capricorn: The critical value is based on the Capricorn trial.

(3) PP: Poria Placenta / Synonyme Rhodonia placenta
CP: *Coniophora Puteana*
WG: Gloephyullum trabeum
CV: Coriolus versicolor / Synonyme Trametes versicolor

(4) For hardwoods only

(5) NF X 41-555 (on beech):

- VRB feuillus x 1
- Softwood GRV = Hardwood GRV x 0.5
- or
- VRB XP ENV 807 on beech and/or pine

Note:

When one or more test methods are required, the critical value corresponds to the effective dose against the most resistant species (test according to NF EN 113-1 in particular).

1.1.2.2 Application and interpretation of the NF EN 599-1+A1 standard and associated standards

Nature of the test methods to be used:

This depends on the treatment process. In principle:

- Efficacy methods for surface applications:

  The maximum application value (MAS) in the test is 100 g/m^2 for tests on wood-boring larvae, 200 ml/m^2 for tests according to NF EN 118, and 100 kg/m^3 for NF EN 113-1.

- Threshold Methods for Impregnation Processes

Termite Efficacy:

Treatment products must have anti-termite efficacy (Anti-termite (T) qualification) regardless of the use class of the wood. Anti-termite efficacy remains an option for products intended for the furniture market.

Ageing tests:

- According to NF EN 73+A1 (evaporation): mandatory for all classes
- According to NF EN 84 (washing) –: mandatory for classes 2, 3, 4

Maximum Allowable Application Values for Bioassays:

Ready-to-use products must meet Maximum Acceptable Limit Values (MLVs) in tests that are lower than the following values:

Application process	VLMA
Vacuum and Pressure (VP)	600 kg/m^3
Double vide (VV)	300 kg/m^3
Diffusion Dipping (TD)	600 kg/m^3
Trempage court (TC)	200 g/m² for insect efficacy testing 100 Kg/m^3 for threshold tests (NF EN 113-1) (1)

(1) Preventive treatment products can be tested, according to NF EN 599-1+A1 , up to 200 g/m², but must meet 100 g/m² to be CTB-P+ certified.

Hardwood / softwood variant:

The sensitivity of species (hardwood / softwood) to certain fungi (Coriolus versicolor in NF EN 113-1 and soft rot agents in XP ENV 807) has made it necessary to introduce this Hardwood / softwood variant which will appear whenever necessary during the evaluation of critical values.

1.1.2.3 Additional requirements of NF EN 599-1+A1:

Where local conditions require that the wood preservative must have additional biological efficacy or must meet the manufacturers' declarations or the requirements of specifiers, the product must also be tested according to the relevant additional or local tests set out in Tables 1 to 5 of standard NF EN 599-1+ A1.

Non-exhaustive examples:
- Field trials according to NF EN 252 (see class 4)
- Antiblue in use
- Lyctus preventive (for joinery, in accordance with NF P23-305/A1)

1.1.2.4 Use Classes and specificities

Use class 1

The required tests and efficacy criteria are as mentioned in Table 1 of NF EN 599-1+A1. The following should also be considered:

- **Ageing test:**
  In use class 1, the efficacy tests are coupled with evaporative ageing (NF EN 73+A1). In the upper classes, the most virulent ageing is taken (NF EN 73+A1 / NF EN 84).

- **Insecticide Trials:**
  - Wood preservatives of use class 1 must be effective against long-horned beetle (Hylotrupes bajulus) as the dominant insect.
  - For a known insecticide, the longhorn beetle (Hylotrupes Bajulus) test is sufficient to judge the efficacy of beetles (Anobium Punctatum) and Lyctus, but not the efficacy of termites.
  - In the case of an unknown insecticide, the trials must all be undertaken separately, the capricorn test being mandatory.
  - In insect tests, if mortality at the lower end of the efficacy threshold is less than 80%, then the upper bound should be taken as the average efficacy threshold value.
  - The BRV is the first value for which we have 100% mortality.
  - **Option:**
    As long as the French standard NF P23-305/A1 exists, the Lyctus test remains required for hardwood-based joinery applications.

- **Termite Trials:**
  For these tests the results of tests carried out not only on the species "santonensis" but also on the species "lucifugus" will be accepted.

Use class 2

The required tests and efficacy criteria are as mentioned in Table 2 of NF EN 599-1+A1. The following should also be considered:

- **Ageing test:**
  In use class 2, the efficacy tests are coupled with evaporative ageing (NF EN 73+A1) and optionally with NF EN 84 (see suitability for use)

- **Insecticide and termite trials:**
  Repeat the requirements of use class 1 with the ageing and tear of use class 2.

- **Fungicide trials:**
  - Tests according to NF EN 113-1 (basidiomycete thresholds):
    - If at the highest concentration, the average weight loss is greater than 3%, a further test should be carried out in the same laboratory.
    - If the threshold value is not determined at the lowest concentration, the last concentration is the critical value; Additional tests may be performed in the same laboratory to determine this value.
    - The concentrations tested must vary with an increase of 1.3 (i.e. 30% in nominal value) at most:
      Example: 0 (blank try)
      10 kg/m3
      13 kg/m3
      [23] g/m^3
      [23] g/m^3
    - For basidiomycete fungi, if the Coriolus versicolor test is not carried out, the product is still effective against deciduous trees in class 2.

    - The s.e.m. value is equal to the average value between the upper and lower limits of the efficacy threshold determined in the threshold tests according to NF EN 113-1, provided, however, that the average mass loss at the lower edge is less than 10% (m/m); if this value is higher, the upper limit of the threshold is retained as the biological reference value.

    - The BRV is established in kg/m^3 in the test according to NF EN 113-1. To express it in g/m2, it is estimated to be equivalent to 2 times this value (example, 100 kg/m^3 = 200 g/m^2).

  - Tests according to NF EN 839 (basidiomycete thresholds):
    - For products claiming to be effective in surface treatment in class 3.1, the NF EN 839 standard is a possible alternative to the NF EN 113-1 standard.
    - By extension, since the products have been tested in class 3 according to NF EN 839 (uncoated), these same products can also be used in class 2 without carrying out the test according to NF EN 113-1. In this case, the BRV of basidiomycete fungi is determined from NF EN 839 after NF EN 73 + A1 and NF EN 84 independently.

Use class 3 (3.1 and 3.2.)

The required tests and efficacy criteria are as mentioned in tables 3a and 3b of NF EN 599-1+A1. The following should also be considered:

- **Ageing test:**
  In use class 3 (3.1 and 3.2), the efficacy tests are coupled with ageing by evaporation (NF EN 73 + A1) and washing (NF EN 84) conducted separately.

- **Insecticide and termite trials:**
  Repeat the requirements of the previous classes with the ageing and tear of use class 3.

- **Fungicide trials:**
  Repeat the requirements of the previous class with the ageing of use class 3 as well as the following specificity on efficacy on brown rot:

  Efficacy on brown rot is granted only if the Coriolus versicolor trial is effective on beech. In this case, the product can be effective in class 3 or 4 on softwoods and hardwoods.

Use class 4

The minimum tests and efficacy criteria required are as mentioned in Table 4 of NF EN 599-1+A1. The following should also be considered:

- **Critical Certification Values:**
  Two critical values for class 4 are defined according to the lifetime objectives to be achieved:

  - **Class 4 (retention 4): 10-15 year service life** (majority of market expectations)
  - **Class 4 (retention 4 sp): service life > 25 years** (for special works or circumstances that require reinforced protections. Example: bank protections...)

- **NF EN 252 field tests:**

For all products claiming to be effective in class 4 and not containing chromium (and its derivatives) as a biocide fixing agent in wood, field tests conducted in accordance with NF EN 252 are mandatory for the evaluation of the critical value.

These trials must be conducted at least in the following 2 locations and for a minimum of 5 years:

- In non-termite metropolitan areas
- In metropolitan areas (e.g. Ile d'Oléron)

They can be carried out in addition and on an optional basis in tropical regions (e.g. Guadeloupe, Reunion Island, etc.)

The certification deliverables mention the consideration of these tests in the establishment of the Class 4 critical values.

Any other NF EN 252 field test on another area may be provided in addition to these tests to justify the efficacy.

The applicant is required to provide the results of the field trials to the certification, systematically:

- Even beyond 5 years, when data are available.
- Even when the data does not comply with *(e.g. USA, Australia data, etc.).*

- **Copper-organic formulations:**

Copper-organic products are preparations based on copper derivatives and containing organic active ingredients as co-fungicides. They are used for vacuum and pressure autoclave process.

- **Critical default values:**
  Pending the provision of the NF EN 252 test reports for 5 years or more, the products can be certified CTB-P+ on the basis of their copper metal composition according to the following procedures:
  - Class 4 certification (retention 4): equivalence for 1.5 kg Cu/m^3
  - Class 4 certification (4 SP retention): equivalence for 2.5 kg Cu/m^3

- **Class 4 retention below the equivalent of 1.5 kg Cu/m^3:**
  The applicant has the possibility to claim a critical value lower than the equivalent of 1.5 Kg Cu/m^3 to certify his product in use class 4 (retention 4) on the basis of valid NF EN 252 tests (at least 5 years).

- **Retention 4 Sp:**
  The critical value *class 4 (retention 4 Sp):*

- Is systematically re-evaluated on the basis of the analysis of the NF EN 252 tests required ***at 5 years*****.**
- May also be re-evaluated on the basis of the analysis of trials ***of more than 5 years***, if the request is made voluntarily.

- **Clarification on critical certification values:**
  - In the case of products with one or more valid marketing authorisations (MAs), the critical values are necessarily compatible with the conclusions of the evaluation of the authorisation (PAR, SPC, MA).

  - When necessary, the certification specifies on its deliverables the specificities of uses resulting from the conclusions of the evaluation of the authorisation (e.g. specific uses excluding any secondary exposure for human health, etc.).

  - Certification Critical Values 4 and 4 SP are displayed as unit minimum efficacy critical values (certification does not certify a range of critical values).

  - In addition to NF EN 599-1+A1, a comparative evaluation of the stakes of the reference products with those of the products under test is used to determine the VRB of the NF EN 252 field test.

1.1.3 Suitability for use

1.1.3.1 Anti-blue in use (use class 2)

This property is an option for use class 2.
The required test (NF EN 152) and the efficacy criteria are as mentioned in Table 2 of NF EN 599-1+A1.

The following should also be considered:

- Efficacy after outdoor exposure 6 months according to NF EN 152 type A (Impregnated wood coated with a varnish based on alkyd resins, exposure from April to October)
- *1 or 2 concentration tested for retention less than or equal to 200 g/m^2 Product certified for response less than or equal to 100 g/^{m2}*
- *Criteria: No score greater than or equal to 2 / No area without blue = 1*

1.1.3.2 Construction phase (use class 2)

In use class 2, tests after washing (NF EN 84) are mandatory in the case where the wood treated with surface application is in use class 2 and where this wood cannot be protected from rain or any other accidental humidification losing its storage or use, which is the general case for construction wood allowed on a pre-covered site.

If carried out and taken into account, the information on the suitability for the construction phase is included in the quality certificate.

1.1.3.3 Surface treatment products (use class 3.1)

The technical data sheets, labels and documents accompanying surface treatment products certified CTB-P+ in class 3.1 must clearly indicate that for use in class 3.1, the wood must be coated with a protective coating.

1.1.3.4 Copper-free treatment products (use class 3.2)

For the treatment of refractory species with heartwood that is not differentiated in use class 3.2 (such as fir and spruce), CTB-P+ certification is only possible for copper-free treatment products if the manufacturer of the product can prove, by means of a relevant evaluation method recognised by FCBA, that the product has been evenly penetrated into the wood over a distance of 6 mm.

The informative labels, as well as the technical documents accompanying these treatment products, must clearly indicate:

- The non-application of the CTB-P+ certification for the treatment of refractory species with undifferentiated heartwood for use in class 3.2 in the event that the product manufacturer has not provided proof of feasibility.
- That for use in class 3.2, the wood must be coated with a protective coating.

1.1.3.5 Feasibility of autoclave process

a) Double-vacuum autoclave process

For water-dispersible products that have been the subject of a feasibility study for application in a double-vacuum autoclave, access to the critical values for deep impregnation can only be granted if the corresponding tests (NF EN 47 and/or NF EN 117 after NF EN 73 + A1 and/or NF EN 84) have been carried out.

b) Emulsion products (FCBA Chimie 075)

This property is optional.

The FCBA Chemistry 075 protocol is intended to verify the suitability for use of emulsion treatment products claiming to be used by autoclave, double vacuum or vacuum and pressure.

The objective of this study is twofold:

- Study the penetration and retention of the same product in at least Scots pine and spruce pieces, in addition to Tauari in the case of a claim for hardwood treatment, after treatment by adapted cycles. For products claiming application in joinery, axial penetration will also be checked.
- To verify the stability of a CTB-P+ certified emulsion during repeated autoclave cycles (vacuum-pressure-vacuum), in the FCBA pilot autoclave.
-

The criteria for validating the feasibility of treatment are as follows:

- Penetration and retention: according to the CTB-B+ treatment specification table.

- Stability:
  - No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.
  - The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

The results of these tests are the subject of information on the quality certificate.

c) Low- or non-fixing treatment products (FCBA Chimie 074)

The FCBA-CHIMIE-074 protocol is intended to verify the suitability for use of low-fix or non-fixing treatment products (e.g. copper-organic and aqueous emulsions containing organic active ingredients) claiming to be used by vacuum autoclave and pressure.

The objective of this study is twofold:

- Study the penetration and retention of the product (with and without additives if requested) on different wood species representative of the market such as pines or spruces with tight rings. No testing is required if the claim for use of the product is limited to the treatment of easily impregnated wood species: Pinus pinaster, Pinus oocarpa, Pinus elliotii, Pinus caribbean, Southern Yellow Pine, Pinus radiata.
- Verify the stability of the process solution during repeated autoclave cycles (vacuum-pressure-vacuum) in the FCBA pilot autoclave.

To qualify for CTB-P+ certification, such products must have been tested under the following conditions:

Mandatory:

a) Planed sawn timber in Scots pine with at least 8 rings/cm, wood moisture before treatment: 10-15%, minimum cross-section 40 x 40 mm (typically pines of Northern European origin).

or

b) Planed Scots pine sawn timber with 3 to 5 rings/cm, wood moisture before treatment: 10-15%, minimum cross-section 40 x 40 mm (typically pines of metropolitan origin)

Optional:

c) Pinus nigra logs (Black Pine/Laricio Pine), wood moisture before treatment: 20-25%, diameter 8 cm minimum.

d) Perforated fir/spruce poles, "France Telecom" type.

e) Planed spruce/fir sawn timber with at least 8 rings/cm, wood moisture before treatment: 10-15%, cladding-type section (typically spruce from Northern Europe)

f) Planed spruce/fir sawn timber with 3 to 5 rings/cm, wood moisture before treatment: 10-15%, cladding-type section (typically spruce of Central European origin).

The tests can be carried out either in FCBA's laboratories or in the presence of CTB-B+ Brand auditors in the treatment plants.

If the tests are carried out in the laboratory, the parts must be at least 60 cm long (40 x 40 mm minimum) and the ends must be sealed.

The process cycles are in accordance with the manufacturer's claim.

The criteria for validating the feasibility of treatment are as follows:

- Penetration and retention: according to the CTB-B+ specification table.

- Stability:
  - No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.
  - The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

The results of these tests are the subject of information on the quality certificate.

Note:
- *Penetration compliance is evaluated on at least 20 different parts.*
- *The results on f), spruce (3 to 5 rings/cm) justify results concerning the impregnability of other refractory resinous species (excluding e).*
- *The results on b), Scots pine (3 to 5 rings/cm) justify results concerning the impregnability of other impregnable resinous species, except a) and c) which must be carried out separately.*
- *Positive results on a) or e) do not require further testing unless adjuvants are added to formulations to improve performance. In this case, the formulas must be tested according to the other tests if there is no claim of the use of an adjuvant.*
- *In the rare case of hardwood treatment, specific tests will be carried out on a case-by-case basis according to the specifications defined by the C3E commission (see management rules) according to the claimed uses.*

1.1.3.6 Certification of additives

Organic copper formulations are usually marketed with additives, the influence of which on the performance of the certified product must be evaluated. Their impact will be the subject of the following specific tests:

<table>
<tr><th>Additives</th><th>Potential impact</th><th>Specifications</th></tr>
<tr><td>pH stabilizer</td><td>Possible impact on fixation (leaching)</td><td>Undefined</td></tr>
<tr><td>Antifoam</td><td>Possible agglomerate formation and possible impact on the penetration of the treatment product.</td><td rowspan="3">FCBA-CHIMIE-074 protocol and criterion on Scots pine

+ NP5 on at least 90% of penetrating parts</td></tr>
<tr><td>Pigment</td><td>Potential impact on treatment penetration and potential for deposits</td></tr>
<tr><td>Water repellent</td><td>Possible impact on product penetration.</td></tr>
<tr><td>Anti-corrosion</td><td rowspan="3">No impact envisaged</td><td rowspan="3"></td></tr>
<tr><td>Dye</td></tr>
<tr><td>Anti-bacterial</td></tr>
<tr><td>Flame retardants</td><td colspan="2">Excluded use with copper-organic under CTB-P+</td></tr>
</table>

Note:

- *For wood treatment products already on the market and for which FCBA already has positive experience with the use of some of these additives (verification of the quality of treatments on wood produced on site), no testing is required for them.*

The conditions of use are given in the technical data sheets of these additives or/or on the manufacturer's technical documents.

The CTB-P+ certificate indicates the list of authorised additives, with their maximum doses of use.

1.1.3.7 Anti-termite treatment products for panels

The anti-termite treatment of the panels can be provided by several different means.

- Either after the panels have been manufactured,
- Either during the manufacturing process, whether or not it is mixed with the glue or one of its components.

a) Termite treatment after the panels have been manufactured

Surface treatment after the panels have been manufactured:

The chemistry and physicochemical criteria are those applicable to preventive treatment products.

The biological efficacy is evaluated according to NF EN 118 after the ageing tests NF EN 73 + A1 and NF EN 84 conducted separately according to the claim in terms of use.

Products that are already CTB-P+ certified for preventive treatment by surface treatment meet the requirements.

Treatment by impregnation after the manufacture of the panels:

The chemistry and physicochemical criteria are those applicable to preventive treatment products.

The biological efficacy is evaluated according to NF EN 117 after the ageing tests NF EN 73+A1 and NF EN 84 conducted separately according to the claim in terms of use class.

Products that are already CTB-P+ certified for preventive wood treatment meet the requirements in the same way.

b) Anti-termite treatment during the panel manufacturing process

The preservative is either added to the glue or one of its components, or is applied separately from the adhesive mixture during the manufacturing process.

The chemistry and physicochemical criteria are those applicable to preventive treatment products.

The biological efficacy is evaluated according to NF EN 117 after the ageing tests NF EN 73+A1 and NF EN 84 conducted separately according to the claim in terms of use class.

The manufacturer also provides a validated analytical method for the analysis of active ingredients in the different types of treated panels for which it claims termite protection.

In particular, the method must provide the extraction yield.

The manufacturer must also evaluate the compatibility of the sticky mixture / treatment product at his panel manufacturer customer. In particular, he checks :

- Suitability requirements for treated panels
- The anti-termite efficacy of the panels.

This information is included in the CTB-P+ trademark holder's customer files and is verified as necessary during administrative follow-up audits.

1.1.4 Amendments

1.1.4.1 Regulatory status

Any changes to the BPR regulatory status must be reported to the certification for evaluation.

1.1.4.2 Composition

The required tests and efficacy criteria in the event of a partial change in composition are as mentioned in Annex A of NF EN 599-1+A1.

The following should also be considered:

- If new tests are prescribed, they shall be coupled with the ageing provided for in the use class claimed by these technical requirements, unless otherwise specified.
- In all cases, the holder must verify, under his or her responsibility:
    - That penetration into wood is not appreciably affected
    - That the stability of the product is not affected
    - By chemical analysis, these changes do not alter the content of active ingredient(s) after storage at 40 °C for 28 days.

In the event of a change in the nature of an active ingredient, the physico-chemical tests are systematically redone.

1.2 MONITORING REQUIREMENTS

The compliance criteria for the analyses of biocidal product samples under surveillance are as follows:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

PARTIE 2 TEMPORARY FRESH SAWN TIMBER TREATMENT PRODUCTS

2.1 TECHNICAL REQUIREMENTS FOR INSTRUCTION

2.1.1 Chemistry and Physico-Chemistry

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Method validation of detection and identification of each of the product's active ingredients
- Characterization of the following properties (test values):
    - Density
    - Flash point
    - pH
    - Viscosity
    - Surface tension

- A storage stability study:
    - According to accelerated test
    - Low Temperature

In the absence of an MA under the BPR, stability testing must meet the following specifications:

- Concentrates:

No deposition or phase separation greater than 1.0% of the concentrate quantity shall be observed at the end of the test.

- Ready-to-use:

No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.

- Analysis of active ingredients:

The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

Depending on the results, the certification may be required to prescribe reserve phrases in the technical documentation associated with the product.

2.1.2 Biological efficacy

If the logs are cut immediately after the tree is felled, their temporary treatment is not necessary.

On the other hand, depending on the sensitivity of the species, sawn timber may be quickly subjected to the development of bluing agents and mould if it dries too slowly. This frequently occurs during poorly conducted natural drying but can be avoided by artificial drying; the latter case is not always possible.

To guarantee drying without the development of discoloration, a temporary preservation treatment of the sawn timber provides it with a protective barrier that should be effective for 6 months.

The efficacy of the product is only assured:

- If the wood is put in effective drying conditions after treatment. In no case do these tests make it possible to evaluate the ability of a product to protect wood over a long period of time. As a result, only the efficacy of stacking treatments on rods can be evaluated.
- If the baths are maintained with a certified title.

The required tests are listed in the table below:

Properties	Trial	Specifications
Laboratory Efficacy	X 41-547 (Trial A) To consider: - The risks of anti-blue, mould and rot (scuffling). - Drying by stacking on a rod only.	Average rating < 1, No > 2 Average of controls ≥ 3
Efficacy Testing (Sawmill)	XP X 41-549 or XP CEN/TS 15082 (Essay B) To consider: - The anti-blue risks. - Drying by stacking on battens only.	Rating< 5% rating ≥ 2 Controls at least 75% rating ≥ 3

Note:

- *The test site is located in a humid temperate oceanic climate, such as the southwest of France.*
- *Mould and rot are complementary options.*
- *The manufacturer's recommendation for use will be at least the lowest concentration studied for which the biological risks claimed by the manufacturer are covered.*
- *Food compatibility is not covered by the certification.*
-

2.1.3 Amendments

Any changes (regulatory and/or compositional) must be declared to the certification for evaluation.

- All efficacy and physico-chemistry tests are required following a modification of the active ingredient (change in content or nature, addition or deletion).
- The addition of non-biocidal co-formulant(s) leads to at least a laboratory efficacy test coupled with the chemical analysis of the product tested. Further tests may be requested depending on the type of co-formulant added.

In all cases, the registrant shall provide a technical data sheet and a safety data sheet for the modified product and declare the new formulation.

2.2 MONITORING REQUIREMENTS

The compliance criteria for the analyses of biocidal product samples under surveillance are as follows:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

PARTIE 3 TREATMENT PRODUCTS FOR WOOD IN USE

3.1 TECHNICAL REQUIREMENTS FOR INSTRUCTION

3.1.1 Chemistry and Physico-Chemistry

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Method validation of detection and identification of each of the product's active ingredients
- Characterization of the following properties (test values):
    - Density
    - Flash point
    - pH
    - Viscosity
    - Surface tension
- A storage stability study:
    - According to accelerated test
    - Low Temperature

In the absence of an MA under the BPR, stability testing must meet the following specifications:

- Concentrates: No deposition or phase separation greater than 1.0% of the concentrate quantity shall be observed at the end of the test.
- Ready-to-use: No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.
- Analysis of active ingredients:

The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

Depending on the results, the certification may be required to prescribe reserve phrases in the technical documentation associated with the product.

3.1.2 Biological efficacy

For each type of product, the criteria set out in standard NF EN 14128 and the criteria required by these technical requirements must be applied.

Only "fast-acting" products can be certified CTB-P+ (product that achieves the required level of efficacy within a period of twelve weeks against Hylotrupes bajulus and eight weeks against Anobium punctatum, using the appropriate standardized test method).

3.1.2.1 Curative efficacy

The table below specifies the biological tests and criteria to be used for wood treatment products claiming curative efficacy.

Property	Trial	Specifications	Maximum application values (VMA)
Curative Capricorn	*NF EN 1390*	*Biological reference value (BRV) on ready-to-use (PAE) > 85% mortality* (with no more than 2 surviving larvae per test tube at the manufacturer's recommended concentration)	*300 ml/m²*
Curative beetle	*NF EN 48*	*Biological reference value (BRV) on ready-to-use (PAE) > 85% mortality* (with no more than 3 surviving larvae/test tube at the manufacturer's recommended concentration)	*300 ml/m²*
	or		
	NF EN 370 + NF EN 73+A1	*Emergence < 10 %*	*300 ml/m²*

Note in application of the NF EN 14128 standard:

- New trials on products claiming to be curative of longhorn beetles must be conducted in accordance with NF EN 1390. However, EN 22 tests conducted before 2007 are accepted for evaluation.
- If the product is designed for the protection of cultural heritage against Anobium Punctatum, then the mortality at the end of the test according to NF EN 48 must be at least 90%.
- If a product has demonstrated efficacy on long-horned beetles and beetles, it can be considered effective "all ILX".
- In the case of a specific claim of efficacy as a curative treatment on lyctus bruneus, the test method described in EN 273 may be used (expired standard):
  - Biological reference value (BVR) on ready-to-use (PAE) > 95% mortality
  - No more than 2 surviving larvae/test tube at manufacturer's recommended concentration
  - Maximum application value (MAS) of 200 ml/m²
- In the case of insecticide-based petroleum solvent products for which data already exist, the capricorn curative trial may be sufficient to justify the lyctus curative efficacy.
- For all other cases, curative trials should be undertaken independently.

3.1.2.2 Preventive Efficacy

In addition to curative efficacy, Tables 1 to 3 of NF EN 599-1+A1 specify by use classes the biological tests and criteria to be used for the certification of wood treatment products that also claim preventive efficacy (insecticide and/or fungicide) as a surface treatment.

The anti-termite efficacy according to NF EN 599-1+A1 must also be demonstrated in certification.

For these trials, the maximum application value is 200 g/m^2.

3.1.3 Suitability for use

CTB-P+ certified products in preventive anti-termite treatment are intended to protect wood against termite attacks. As a curative treatment, they are effective but are not intended to fight against termite colonies.

CTB-P+ certified curative products (and by extension preventive products) have a minimum service life of 10 years for wood treatment.

- **Products in gel form:**
  In the event that these products claim a diffusion in the wood that limits the number of injections in curative treatment of the wood in use, they must then meet the requirements of the diffusion test according to the FCBA-CHIMIE-073 protocol.

  Criteria:

  - The product must be qualitatively recovered at 4, 8 or 12 weeks.
  - Significant differences between 4, 8 and 12 weeks should be analysed

  Information is then included on the certificate and a list of its method of use and weight.

3.1.4 Amendments

3.1.4.1 Regulatory status

Any changes to the BPR regulatory status must be reported to certification for evaluation.

3.1.4.2 Composition

The required tests and efficacy criteria in the event of a partial change in composition are as mentioned in Annex A of the NF EN 14128 standard.

The following should also be considered:

- If new tests are prescribed, they shall be coupled with the ageing provided for in the use class claimed by these technical requirements, unless otherwise specified.
- In all cases, the holder must verify, under his or her responsibility:
  - That penetration into wood is not appreciably affected
  - That the stability of the product is not affected
  - By chemical analysis, these changes do not alter the content of active ingredient(s) after storage at 40 °C for 28 days.
  - In the event of a change in the nature of an active ingredient, the physico-chemical tests are systematically redone in addition to the efficacy tests.

3.2 MONITORING REQUIREMENTS

The compliance criteria for the analyses of biocidal product samples under surveillance are as follows:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

PARTIE 4 DRY ROT TREATMENT PRODUCTS

Such products are intended to treat masonry against dry rot infestations. In addition to the properties of efficacy itself, particular characteristics of diffusion capacity and stability are inherent to the efficacy of this type of product.

Only ready-to-use or concentrated aqueous phase products can benefit from CTB-P+ certification.

4.1 TECHNICAL REQUIREMENTS FOR INSTRUCTION

4.1.1 Chemistry and Physico-Chemistry

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Method validation of detection and identification of each of the product's active ingredients
- Characterization of the following properties (test values):
    - Density
    - Flash point
    - pH
    - Viscosity
    - Surface tension
- A storage stability study:
    - According to accelerated test
    - Low Temperature
    - In a saline and alkaline environment (CTBA Chimie n° 62)

In the absence of an MA under the BPR, stability testing must meet the following specifications:

- Concentrates: No deposition or phase separation greater than 1.0% of the concentrate quantity shall be observed at the end of the test.
- Ready-to-use: No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.
- Analysis of active ingredients:

The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

Depending on the results, the certification may be required to prescribe reserve phrases in the technical documentation associated with the product.

4.1.2 Biological efficacy

The following table specifies the bioassays and criteria to be used:

Property	Trial	Specifications
Diffusion test	CTBA Chemistry Protocol 061	Presence/absence of active ingredients
Efficacy	NF EN 12404	NF EN 14128

(*) An indication of the rate of diffusion of the product in relation to a reference product (copper sulphate) will be mentioned in the test.

4.1.3 Amendments

Any changes (regulatory and/or compositional) must be declared to the certification for evaluation.

- All efficacy and physico-chemistry tests are required following a modification of the active ingredient (change in content or nature, addition or deletion).
- The addition of non-biocidal co-formulant(s) leads to at least a laboratory efficacy test coupled with the chemical analysis of the product tested. Further tests may be requested depending on the type of co-formulant added.

In all cases, the registrant shall provide a technical data sheet and a safety data sheet for the modified product and declare the new formulation.

4.2 MONITORING REQUIREMENTS

The compliance criteria for the analyses of biocidal product samples under surveillance are as follows:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

PARTIE 5 TERMITE BUILDING PROTECTION PRODUCTS AND TECHNOLOGIES

This part concerns the following product families:

- New Construction Protection Products:
  - Physical barriers
  - Physicochemical barriers
- Protection products for existing buildings
  - Pitfalls
  - Chemical barriers

5.1 PROTECTION OF NEW BUILDINGS

The scope of application corresponds to products intended to be used as a protective barrier between the ground and the building pursuant to Article R 112-3 (Decree No. 2006-591 of 23 May 2006) of the Construction and Housing Code.

Two types of barriers are mentioned in the amended decree of 27 June 2006: Physical barriers and physico-chemical barriers.

For each type of barrier, the products are grouped into families (a set of products with comparable characteristics):

- **Physical** barriers: barriers whose physical support is made up of a material resistant to crossing by termites.
- **Physico-chemical barriers:** a barrier comprising one or more biocides and whose physical support is one or more membranes

Other types of products may extend the scope of the certification. In this case, the test programme(s) are defined by the C3E commission (see management rules).

5.1.1 Technical Requirements for Instruction

5.1.1.1 Chemistry and Physical Chemistry

a) Physical barriers

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Density characterization (test value)
- A storage stability study according to accelerated test (criterion: no physical change)

These requirements are applicable to the following product types:

- Textile mesh coated with an abrasive powder
- Stainless Steel Mesh

For other types of physical barriers to be evaluated, tests may be planned and are then defined by the C3E commission.

b) Physicochemical barriers

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Method validation of detection and identification of each of the product's active ingredients
- Density characterization (test value)
- A storage stability study:
    - According to accelerated test
    - Low Temperature

In the absence of an MA according to the BPR, the difference between the results of the chemical analyses of active ingredients before and after the aging test must not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

In addition, no physical changes should be observed.

Depending on the results, the certification may be required to prescribe reserve phrases in the technical documentation associated with the product.

5.1.1.2 Biological efficacy

For laboratory bioassays, the biological material used is:

- A European species belonging to the genus Reticulitermes Spp for obtaining CTB-P+ certification in Metropolitan France.
- A species of the genus Coptotermes Sp for obtaining a CTB-P+ certification in one or more departments of the COM (ex DOM).

a) Physical barriers

The following table specifies the bioassays and criteria to be used:

Property	Trial	Specifications
Anti-termite efficacy	Adaptation of XP X 41-550: FCBA-BIO-E-044	According to NF X41-551

Depending on the type of physical barrier to be evaluated, other tests may be planned and are defined by the C3E commission.

b) Physical-physical barriers

The following table specifies the mandatory bioassays and criteria to be used:

Property	Trial	Specifications
Anti-termite efficacy with ageing (Immersion)	XP X 41-550 After NF X41-568	According to NF X41-551 (failure to cross the barrier)
Anti-termite efficacy with ageing (solar radiation*)	XP X 41-550 after CTBA BIO E-016/3	
Anti-termite efficacy in alkaline environments	XP X 41-550 after CTBA Bio E-007/2	

**Regardless of the territorial claim of the product, the ageing test will be systematically carried out on Reunion Island*

Depending on the type of physical barrier to be evaluated, other tests may be planned and are defined by the C3E commission.

The following table outlines the optional bioassays and criteria to be used:

Property	Trial	Specifications
Anti-termite efficacy Without ageing	XP X 41-550	According to NF X41-551 (failure to cross the barrier)
Anti-termite efficacy By contact without ageing **(manufacturer's claim of lethal barrier action)**	CTBA BIO E-004	According to NF X41-551: 100% mortality from contact with the biocidal part in the boxes during the 48 hours of exposure

5.1.2 Amendments

Any changes (regulatory and/or compositional) must be declared to the certification for evaluation.

For physico-chemical barriers:

- All efficacy and physico-chemistry tests are required as a result of a change in the active ingredient (change in content or nature, addition or deletion).
- Pigment modification requires retesting only if the content is greater than or equal to the content of the original pigment.
- The addition of non-biocidal co-formulant(s) leads to at least one laboratory efficacy test per claimed area (according to the XP X 41-550 or CTBA BIO E-004 standard) coupled with the chemical analysis of the product tested. Further tests may be requested depending on the type of co-formulant added.
- In all cases, the registrant shall provide a technical data sheet and a safety data sheet for the modified product and declare the new formulation.
-

5.2 SURVEILLANCE REQUIREMENTS

5.2.1 In-house laboratory suitability

Only physico-chemical barriers are sampled for surveillance.

These samples are taken as part of the verification by inter-comparison of the ability of the holder's control laboratory to conduct its tests.

They consist of the selection of a minimum of 6 paired test tubes (A4 format) per product (6 for the certification laboratory and 6 for the holder's laboratory).

The analysis of each of the product's active ingredients is then carried out by each laboratory.

The holder provides for certification:

- The individual values obtained on each specimen
- The associated average
- The reference of the method used
- Internal control specifications

The averages obtained by each of the laboratories are compared by a Student's test to determine the significance (at the 5% probability threshold) of the difference observed, which must remain stable over time.

These results are monitored over time (future monitoring trials). In the event of repeated instability, the holder shall provide all necessary information, as well as any corrective actions required.

5.2.2 Field test

In addition to the technical audits described in the CTB-P+ managementrules, certified termite barriers are monitored by following up on field trials over a minimum period of 10 years with reports at start-up, the first year, and then every 2 years.

Taking into account the biological environment in which the product is used and the parameters that may influence its behaviour, the purpose of this monitoring is to alert the certifier to inappropriate behaviour of the product placed and to initiate an analysis of the situation with the holder with a view to taking the necessary actions to restore confidence in the product's action over time.

The conditions for the recognition of laboratories and the conditions for the validity of test methods are defined below.

5.2.2.1 Prescription according to geographical areas of application

Depending on the claim of the scope of the certification, field tests are to be carried out for each of the territories concerned: metropolitan France, French Guiana, Reunion Island, Guadeloupe, Martinique, Mayotte.

For information, the main genera of underground termites present in the DROM COM (non-exhaustive), having an economic interest, and attacking buildings are:

	Heterotermes spp	Coptotermes sp	Nasusitermes spp	Prorhinotermes ssp
French Guiana	☑	☑	☑	
Guadeloupe	☑		☑	
Martinique	☑		☑	
Reunion Island		☑		☑
Mayotte		☑	☑	☑

Given the presence of termites belonging to the same genus in several COMs, it is accepted that:

- Positive trials in Guadeloupe are recognized for Martinique and vice versa.
- Positive trials in Reunion Island and Guadeloupe and Martinique have been recognised for French Guiana and Mayotte.
- Positive tests in French Guiana have been recognized for Reunion Island, Martinique, Guadeloupe and Mayotte.
-

5.2.2.2 Recognition of laboratories

Surveillance field tests must be carried out in laboratories that attest to their impartiality and compliance with the requirements of the NF EN ISO 9001 standard. This can be demonstrated either by an accreditation issued by an accreditor who is a signatory to the EA multilateral agreement, or by audits carried out by FCBA.

The identification of the tested product must be verifiable. For physico-chemical barriers, the composition of active ingredients in the batches used in the field trials must be certified by means of a chemical analysis (identification and concentration of the various substances according to the same conditions for the recognition of the tests as above).

It is the responsibility of the test applicant to ensure that the laboratory meets the recognition criteria specified above.

Third-party laboratories, other than those of FCBA, which offer test methods equivalent to those specified in the standard, must be accredited NF EN ISO/IEC 17025 on their competence to develop test methods.

5.2.2.3 Recognition of a field test method

To be recognized for certification, the field test method used for certification oversight purposes must meet the following requirements:

a) Discriminant test

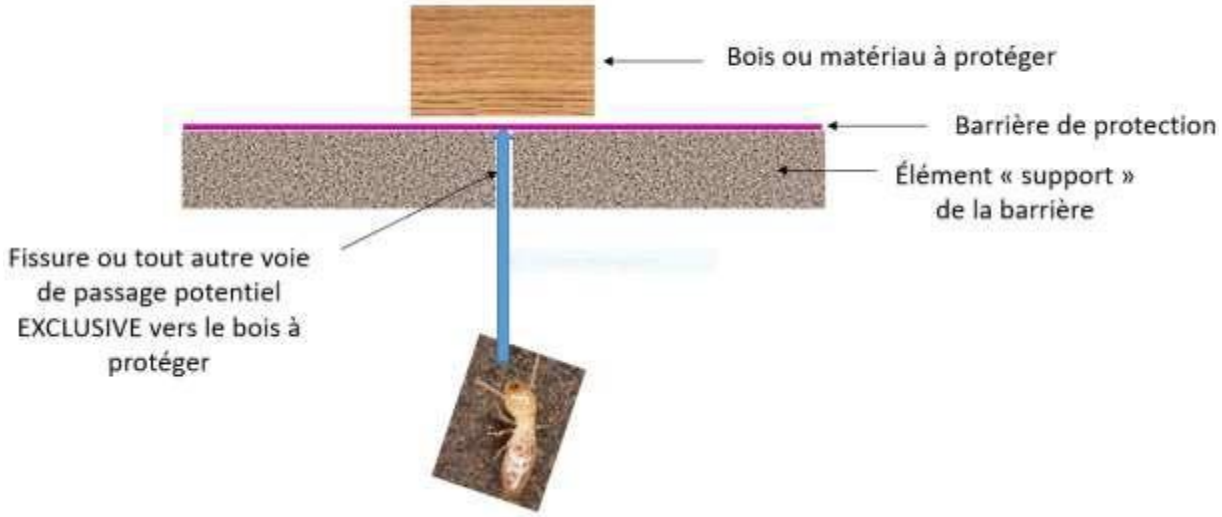
The test must show what the barrier brings to the protection of the wood placed in a test device, compared to an unprotected device.

The area to be protected in the system must be precisely defined.

The control device is designed to allow termites to reach the wood through a sensitive area (which is the one to be protected).

The land must show a proven virulence of termites.

To reach the wood to be protected, the termite MUST be confronted with the problem of crossing the barrier:



b) Robust test

The number of control devices depends on the prior knowledge of the virulence of the field.

The control devices make it possible to validate the test by the attack of the wood by the termites inside them.

The number of devices treated must be sufficient to minimize the risk of declaring the product fit when it is not (beta risk).

c) Indicator test

The field trial evaluates the intrinsic properties of the product under conditions of use close to the reality of "building"; it does not evaluate the efficacy of the installation requirements and the diversity of situations with which the product is confronted.

The device must allow a clear interpretation of the events that may take place at the level of the wood.

The product should be installed as close as possible to the most common use of the product.

Depending on the specifications related to the use of the test site, the direct contact with the soil of a biocide must be controlled.

The tests prescribed in the previous versions of the CTB-P+ technical specifications for termite barriers (according to FCBA-BIO-E-045 or CTBA –BIO-E-008) meet these recognition requirements.

The process of evaluating any other test method according to the conditions of recognition will be conducted by FCBA and invoiced on the basis of a quote based on the time spent.

d) Application of a field method:

The applicant provides the certifier with the installation report as well as a follow-up report every 2 years.

The applicant must alert the certifier if the barrier has been breached, even if this occurs in the interval between the review of the monitoring reports.

Although the finding of crossing the barrier in a field surveillance test does not in itself constitute a criterion for sanctioning certification insofar as this test is not a means of evaluation taken into account in the investigation process, the certifier may be required to take decisions that may have an impact on the certification of the product if the actions necessary to recover an acceptable situation are not carried out by the holder. A follow-up of the actions implemented will be carried out during the technical and/or administrative audits.

e) Additional provisions for physico-chemical barriers:

Any barrier crossed will be systematically sampled by the testing laboratory. The latter must contact the certification to send the sample according to the sealing procedure that will be indicated. The analysis of the active ingredient content will be carried out by the FCBA chemistry laboratory. These inspection results will be added to the analysis file of the barrier crossing report.

5.3 PROTECTION OF EXISTING BUILDINGS

5.3.1 Anti-termite treatment products for floors and walls

Ready-to-use products or water-based concentrates are certifiable.

5.3.1.1 Technical Requirements for Instruction

a) Chemistry and Physical Chemistry

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Method validation of detection and identification of each of the product's active ingredients
- Characterization of the following properties (test values):
    - Density
    - Flash point
    - pH
    - Viscosity
    - Surface tension

- A storage stability study:
    - According to accelerated test
    - Low Temperature

In the absence of an MA under the BPR, stability testing must meet the following specifications:

- Concentrates: No deposition or phase separation greater than 1.0% of the concentrate quantity shall be observed at the end of the test.

- Ready-to-use: No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.

- Analysis of active ingredients:
  The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

Depending on the results, the certification may be required to prescribe reserve phrases in the technical documentation associated with the product.

5.3.1.2 Biological efficacy

Prescription according to geographical areas of application

Depending on the claim of the scope of the certification, field tests are to be carried out for each of the territories concerned: metropolitan France, French Guiana, Reunion Island, Guadeloupe, Martinique, Mayotte.

For information, the main genera of underground termites present in the DROM COM (non-exhaustive), having an economic interest, and attacking buildings are:

	Heterotermes spp	Coptotermes sp	Nasusitermes spp	Prorhinotermes ssp
French Guiana	☑	☑	☑	
Guadeloupe	☑		☑	
Martinique	☑		☑	
Reunion Island		☑		☑
Mayotte		☑	☑	☑

Given the presence of termites belonging to the same genus in several COMs, it is accepted that:

- Positive trials in Guadeloupe are recognized for Martinique and vice versa.
- Positive trials in Reunion Island and Guadeloupe and Martinique have been recognised for French Guiana and Mayotte.
- Positive tests in French Guiana have been recognized for Reunion Island, Martinique, Guadeloupe and Mayotte.

- **Termite products Soil:**

The following table specifies the bioassays and criteria to be used:

Property	Trial	Specifications
Efficacy after aging (percolation)	XP X 41-550 after NF X 41-542	According to XP X 41-551
Field test (natural aging)	CTBA BIO E 002 Protocol + XP X 41-550	According to XP X 41-551 at 1 year + other term(s) according to the applicant's claims

Practical application rate = effective product value found in the test (v.r.b)

- **Wall termite control products:**

The following table specifies the bioassays and criteria to be used:

Property	Trial	Specifications
Efficacy after ageing (percolation)	XP X 41-550 after NF X 41-542	According to XP X 41-551
Field test (natural ageing)	FCBA BIO E 053 + XP X 41-550	According to XP X 41-551 at 1 year + other term(s) according to the applicant's claims

Practical application rate = effective product value found in the test (v.r.b)

5.3.1.3 Amendments

Any changes (regulatory and/or compositional) must be declared to the certification for evaluation.

- All efficacy and physico-chemistry tests are required following a modification of the active ingredient (change in content or nature, addition or deletion).
- The addition of non-biocidal co-formulant(s) leads to at least a laboratory efficacy test coupled with the chemical analysis of the product tested. Further tests may be requested depending on the type of co-formulant added.

In all cases, the registrant shall provide a technical data sheet and a safety data sheet for the modified product and declare the new formulation.

5.3.1.4 Monitoring requirements

The compliance criteria for the analyses of biocidal product samples under surveillance are as follows:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

5.3.2 Termite bait traps

The certification of termite bait traps concerns the "container – formulation" system.

The applicant must:

- Declare to FCBA the system used when applying for certification.
- Inform FCBA of any evolution or change of any of the system components.

5.3.2.1 Technical Requirements for Instruction

a) Chemistry and Physical Chemistry

Product identification is to be carried out according to the following reference text:

Guidance on the BPR: Volume I : Identity/physico-chemical properties/analytical methodology (Parts A+B+C) (https://echa.europa.eu/fr/guidance-documents/guidance-on-biocides-legislation)

It includes:

- Method validation of detection and identification of each of the product's active ingredients
- The characterization of the following properties (test values):
    - Density
    - Flash point (if applicable)
    - pH (if applicable)
    - Viscosity (if applicable)
    - Surface tension (if applicable)

- A storage stability study:
    - According to accelerated test
    - At low temperatures

In the absence of an MA under the BPR, stability testing must meet the following specifications:

- Concentrates: No deposition or phase separation greater than 1.0% of the concentrate quantity shall be observed at the end of the test.

- Ready-to-use: No deposition or phase separation greater than 0.10% of the mass of the solution shall be observed at the end of the test.

- Analysis of active ingredients:
  The difference between the results of the chemical analyses of active ingredients before and after the ageing test shall not differ by a value greater than the following tolerances:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

Depending on the results, the certification may be required to prescribe reserve phrases in the technical documentation associated with the product.

5.3.2.2 Biological efficacy

The CTB-P+ certification takes into account the following geographical specificities:

For metropolitan France:

- Laboratory tests must be carried out on one of the species of Reticulitermes present in mainland France.
- Field trials must be carried out on all species present in the territory and in situations where the product is intended to be used in practice.

For the Overseas Departments and Territories:

- Laboratory tests must be carried out on one of the species of Coptotermes present in the DROM / COM.
- Field trials must be carried out on all the underground species present in the territory and in the situations encountered in practice.

For information, genera of underground termites present in the DROM (non-exhaustive), having an economic interest, and attacking buildings are:

GUYANA: Heterotermes sp / Coptotermes sp / Nasutitermes sp

GUADELOUPE: Heterotermes sp / Nasutitermes sp

MARTINIQUE : Heterotermes sp / Nasutitermes sp

REUNION ISLAND: Coptotermes sp

- If the sites are carried out by companies holding the CTB-A+ Mark, then a specific quality procedure for monitoring the sites is required; the follow-up is transmitted gradually to the managers of the CTB-P+ and CTB-A+ brands and to the testing laboratory.

- If the sites are not implemented by CTB-A+ certified companies, then the testing laboratory must have a monthly follow-up.

- All construction sites must be declared to the person in charge of the CTB-P+ Mark.

- The test laboratory will carry out 3 visits: during the first connections, when the elimination of termites has been observed, then 3 months later, outside the winter period.

- The applicant undertakes not to carry out more than 20 projects per territory with CTB-A+ companies.

- The end customer must be informed of the experimental status of the test product.

The following table specifies the bioassays and criteria to be used:

Property	Trial	Specifications	
		Criteria	Validity of the test
Anti-termite efficacy by delay effect	XP X 41-543.1 Test A.	Determination of time without effect (te)	According to XP X 41-543.1 Test A.
Test de Transmission **(informative)**	XP X 41-543.1 Test B.	100% mortality in test devices.	According to XP X 41-543.1 Test B.
Choice Test	XP X 41-543.1 Test C.	According to XP X 41-543.3 100% mortality in test devices (or residual activity persists)	According to XP X 41-543.1 Test C.
Controlled efficacy on the experimental site	NF X41-543-2 Wood Preservatives - Determining the Efficacy of a Bait Trap System - Part 2: Field MethodFor the Metropolis: A minimum of 12 construction sites, including at least 1 for each species of economic interest (2 for R. flavipes and 2 for R. grassei) according to the conditions of use claimed by the manufacturer For the French Overseas Departments: A minimum of 6 sites with a minimum of 2 sites per type of economic interest.	According to XP X 41-543.3 Consumption within 6 months of installation Termite elimination within 18 months (excluding winter periods) no activity on the site in the 3 months following the observation of elimination (except during the winter period)	/

5.3.2.3 Amendments

Any change (regulatory and/or compositional) must be declared to the certification for evaluation:

a) Voluntary modification of the content by the manufacturer:

1. Change of active ingredient: all laboratory and field tests are requested.
2. Change in insecticide content or voluntary matrix change:
   - All laboratory tests are required.
   - If significant differences exist between the initial and new trials, 2 additional field trials are required: 1 on Reticulitermes flavipes and 1 on **Reticulitermes grassei.**

b) Voluntary modification of the container: Evolution of the outdoor and indoor stations:

The manufacturer provides FCBA with a technical file with all the comparative tests. Depending on the elements provided, 1 field test to verify the claim may be requested.

Note:

In the event that changes are made to the terms and conditions of supply of an element, without any change in the manufacturer's initial specifications (e.g. = change of cellulose supplier in the case of raw material equivalence, etc.), these changes will be the subject of prior information to FCBA. The manufacturer then provides the certifying body with a file specifying the measures taken internally in terms of quality monitoring, including equivalence qualification tests. The monitoring of these internal provisions is carried out as part of the on-site surveillance audits.

5.3.2.4 Monitoring requirements

The compliance criteria for the analyses of biocidal product samples under surveillance are as follows:

Nominal biocide content	Tolerance to nominal value
> 50%	+/- 2.5 %
25 to 50%	+/- 5.0 %
10% to 25%	+/- 7.0 %
2.5 to 10 %	+/- 10.0 %
1.0 to 2.5 %	+/- 15.0 %
0.5 to 1.0 %	+/- 20.0 %
0.1 to 0.5 %	+/- 30.0 %
< 0.1%	Quantization of the order of magnitude

ARTICLE 2 PERFORMANCE AND INTERNAL CONTROL REQUIREMENTS

In order to ensure the control of the quality of the products/services under certification, the holder must set up an organization that guarantees that all products marketed under certification comply with the requirements of this standard and will be maintained.

The requirements for mastering and controlling the production of products/services apply to the products/services concerned by this certification.

1.1 CONCEPTION CHANGE

In the case of a change in the formulation of a certified product, the company analyses the impact on the certified characteristics and the description of the certified product(s). If the impact shows a risk likely to influence these characteristics or the description, the company must inform FCBA, which will judge whether or not it is necessary to initiate an instruction to modify the product(s) concerned.

The company must identify the persons authorized to make the design changes on the certified products.

The company must control the updating and distribution of all documents or data resulting from the design change (examples: nomenclature, formula, process, etc.).

- Records needed to provide evidence: updating documents or data from the design change, etc.
- Document(s) required to master the activity: not mandatory

1.2 PURCHASING

Purchasing control concerns raw materials likely to influence the certified characteristics.

This control includes, for the raw materials concerned, the installation:

- Specifications in the case of subcontracting,
- From control methods to receipt and until its use.

For biocidal active ingredients as defined in BPR, the inspection on receipt is carried out:

- Either by the chemical analysis of each batch received,
- Or by verifying the certificate of analysis issued by the supplier and attesting to compliance with the purchasing specifications. In this case, chemical analyses on receipt may be carried out from time to time, to verify the supplier's declarations.

For other raw materials, physical measurements or control of the certificate of analysis may be sufficient for each batch received.

In the event of a change in raw materials and/or suppliers that may affect the certified characteristics or the description of the certified product(s), the company shall analyse the consequences with regard to the certification. If the impact shows a risk likely to influence the certified characteristics and/or the description of the certified product(s), the company must inform FCBA, which will judge whether or not it is necessary to initiate an instruction to modify the product(s) concerned.

- Records required to provide proof:
    - List of authorized suppliers,
    - Technical specifications for materials,
    - Material Safety Data Sheets (SDS),
    - Inspection result.
- Document(s) required to control the activity: not applicable

1.3 PRODUCT REALIZATION

The manufacturer must apply:

- Manufacturing specifications (material quantities, process parameters)
- The sampling procedure for the control of the finished product.
- Note: it is necessary to take on-call samples necessary for surveillance audit samples.
- Managing the risks of contamination of the certified product or any mixing with other products in the process of manufacture;
- Batch or date traceability management.

- Document(s) necessary to control the activity: production order, production scheduling and/or rinsing procedure, etc.
- Records required to provide proof: material registration and/or production order (batch number and/or date).

1.4 CONTROL EQUIPMENT

Measuring equipment in production or during product inspection in the laboratory that may affect the values of the certified characteristics must:

- Have a unique identification,
- Be appropriate to the control carried out,
- Used and maintained in a state of operation in accordance with its use,
- Be calibrated at defined intervals to guarantee metrological connection,
- Be verified to confirm suitability for use,
- Have a sign to ensure that he or she is in a period of fitness for employment

- Records necessary to provide proof: calibration report, verification reports, metrological connection schedule, etc.
- Document(s) needed to control the activity: calibration and verification documents.

1.5 CONTROL OF NON-CONFORMITIES

When an inspection leads to the finding of non-compliance, the object inspected must be isolated in order to prevent its use. Corrected non-compliant products must be checked again to ensure their compliance.

The company must take corrective action to eliminate the causes of non-conformities and prevent their recurrence. Corrective actions must be adapted to the impact of the problems encountered.

- Records required to provide proof: duly completed control form, etc.
- Document(s) necessary to control the activity: procedure for managing non-conformities.

1.6 RELEASE OF THE CERTIFIED PRODUCT

The company must identify the persons authorized to release the certified products.

This operation consists of ensuring compliance with all the requirements for the control and control of the production and packaging of the product in order to authorise their release accompanied by the certification mark.

Procedures for checking the product as it will be placed on the market and verifying the product's compliance with the informative label:

- The results of the analyses must be obtained before the products manufactured leave the factory.
- The laboratory must have the appropriate analytical methods identified, competent personnel, chemical reagents and controlled analytical equipment
- The results of the analyses must be recorded with the necessary traceability

In the case of biocidal products, it is requested to verify the compliance of all active ingredients:

- The compliance tolerance for each active ingredient varies from +/- 10% in relative value of the declared value for liquid or powder formulations.
- It is to be specified for other types of products such as termite repellent films.
- The other components are tested with a tolerance of +/- 10% in relative value;

When products are not released due to a known or suspected problem with compliance, they must be isolated pending process.

If the products concerned are treated, they must be checked again to ensure their compliance before release.

If the products concerned are not brought into compliance, any reference to certification must be removed from these products.

In the event that the products have been identified as non-compliant after their release, they are subject to a recall by the company, either to bring them into compliance or to remove any reference to the certification of the products concerned.

- Records required to provide proof: duly completed control sheet, packaging order, list of recalled products, etc.
- Document(s) required to control the activity: finished product control procedure, packaging procedure including labelling and marking.

1.7 COMPLAINTS

The company undertakes to register all customer complaints of which it is aware regarding the certified products/services as well as the arrangements made to deal with them.

- Records necessary to provide proof: list of complaints and actions implemented, etc.
- Document(s) needed to control the activity: complaints management procedure.

1.8 DOCUMENT AND RECORDS MANAGEMENT

This paragraph relates to the documents and records specified in this repository.

1.8.1 Documentations

The documents must be available where they are to be applied.

The revision of documents must be validated by the duly authorized persons before it can be implemented.

A list of documents in force or any other procedure must ensure that the documents are applied in their current version.

1.8.2 Recordings

The records requested by this repository must be kept:

- For a minimum period of 10 years and comply with the legal provisions where they exist,
- Under conditions that allow them to be consulted throughout the storage period.