



Test report: Approved wood preservatives in Belgium and The Netherlands

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SHR
Nieuwe Kanaal 9e
PO Box 497
6700 AL Wageningen, The Netherlands
Tel: + 31 317 467366
If not stated other wise the tests have been
performed at this address.

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E-mail: m.vanderzee@shr.nl

Principal: VELUX Global Group
Ådalsvej 99
DK-2970 Hørsholm
Denmark (DK)

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Authors:



M.E. van der Zee, MSc
Project Manager



J.G.M. Creemers, MSc
2nd author

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1 Introduction

1.1 Assignment

VELUX Global Group assigned SHR to make an inventory of the wood preservatives approved in Belgium and The Netherlands that do not contain propiconazole, tebuconazole and/or IPBC.

Within this assignment the scope was further focussed, leading to a new report.

The wood preservative needed should be:

- effective against wood destroying fungi (basidiomycetes);
- effective against surface fungi (including blue stain);
- suitable for Use Class 3 (exterior application);
- applicable in an industrial process environment through flow coating or spray cabin.

1.2 Date of assignment

June 1, 2021.

2 Execution of the assignment

2.1 Background

Biocides authorised in the different EU member states can be found in national databases. In The Netherlands the database is available on the website of CTGB, College voor de Toelating Gewasbeschermingsmiddelen en Biociden (<https://toelatingen.ctgb.nl/nl/authorisations>).

The database is updated on a weekly basis and was downloaded on June 7, 2021. In Belgium the database is available on the website of Federale overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu (FPS Health, Food Chain Safety and Environment) (<https://docs.health.belgium.be/ActiveProducts.pdf>). The database was downloaded on June 10, 2021 and gives the authorised biocides of April 22, 2021.

The databases have been screened on biocides authorised for product type PT08, wood preservatives. In the databases information on the active ingredients of the biocides is given, and the final date of the authorisation. Information on the target organisms and application methods can either be found in the databases itself or in the certificate that is linked to the database.

The authorised biocides have been itemised. If different colours of the same product have different registration numbers, these products have been clustered and are presented in the tables below as one product.

2.2 Inventory

Of all PT08 wood preservatives information on three criteria has been collected: active ingredients, application methods, and target organisms. The different ingredients, methods and organisms are shown in tables 1 to 3. The tables also give a code (1 – 21, A – J, and z – u) that is used in the appendices to facilitate combining information.

2.2.1 Active ingredients

A total of 21 individual active ingredients can be distinguished. Table 1 shows the active ingredients together with their CAS-number.

Table 1. Active ingredients found in authorised wood preservatives in Belgium and/or the Netherlands.

Code in tables	Active ingredients	CAS-number
1	3-jood-2-propynylbutylcarbamaat,	55406-53-6
2	1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazole-1-ylmethyl)pentane-3-ol / Tebuconazole	107534-96-3
3	1-[[2-(2,4-dichlorophényl)-4-propyl-1,3-dioxolane-2-yl]méthyl]-1H-1,2,4-triazole / Propiconazole	60207-90-1
4	Basic copper carbonate	12069-69-1
5	Copper(II)oxide	1317-38-0
6	Boric acid	10043-35-3
7	N,N-didecyl-N-methylpoly(oxyethyl) ammoniumpropionate	94667-33-1
8	Alkyl (C12-16) dimethyl benzyl ammoniumchloride	12600-89-8
9	Didecyl dimethyl ammoniumchloride	7173-51-5
10	Quaternaire ammonium compounds, cocos alkyl trimethyl, chlorides	61789-18-2
11	Disodium tetraborate	1330-43-4
12	Disodium tetraborate pentahydrate	12179-04-3
13	Hydrogen cyanide	74-90-8
14	Penflufen	494793-67-8
15	Sulfurylfluoride	2699-79-8
16	Bis-(N-cyclohexyldiazoniumdioxy)-copper	312600-89-8
17	Permethrin	52645-53-1
18	α -(4-chlorophényl)- α -(1-cyclopropyléthyl)-1H-1,2,4-triazole-1-éthanol / Cyproconazole	94361-06-5
19	Cis-4-[3-(p-tert-butylphényl)-2-méthylpropyl]-2,6-diméthylmorpholine / Fenpropimorph	67564-91-4
20	2-thiazol-4-yl-1H-benzoimidazole (Thiabendazole)	148-79-8
21	Borate de N-didecyl-N-dipolyethoxyammonium / Borate de didecylpolyoxethylammonium	214710-34-6

2.2.2 Application methods

Methods

Table 2 gives the nine different application methods distinguished in the inventory. The application methods were not always unambiguous in the certificates. Only preservatives that specifically mention 'flow coating' are given the application method B flow coating. Different spraying methods were mentioned. In this report only methods that clearly state that spraying should be performed in a closed cabin are given the application method C, spraying (closed cabin). All other spraying methods are combined in application method D, low pressure spray. Method F, dipping combines all methods in which the wood is submerged in the wood preservative solution irrespective of the duration of the submersion. In an exceptional case, no information is supplied in the certificate regarding the application method, or no legible certificate is supplied.

Users

In the certificates the allowed group of users of the preservative is mentioned: non-professional, and/or professional. In some cases also the indication “industrial” is used independently of the term “professional”. However, the indication “industrial use” is not always mentioned specifically. In the inventory, all clearly industrial application processes like vacuum pressure treatment, closed cabin spraying, automatic dipping, are given the indication “industrial”.

Table 2. Application methods.

Code in tables	Application methods	Industrial application
A	Brush, Roller	No
B	Flow coating	Yes
C	Spraying (closed cabin)	Yes
D	low pressure spray	No
E	Vacuum Pressure	Yes
F	Dipping	Yes, if automated
G	(Bore hole) injection	No
H	Fumigation	No
J	Bandage	No

2.2.3 Target organisms

Table 3 shows the target organisms that are mentioned in the certificates.

Table 3. Target organisms.

Code in tables	Target organisms
z	Wood destroying fungi, Basidiomycetes
y	Surface fungi / blue stain / moulds
x	Insects
w	Termites
v	Micro-organisms
u	Algi

3 Results of the inventory

A table of wood preservatives, including active ingredients, target organisms, and application methods authorized in Belgium is given in Appendix 1. A similar table of wood preservatives authorized in The Netherlands is given in Appendix 2. In these appendices, only products are mentioned with (some) efficacy against fungi. Products with single use against insects or applied in very specific ways like fumigation or bandages are not mentioned.

From these lists, further selections have been made in order to only have products, which comply with the four requirements as mentioned in § 1.1. Only these requirements have been met in the selection, which means that some of the products might still not be suitable because of other requirements or experiences of the principal with regard to e.g. applicability, corrosivity, or solvents.

In both countries information concerning HK-lasur and the related HSL is ambiguous. Under the same product family and comparable name products are listed with 0.5% and 1.5% IPBC. However, only the 1.5% products are suitable against Basidiomycetes where as the 0.5% products are suitable only against surface fungi and blue stain. In the certificates both 'only for non-professional use' and 'for professional use' are mentioned and information on application in closed cabin spraying is not uniform in both countries.

The selection leaves 10 products in Belgium, highlighted in Appendix 1 and presented in table 4.

Table 4. Wood preservatives authorized in Belgium complying with the four principals requirements

Name	Registration number	Application						Active ingredients 1, 2 and/or 3
		(B = Flow coating and C = CC-spraying)						
Embalit NT	5306B			C		E	F	-
HK-Lasur - Famille de produits - META-SPC 1 (22879)	BE2019-0034-01-00		B	C	D			1
HSL-30/m	BE2019-0034-01-01	A	B	C				1
HSL-30/m clear	BE2019-0034-01-02	A	B	C				1
Induline SW-900	BE2012-0032	A	B	C			F	1, 3
Induline SW-900 IT	BE2019-0002			C				1, 3
Koranol Holzbau Grund	BE2020-0035		B				F	1, 3
Sikkens Cetol WP 567(BPD) META SPC 1	BE2019-0073-01-00		B	C			F	1, 2, 3
Teknol aqua 1412-01 (Gori 356)	BE2012-0039	A	B	C			F	1, 2, 3
TWP 085	BE2012-0025	A	B	C			F	1, 3

Of these 10 products, approved in Belgium:

- 4 do not contain propiconazole
- 8 do not contain tebuconazole
- 4 do not contain propiconazole nor tebuconazole
- 1 does not contain IPBC

When doing the same selection – i.e. complying with the four principals requirements – on the selected wood preservatives authorized in The Netherlands, that leaves 4 products, highlighted in Appendix 2 and presented in table 5.

Table 5. Wood preservatives authorized in The Netherlands complying with the 4 principals requirements

Name	Registration number	Application					Active ingredients 1, 2 and/or 3
		(B = Flow coating and C = CC-spraying)					
HK-Lazuur / HSL-30/m / Tuinhuis Beits	NL-0001764-0000	A		C			1
HSL-30/m clear	NL-0019576-0002			C			1
HSL-30/m, HK-Lazuur 1.5%	NL-0019576-0001			C			1
Induline SW-900	NL-0006665-0000	A	B		D	E	1, 3

Of these 4 products, approved in The Netherlands:

- 3 do not contain propiconazole
- 4 do not contain tebuconazole
- 3 do not contain propiconazole nor tebuconazole
- None do not contain IPBC

It is again stated, that the remaining products may still prove unsuitable for the principals process because of other requirements or experiences with regard to e.g. applicability, corrosivity, or solvents.

4 Conclusion

VELUX Global Group assigned SHR to make an inventory of the wood preservatives authorized in Belgium and The Netherlands that do not contain propiconazole, tebuconazole or IPBC.

The wood preservative needed should be

- (1) effective against wood destroying fungi (basidiomycetes) as well as against
- (2) surface fungi (including blue stain)
- (3) suitable for Use Class 3 (exterior application) and
- (4) applicable in an industrial process environment through flow coating or spray cabin.

In total, 10 PT08 wood preservatives are authorized in Belgium and 4 in the Netherlands that comply with these four requirements.

In table 6 the number of authorized preservatives is given that can be specifically applied by flow coating or spray cabin in Belgium and the Netherlands and which do not contain any of the specified active ingredients.

Table 6. Number of PT08 preservatives authorized in Belgium and the Netherlands that specifically mention industrial application, flow coating or spray cabin as application method, not containing the specified active ingredients.

Country	Preservative does NOT contain:			
	Propiconazole	Tebuconazole	Propiconazole & Tebuconazole	IPBC
Belgium	4	8	4	1
The Netherlands	3	4	3	0

References

<https://toelatingen.ctgb.nl/nl/authorisations>. June 7, 2021.

<https://docs.health.belgium.be/ActiveProducts.pdf>; June 10, 2021.

