



# Rekjanleiki byggingarvara í Visthúsi

Vorráðstefna Vörustjórnunarfélagsins

7 maí 2019



# Um Visthús





## Markmið Svansins

- Byggir á markaðslausnum
- Vörur ekki umhverfisvænar eða sjálfbærar heldur betri en almennt gerist á markaðnum
- Er lausnamiðaður- bendir ekki á einstakar lausnir
- Kröfur eru auknar og aðlagaðar á þriggja til fimm ára fresti
- Ýtir undir þróunn





## Nokkrar lykilákvarðanir

- Notum vörur sem eru þegar til á markaðnum og hluti af viðurkenndri byggingarhefð
- Eigum samskipti við íslenska birgja sem við treystum
  - Erlenda birgja sem þeir íslensku treysta til að veita réttar upplýsingar
- Notum umhverfisvottaðar vörur ef það er hægt
  - Svanurinn, Evrópublómið eða Blái Engillinn
  - Vottaðar vörur voru sjálfkrafa samþykktar - vinnusparnaður
- Kaupum ekkert frá Kína og forðumst markaðssvæði sem við þekkjum lítið
  - Rússland og Austur-Evrópa nema það komi frá þekktum fyrirtækjum



# Leyfilegar vörur

## Leyfileg vara í Svansvottað hús

- Varan er ekki umhverfisvottuð en það er leyfilegt að nota hana í svansvottað hús.
- Það felur í sér að það er búið að takmara innihald umhverfis- og heilsuskaðlegra efna í vörunni
- Leyfilegar vörur eru vörur hafa eingöngu verið metnar út frá efnaeiginleikum, ekki umhverfisáhrifum á líftíma

## Af hverju leyfilegar vörur?

- Það eru aðallega tvær ástæður
  - Margar vörutegundir sem eru notaðar í umhverfisvæn hús er ekki hægt að votta. Svanurinn er aftur á móti með kröfur að þær vörur þurfa að uppfylla ákveðin skilyrði um vistvænleika
    - Dæmi: Salernistæki og sturtur, steinull, rafmagnsvírar, barkar og rör
  - Í sumum vöruflokkum eru mjög fáar vörur umhverfisvottaðar. Það væri mjög erfitt að byggja vistvæn hús ef verktakar væru algerlega í höndunum á einum birgja.
    - Dæmi: Kítti, innréttingar, flísar, timbur



# Formaldehyde

Table 2. Nordic Ecolabelling's limits for emissions of formaldehyde with the use of different test methods.

	<b>EN 717-1 (23°C/45% RH)</b>	<b>ISO 16000-9 (23°C/50% RH) Testmethod for M1</b>	<b>ASTM E 1333 (23°C/50% RH)</b>	<b>JIS A 1460</b>
MDF	0.124 mg/m <sup>3</sup>	0.05 mg/m <sup>2</sup> /h	0.09 ppm	0.90 mg/l
Other panels	0.07 mg/m <sup>3</sup>	0.03 mg/m <sup>2</sup> /h	0.08 ppm	0.53 mg/l

Nordic Ecolabelling accepts the following certificates as documentation for the requirement:

- E1-certificate for MDF-panels
- M1-certificate for MDF-panels
- CARB PHASE II-certificate for all types of wood-based panels
- Certificate according to Indoor Air Comfort or Indoor Air Comfort Gold for all types of wood-based panels.



- ☒ Certificate concerning occurrence of formaldehyde-based additives in accordance with Appendix 6.
- ☒ Analysis report, including measurement methods, measurement results and measurement frequency. It must be clearly stated which method/standard was applied, the laboratory that conducted the analysis, and that the analysis laboratory is an independent third party. Other analysis methods than those stated in the above table may be used, provided that the correlation between testing methods can be verified by an independent third party. For more information, see Appendix 1.
- ☒ Certificate for products as an alternative to an analysis report. The certificate that is accepted is stated in the requirement text.



# Uppá heiður og samvisku!

## Appendix 6 Declaration on emissions of formaldehyde

Applies to all wood-based panels/boards used in the production of Nordic Swan Ecolabelled buildings either as (building) panels/boards, boards in floors or boards in fittings. Panels that are not solely marketed as façade panels are exempted.

Product name, Denmark	Melamine faced particle board type P2, Decor 6458, 0112 PE
Product name, Finland	Melamine faced particle board type P2, Decor 6458, 0112 PE
Product name, Iceland	Melamine faced particle board type P2, Decor 6458, 0112 PE
Product name, Norway	Melamine faced particle board type P2, Decor 6458, 0112 PE
Product name, Sweden	Melamine faced particle board type P2, Decor 6458, 0112 PE
Manufacturer	SIA KRONOSPAN Riga
Product description	NF PB P2 6458 and 0112 PE
	<input checked="" type="checkbox"/> Wood based panels/boards <input type="checkbox"/> Boards in floorings <input type="checkbox"/> Boards in doors and fittings <input type="checkbox"/> Mouldings, baseboards and frames

1. Does the wood board/panel contain more than 3% by weight of formaldehyde-based additives? Yes  No

If yes, fill in bullet 2 and then either bullet 3 or 4 below.

2. For laminated panels/boards: Does the level of free formaldehyde in glue with any hardener (i.e. the final glue compound) exceed 2,000 ppm (0.2% by weight)? Yes  No

If yes, fill in bullet 3 or 4 below.

3. Is the product certified with any of the following certifications? E1 or M1 for MDF-boards Yes  No

CARB PHASE II or Indoor Air Comfort GOLD/Indoor Air Comfort for all types of boards? Yes  No

If yes, what certification is held? If no, please, fill in point 4.

## Signature of panel/board manufacturer

City and Date	Riga, 06.12.2018	Company	SIA KRONOSPAN Riga
Name of contact person	Olegs Volodins	Signature by contact person	O Barojun
Phone	+37167436814	E-mail	o.volodins@kronospan-riga.lv

A correct signed declaration can result in the acceptance of use of the construction product in Nordic Swan Ecolabelled buildings. This shall not be mixed up with the Nordic Swan Ecolabelling of the construction product.

## Upp á heiður og samvisku gildir fyrir allar vörur

- Efnavörur
- Byggingarvörur
- Timbur
- Hreinlætistæki
- Innréttingar

En það þurfti einnig aðrar staðfestingar





**CARB**  
CALIFORNIA

# CERTIFICATE

**No. 712-2009-02-TPC-4**

By order of the State of California - Air Resources Board, according to the executive order W-18-004, relating to ARB approval of third party certifiers under Section 93120.4, Title 17, California Code of Regulations



CARB notified TPC 4

**Fraunhofer Institute for Wood Research**  
Wilhelm-Klauditz-Institut WKI  
Bienroder Weg 54E, 38108 Braunschweig, Germany

has 1) verified the accuracy of the emission test procedures and facilities used by the composite wood product manufacturer to conduct formaldehyde emission tests, 2) monitored the manufacturer's quality assurance programs, 3) has assessed that the below mentioned product fulfils the emission requirement according to table 1 of § 93120.2 of **Phase 2** - see qualification and correlation test reports provided to the manufacturer and 4) provided independent audits and inspections as an ARB approved third party certifier according supervision contract No. 0712 with the manufacturer

**SIA "KRONOSPAN Riga"**  
Daugavgrivas soseja 7B  
LV-1016 Riga  
Latvia

**for the product:**

**E-LE (E 0.5) Low Emission Particle Board**

particleboard, MUF + UF, unfaced  
in the thickness range: 12 mm ≤ 25 mm

This certificate, first issued on 11 February 2009, is valid as long as the continuous supervision, quarterly per year will be carried out by WKI. For more information about ARB's program, please visit ARB at: <http://www.arb.ca.gov/toxics/compwood/certifiers.htm>.



**Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., München**

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*H. Schwab*

**Dipl.-Ing. Harald Schwab**  
Head of the Third Party Certifier  
Braunschweig, 24 August 2018



Fraunhofer WKI | Bienroder Weg 54 E | 38108 Braunschweig

UPM-Kymmene Wood Oy  
Pellos Plywood Mill  
Karsikkoniementie 10  
52420 Pellosniemi  
Finland

Your reference

Your message dated

Our reference  
Mey/Pr

Fraunhofer Institute for Wood Research  
Wilhelm-Klauditz-Institut WKI

Director  
Prof. Dr.-Ing. Bohumil Kasal

Head of the Testing, Supervision and  
Certifying Body  
Dipl.-Ing. Harald Schwab

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Braunschweig,  
1 June 2016

**Test Report No. QA-2016-1474**

**Client:**

UPM-Kymmene Wood Oy  
Pellos Plywood Mill  
Karsikkoniementie 10  
52420 Pellosniemi  
Finland

**Method and object of the test:**

External supervision of wood based materials regarding formaldehyde release

**Content of the test report:**

1. Task  
2. Material  
3. Test method  
4. Test results  
Appendix

Page 2  
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The test report comprises 3 pages and 1 appendix.

This test report is not permitted to be published incompletely. A publication in extracts is in any case subject to the previous consent of Fraunhofer-Institut für Holzforschung, Wilhelm-Klauditz-Institut (WKI), Bienroder Weg 54E in 38108 Braunschweig (Germany). The test results exclusively refer to the objects of the test.



# Úrval af efnakröfum

## 016 Classification of chemical products

Chemical products used in the production of Nordic Swan Ecolabelled buildings must not be classified according to the table 3 below. Classification must be in line with current legislation (CLP Regulation (EC) No 1272/2008).

Table 3. Prohibited classifications of chemical substances

Classification under CLP Regulation 1272/2008	
Hazard class and category	Hazard phrases
Toxic to aquatic organisms Category acute 1 Chronic 1-2	H400 <sup>(1)</sup> ***, H410, H411*** <sup>(1)</sup>
Hazardous to the ozone layer	H420
Acute toxicity Category 1-3	H300, H310, H330, H301, H311, H331
Specific target organ toxicity (STOT) with single and repeated exposure STOT SE category 1 STOT RE category 1	H370, H372
Carcinogenic Carc. 1A/1B/2	H350, H351
Mutagenic Muta. 1A/B/2	H340, H341
Toxic for reproduction Repr. 1A/1B/2	H360, H361, H362

The classifications in the Table concern all classification variants. For example, H350 also covers classification H350i.

## 020 Other substances excluded from use

The following substances may not be constituent in chemical products used in the production of Nordic Swan Ecolabelled buildings:

- Substances on the Candidate List\*.
- Substances evaluated by the EU to be PBT substances (persistent, bioaccumulative and toxic) or vPvB substances (very persistent and very bioaccumulative) in accordance with the criteria in Appendix XIII in REACH, including substances those have not been evaluated but are considered to meet the requirements.
- Substances considered to be potential endocrine disruptors in category 1 or 2 on the EU's priority list of substances that are to be investigated further for endocrine disruptive effects\*\*.

In addition, the following individual substances and substance groups are prohibited or restricted. There may be overlap between the substances listed below and substances categorized over.

- Short-chain chlorinated paraffins (C10-C13) and medium chain chlorinated paraffins (C14-C17).
- Perfluorinated and polyfluorinated alkylated substances (PFAs).
- APEO – alkylphenol ethoxylates and other alkylphenol derivatives (substances that release alkylphenols on degradation).
- Brominated flame retardants.
- Phthalates\*\*\*.
- Bisphenol A, bisphenol S and bisphenol F.
- The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds.
- Volatile aromatic compounds >1% by weight\*\*\*\*.
- Organic tin compounds. Exemptions are made for dibutyltin (DBT) and dioctyltin (DOT) which are permitted in the following levels in sealing products (the primer and joint product respectively):



# Öryggisblöð skv 31. grein REACH

## 2. HAZARDS IDENTIFICATION

### Hazardous Nature:

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.  
Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

### Signal Word Danger

### Hazard Statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

### Chemical Characterization: Mixtures

Description: Mixture: consisting of the following components.

### Hazardous Components:

108-88-3	Benzene, methyl- Flam. Liq. 2, H225; Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336	>25%
71-36-3	1-Butanol Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	1-5%
1185-55-3	Silane, trimethoxymethyl- Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 4, H332	1-5%
97-88-1	n-butyl methacrylate Flam. Liq. 3, H226; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.1-1%
80-62-6	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	0.1-1%

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## Reynslan

- Flókið í byrjun þegar þekking var takmörkuð en birgjar voru tiltölulega fljótir að átta sig
- Við tókum réttar lykilákvarðanir í byrjun
- Flestir birgjar (ef frá eru teknir ævintýramenn) tóku þessu alvarlega. Mjög sjaldan sem ég þurfti að fara oft í gegnum gögn frá birgjum
  - Líklega oftast sem birgjar treystu sér ekki til að staðfesta að vörurnar uppfylli kröfur en að reynt væri að svindla



**Umræður**