Consultation response for

Floor coverings and flooring underlays

Version 7.0

5 December 2023

Nordic Ecolabelling

Nordic Swan Ecolabelled Floor coverings and flooring underlays – Consultation response

029/7.0 – 5 December 2023

1 Summary

A total of 32 consultation responses have been received, divided into 25 responses in Sweden, 4 in Denmark, 2 in Norway and 1 in Finland. The vast majority of consultation responses are "Supports the proposal with comments" (22 responses). The comments usually refer to Nordic Ecolabelling's ban on PVC and PVC products or to several requirements for which the level is too high (share of renewable/recycled raw materials and circular requirements). The ones rejecting the proposal (7 responses) are the ones only commenting Nordic Ecolabelling's ban on PVC and PVC products.

The consultation on reviewing the draft criteria for Floor coverings and flooring underlays, gen 7, has been conducted in all Nordic countries in the period from 21 June 2023 to 19 September 2023.

The overall aim of this revision is to ensure that the Nordic Ecolabelling criteria continue to ensure positive environmental benefits via ecolabelling and that the criteria are viable and clear for the industry. The main comments apply to the following sections and requirements:

- Definition of the product group
- Share of renewable/recycled raw materials
- Chlorinated plastics in floor coverings and flooring underlays
- Traceability and certification (of wood raw material)
- Requirements on Plastic, rubber and foam (bio-based polymer and traceability)
- Requirements on Wood-Plastic composites
- Chemical requirements
- Requiremement on Energy and Waste
- Requirement on packaging
- Emission requirements
- Requirement on Quality and Durability of floor coverings
- Circular requirements (Warranty and Spare parts, Labelling and Traceability, Reparability and Recyclability)
- Innovation requirements

Several requirements are adjusted and some are made clearer. In some cases, parts of requirements or exemptions have been reintroduced to match the criteria generation 6.
Many comments were received regarding Nordic Ecolabelling's decision to renew its ban on PVC and PVC products. The background text to requirement O5 has been updated to highlight the latest arguments behind the decision.

Nordic Ecolabelling has in section 4 given a response to all comments and described if the requirement has been adjusted. In section 7, you find a table showing all the changes that have been done in the criteria document after the consultation period.

2 About the consultation

This document consists of feedback received during the public consultation for revised criteria for Floor coverings and flooring underlays and Nordic Ecolabelling's response to this feedback. The purpose of this document is to show how external feedback has affected the development of the draft criteria in compliance with the ISO 14024 standard.

Nordic Ecolabelling is grateful for all inputs that helped us in the development of both environmentally ambitious and market-based criteria for floor coverings and flooring underlays.

After the consultation period and because of all comments received, several requirements are adjusted because of their level being too ambitions and some are made clearer. For instance:

- The requirement O4 *Share of renewable/recycled raw materials has* been adjusted to take into account the challenges coupled with the scarcity of recycled material of good quality.
- The circular requirements (*Warranty and Spare parts, Labelling and Traceability, Reparability and Recyclability*) have been adjusted to match the reality of the market and to avoid conflicts with eventual incoming European legislations.

However, for some requirements, the level is too low and that is why flooring underlays are no longer exempted from several of them. For the same reason, the reparability requirement is now set on all floor coverings and not only on glued down ones.

In some cases, parts of requirements or exemptions from criteria generation 6 have been reintroduced. This concern mostly requirements set on chemicals and chemical products.

Finally, many comments were received regarding Nordic Ecolabelling's decision to renew its ban on PVC and PVC products. The background text to requirement O5 has been updated to highlight the latest arguments behind the decision.

Response to consultation comments
Nordic Ecolabelling has in section 4 given a response to all comments and described if the requirement has been adjusted. In section 7, you find a table showing all the changes that have been done in the criteria document after the consultation period.

3 Compilation of received responses

A total of 32 consultation responses have been received, divided into 25 responses in Sweden, 4 in Denmark, 2 in Norway and 1 in Finland. The vast majority of consultation responses are "Supports the proposal with comments". The comments usually refer to Nordic Ecolabelling's ban on PVC and PVC products or to several requirements for which the level is too high (share of renewable/recycled raw materials and circular requirements). The ones rejecting the proposal are the ones only commenting Nordic Ecolabelling's ban on on PVC and PVC.

All comments received are collected and answered by Nordic Ecolabelling in this document. For details on which consultation bodies have responded and how they have ommented, see tables 1-5 under.

Table 1: Compilation of received responses

Country	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification	Totally
Denmark			3		1	4
Sweden	1		18	2	4	25
Finland					1	1
Norway			1		1	2
Iceland						
Totally	1		22	2	7	32

Table 2: Danish consultation responses

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
Tarkett DK					**X**
Windmöller			**X**		
DFL			**X**		
Miljöstyrelsen			**X**		
Σ Danish responses:			3		1

Table 3: Swedish consultation responses

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
Folkhälsomyndigheten				X	
Golvbranschen			X		
Parador			X		
SKR				X	
Tarkett EMEA					X
Tarkett Ronneby			X		
Tarkett SpA			X		
Unilin			X		
Abriso-Jiffy			X		
AkzoNobel			X		
Sherwin Williams			X		
BASF			X		
Bolon					X
Forbo			X		
Kährs			X		
Plastics Europe					X
Tarkett AB			X		
Välinge			X		
SVEFF			X		
Bona			X		
Evonik			X		
Mercene Coatings			X		
PVC Forum					X
IKEM			X		
Agfa	X				
Σ Swedish responses:	1		18	2	4

Table 4: Finnish consultation responses

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
Tarkett FI					X
Σ Finnish responses:					1

Table 5: Norwegian consultation responses

Consultation body	A. Only comments	B. Supports the proposal	C. Supports the proposal with comments	D. Refrain from commenting	E. Rejects the proposal with justification
Bauwerk group			X		
Tarkett NO					X
Σ Norwegian responses:			1		1

4 Comments to the criteria, in detail

The various comments from the consultation stakeholders have been inserted below and grouped in relation to the specific requirement. Nordic Ecolabelling has given a response to all comments and described if the requirement has been adjusted.
In section 6, you find a table showing all the changes that have been done in the criteria document after the consultation.

4.1 Definition of the product group

4.1.1 What can carry the Nordic Swan Ecolabel?

Abriso-Jiffy
Abriso-Jiffy will be aiming at the necessity for the Nordic Swan Ecolabel to be applicable for a range of products (a combination of specifications such as densities, thicknesses, etc.) and not only to one specific product only.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Nordic Swan Ecolabelled flooring underlays do neither have to be specific to a particular flooring nor specific to a Nordic Swan Ecolabelled flooring.

Kährs
Why are thermoplastic non PVC floor coverings missing? Proposal to add this.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Your suggestion has been added.

Parador
Floor coverings that can be Nordic Ecolabelled are:

- wooden floorings according to EN 13756 (solid wood flooring, multi-layer wood flooring or engineered

Remark: Shouldn´t product related standards like EN 13489 for multilayer wood flooring and EN 14354 for Wood-based panels – Wood veneer floor coverings be listed as well (acc. To EN 13329 at laminate flooring).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Your suggestion has been added.

Tarkett SpA
in the definition of underlay, it's specified that "Flooring underlays can be defined as a thin layer of either plates or rolled material installed under the floor covering to which there are neither attached nor glued to ": why don't include also underlayers where flooring can be glued on? The criteria as written today excludes the possibility of certification for all underlayers dedicated to non- loose-lay products.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The phrasing has been changed. Indeed, once the Nordic Swan Ecolabelled underlays is sold, there is no steerability

regarding how and where it will be used (under loose-lay or attached/glued to the flooring).

Unilin
General question regarding flooring underlays:
A debate point in underlays' sustainability is the material used for the vapour barrier. Thin & light Alu-PP versus thicker & heavier PE-films : Does Nordic Swan have a position on this ?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. According to Nordic Ecolabelling's guidelines, recyclable materials overrules non-recyclable materials. However, if there is no perspective of recycling the product, we do not have principle issues with multi-materials/layers products. Regardless, the product would have to fulfil requirement O4 which can be difficult depending on the amount of aluminium.

4.1.2 What is required to be Nordic Swan Ecolabelled?

No comments received.

4.2 Comments to the individual requirements

4.2.1 Description of the product group

O1 Description of the product and material composition

IKEM
IKEM har inga synpunkter på dessa kriterier (O1-O4). Vi välkomnar kriterier för produktbeskrivning, sammansättning, produktion, kemikalieinnehåll samt andel förnybara/återvunna material, då det bidrar till minskad förvirring angående en produkts egentliga hållbarhet.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

O2 Description of the product chain and manufacturing process

No comments received.

O3 Overview of chemical products

No comments received.

O4 Share of renewable and/or recycled raw materials

Abriso-Jiffy
The share of renewable and/or recycled material as defined with section O4 requires a content of recycled material as of 60% weight% or min. 80% when the underlay consists of a combination of renewable and recycled material. In order to comply with our quality standards and our mission to aim at zero defects the maximum quantity of recycable material is machine related and could be limited due to current process technology and sourcing capacity.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The requirement has been adjusted. The limit value for alternative c) has been adjusted back to 70% and fillers can be left outside the calculations again. However, the factor promoting the use of renewable materials over recycled material has not been reintroduced.
Alternative b) has been tightened to stimulate the use of post-consumer recycled material. The limit value is still of 60% but half of it must come from post-consumer recycled material.

Forbo
This requirement is tightened too much at once. By both eliminating the 7/6 factor on renewable content and increasing the requirement to 80% at once, is an unrealistic high requirement.
If a product that is 96-98% natural cannot reach this requirement, which other product can?
We consider that the 7/6 factor must remain or go back to > 70%
If 7/6x would be maintained - then the 80% target is reached in.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The requirement has been adjusted. The limit value for alternative c) has been adjusted back to 70% and fillers can be left outside the calculations again. However, the factor promoting the use of renewable materials over recycled material has not been reintroduced.
Alternative b) has been tightened to stimulate the use of post-consumer recycled material. The limit value is still of 60% but half of it must come from post-consumer recycled material.

Kährs
Earlier formula was (7/6)X +Y >70% and non-organic filler was exempted, where Calcium Carbonate wasn`t included. Why is it included now?
We do not think this is a valid criterion. Our Swan labelled product got value of 71% at earlier calculation rules. As this product has high filler content (about 60% calcium carbonate), it is impossible to reach proposed calculation value of 80% at existing product as suitable recycled clean calcium carbonate is not available. Calculation level of 80% is too high to reach. Environmentally thinking fillers should be available as close to production as possible. Proposal to keep same calculations as before.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The requirement has been adjusted. The limit value for alternative c) has been adjusted back to 70% and fillers can be left outside the calculations again. However, the factor promoting the use of renewable materials over recycled material has not been reintroduced.
Alternative b) has been tightened to stimulate the use of post-consumer recycled material. The limit value is still of 60% but half of it must come from post-consumer recycled material.
The definition on recycled materials has been edited so that in-house production waste may not be regarded as pre-consumer material.

Miljöstyrelsen
Flere steder i den introducerende del er det fremhævet, at det fornybar materiale, der indgår i disse Svanemærket produkter, er "sustainable sourced". Miljøstyrelsen foreslår derfor, at man i punkt a tydeliggør, at det fornybar materiale skal være "sustainable sourced".

Nordisk Miljømærkning skriver flere steder i baggrundsdokumentet, at brugen af 'reused', recycled' and/or 'renewable material' har miljøfordele, reducere energiforbruget og reducere klimapåvirkningen.
Miljøstyrelsen bemærker, at det vil være relevant at underbygge disse udsagn med kildehenvisninger, gerne specifikke for den relevante produktgruppe.
Det er også relevant for argumentet om udvidelsen af produktgruppen med muligheden for at kompositmaterialer kan indgå.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. "Sustainably sourced" has been replaced by"reponsibly sourced". References to LCA studies conducted by IVL on flooring have been added. One could also refer to the many product specific EPDs published by the manufacturers.

Tarkett Ronneby, Tarkett AB
It should be clear that fillers are now included in the calculation above. This was not the case in the previous version, and it should therefore be highlighted.
Based on the definition in ISO 14021 it's not clear as to what post-installation waste is. This must be clarified.
Our interpretation of the ISO 14021 definition is that internal production waste is considered pre-consumer recycled material if it's diverted from the production line and processed in some manner, e.g. granulation.
Installation waste is more difficult to acquire than internal production waste. Using installation waste in production of new flooring means there's a take-back system in place and should therefore be valued higher than internal production waste. In Nordic Swan's new criterion "Innovation" recycling efforts are encouraged and this should also be the case in this criterion.
Installation waste is for the most part easier to acquire than old flooring (post-consumer) and should therefore be valued differently. Our suggestion is that installation waste is considered as a separate fraction from pre-/post -consumer and that internal production waste have a threshold limit as to how much can be used.
Based on our interpretation of ISO 14021 it is now possible to fulfil the criteria with only internal production waste. This is not sustainable; production waste is the result of inefficient use of resources.

If internal production waste will be regarded differently to external production waste Nordic Swan should clearly define these two fractions.

Where wood grows scarcer there is an interest to be more efficient. With that in mind, reducing the usage of wood but otherwise keeping the same production processes and product constructions will disqualify such optimizations. For example, a thinner product with the same chemical usage as a thicker product might not fulfil the requirement. Keeping this in mind when defining the requirements is important to not limit innovations in converting more cubic meters into square meter.
The recycled material definition needs to be reviewed and clarified per relevant material. If HDF is per definition a recycled material it is much easier to pass the O4

criteria with it than using softwood, which shouldn't be the case since HDF contain a lot more chemicals.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The requirement and the definition for "recycled materials" have been adjusted.
The limit value for alternative c) has been adjusted back to 70% and fillers can be left outside the calculations again. However, the factor promoting the use of renewable materials over recycled material has not been reintroduced.
Alternative b) has been tightened to stimulate the use of post-consumer recycled material. The limit value is still of 60% but half of it must come from post-consumer recycled material.
The definition on recycled materials has been edited so that in-house production waste may not be regarded as pre-consumer material.
Such optimisations may be rewarded by the energy and waste requirements (O36 – O38).
There is usually much less than 10% chemicals, which is the limit value, in wood flooring. It should not be an issue.
HDF is never considered as a recycled material according to Nordic Ecolabel's definition.

Tarkett SpA
New requirements are stringent if compared to previous ones, also because in the new proposal non-organic fillers can't be excluded from calculations. On the other hand, $CaCO_3$ is being considered as a renewable raw material, since it is compliant with the definition of renewable raw material. So it's fundamental to understand what is your position regarding $CaCO_3$ as renewable raw material.
Recycled $CaCO_3$ is still really far from the possibility of consistently replace $CaCO_3$ from mining for availability, logistic and costs reasons. Logistic aspect should also be taken into account when considering an "unlimited" material as $CaCO_3$, since the environmental impact due to transport of recycled $CaCO_3$ can be significant.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The requirement and the definition for "recycled materials" have been adjusted.
The requirement level in the hearing was too high.
The limit value for alternative c) has been adjusted back to 70% and fillers can be left outside the calculations again. However, the factor promoting the use of renewable materials over recycled material has not been reintroduced.
Alternative b) has been tightened to stimulate the use of post-consumer recycled material. The limit value is still of 60% but half of it must come from post-consumer recycled material.
The definition on recycled materials has been edited so that in-house production waste may not be regarded as pre-consumer material.

Unilin
Criteria "a) Minimum 90% by weight of renewable raw materials" is a very stringent criterium, which excludes laminate coverings almost per definition.
An 8mm laminate floor consists for 78% of wood fibers (HDF + paper layers), ± 6% of water and ± 11% of resin.
This means that the only way to reach the 90%, is using a bio-based glue (which is absolutely not common on the market yet).

Which leads to the next question: are water and bio-based glue considered as renewable materials? And other "naturally abundant materials", such as Sand / Chalk, … (eg. for underlays)?
The laminate standard (EN13329) requires a minimum of 65% in mass of wood content.
Setting more stringent requirements can perfectly be accepted, but it should still be feasible to certify a laminate floor.
Therefor we advise to change the limit to 75% instead of the proposed 90%. Without changing this requirement, certifying a laminate floor will be extremely difficult.
As a reference, EU Ecolabel is not mentioning any requirement on renewable/recyclable materials at all.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The requirement and the definition for "recycled materials" have been adjusted.
The requirement level in the hearing was too high.
The limit value for alternative c) has been adjusted back to 70% and fillers can be left outside the calculations again. However, the factor promoting the use of renewable materials over recycled material has not been reintroduced.
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The definition on recycled materials has been edited so that in-house production waste may not be regarded as pre-consumer material.

O5 Chlorinated plastics in floor coverings and flooring underlays

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for all comments.
Nordic Ecolabelling acknowledges that much has been done by industry to reduce the climate and health impact of PVC manufacturing and PVC products within the last 10 years. However, Nordic Ecolabelling reckons that the use of PVC in floor coverings and flooring underlays is still problematic for the following reasons:

- *Although the recyclability of PVC and PVC products is undeniable, and PVC recycling systems are under development, it is still a challenge for the industry to collect, sort and process the material so that it does not contaminate new products with harmful legacy chemicals. Nordic Ecolabelling has looked into the possibilities of requiring take back systems for specific PVC product areas. Unfortunately, it may take time before all actors involved throughout the service life of a floor covering manage to run a fully functional take-back system.*

- *Although emissions of polyaromatic hydrocarbons (PAH), benzo-a -pyrene, dioxins and furans from incineration plants have been significantly reduced, and technologies for the management of air pollution control residues have been developed, not all the Nordic countries allow incineration of PVC. Denmark has a waste legislation that states that all PVC products must be sorted for material recycling. However, the difference in composition of products made of soft PVC (such as flooring) render their recycling difficult and must currently be sent to landfill, resulting in potential leaching of*

additives to the environment.[1] Furthermore, as a principle matter, Nordic Ecolabelling does not want to certify products that end up in landfills.

- *Although the use of the most problematic phthalates is now restricted in the EU, other additives hazardous to the environment and health (e.g., plasticizers and stabilizers) can still be used in PVC as well as in other plastics.[2] The recent ECHA's work on a restriction proposal on the use of PVC and its additives is in line with Nordic Ecolabelling's specific concerns with PVC.[3,4]*

- *Although mercury cells are not used in Europe anymore, the replacing membrane technology requires the use of harmful substances (PFAS) to produce the chlorine gas needed in PVC and other chemicals/plastics production.[5,6] How much PFAS are released to the environment throughout the service life of the membrane and how the membrane is disposed afterwards as waste, are issues in need of more investigation.*

- *Although the purpose of Nordic Ecolabelling is to guide the consumer to choose the best products from an environmental perspective, communicating on potentially Nordic Ecolabelled PVC products could be challenging and be regarded as misleading. Additionally, there is a risk that the trustworthiness of the Nordic Ecolabel could be undermined if Nordic Ecolabelled vinyl flooring were to be found on the market, as many NGOs still advise to avoid the use of soft PVC products.*

Comments received from stakeholders regarding requirement O5 are the following:

Bolon
All floorings produced by Bolon has compared with these objectives:

1. A high degree of renewable and/or recycled material. From this fall we have 70-75 % recycled material in our floorings
2. There are no hazardous substances neither in production nor in the product. Our floorings have been free of heavy metals for 20 years and free from Phthalate's in 10 years. Production and products are free of any H-phrase substances.
3. In production Bolon use effective head pumps driven by 100 % renewable electricity. In fact, all production runs on renewable electricity and has low energy need per square meter produced floorings. From April 2023 we have solar panels on the factory roof contributing to 1 100 mWh/year which is 25-30 % of the total need of electricity.
4. The VOC emission during full lifespan of our floorings is very low and certified by m1 and floor score for low emissions.
5. All Bolon flooring is durable and comes with 10 to 15 years warranties. No special surface treatment is needed during full lifespan. This reduces the

[1] https://op.europa.eu/en/publication-detail/-/publication/e9e7684a-906b-11ec-b4e4-01aa75ed71a1
[2] https://echa.europa.eu/sv/mapping-exercise-plastic-additives-initiative
[3] https://echa.europa.eu/documents/10162/17233/mandate_pvc_and_additives_rev_en.pdf/a860fd87-4231-5ed4-157b-f6cda1ee5832?t=1655721970555
[4] https://echa.europa.eu/documents/10162/7d64f1d7-b29f-94ec-4477-9bcebf737a82
[5] https://eippcb.jrc.ec.europa.eu/reference/production-chlor-alkali-0
[6] https://www.eurochlor.org/publication/fluoropolymers/

climate footprint in the use phase compared with other floorings that need that kind of treatment.

6. Full traceability exists from both suppliers of raw material and customers that buys our floorings. Our products can both be repaired and recycled. We have our own recycling plant where we can turn old floors into new floors. This can be done for our floorings from 2014 and ahead.

Bolon floorings has due to the combination of raw material, chalk and PVC with a high degree of recycled and or biomaterial will this fall have a documented zero climate impact per square meter flooring. This will not be the case for several other products that will achieve the swan label.
Bolon floorings will this fall contain 100 % Bio PVC in the weave and big amount of hazardous free recycled PVC in the backing. We secure by requirements and testing's that there are no hazardous substances in the recycled PVC that we source.
Bolons small amount of virgin PVC comes from third party labeled PVC production which secure both energy efficiency, mercury free and no hazardous emissions in the working environment. Of course, this is 100 % traceable and is regular followed up.
Bolon has also started our journey to a fully circular flooring. With our own recycling plant integrated in our industry in Sweden we will take back flooring after end of life.
Conclusion: The proposed ban on a material level will miss its purpose when it comes to modern vinyl floorings like Bolon's that has zero climate impact, 75 % recycled material without any hazardous substances and ready for takeback. Just by moving away from material criteria on one particular polymer this will be solved.

Golvbranschen
We strongly disagree with the Nordic Swan Ecolabel's decision to exclude PVC as a material in floor coverings and flooring underlays. The reasons stated for the decision are based on weak and inconsistent arguments. It is even implied that the decision to exclude PVC flooring is in part based on a general attitude towards PVC. The Nordic Swan Ecolabel is a type 1 ecolabel according to the standard ISO 14024. The requirements should therefore be developed and selected on scientific principles. Applying a more scientific approach could also correct an out-dated view on PVC and promote more sustainable solutions.

Since PVC flooring meets several unique performance requirements, it is in certain applications the best choice of flooring. The Nordic Swan already makes exceptions in the Nordic Ecolabelling for buildings when specific needs are called for, such as high durability or slip resistance. It is our understanding that exceptions are made for:

- Floorings in professional kitchens with floor drain.
- Floorings in wet rooms with floor drain in educational buildings, homes for the elderly and homes for persons with disabilities.
- Service areas such as fan rooms, substations, lift shafts, machine rooms, electricity centres and other areas.

If it would be possible to include PVC flooring and underlays meeting strict requirements, The Nordic Ecolabel has an opportunity to ensure that the best and most sustainable PVC products are used. Strict requirements could also work as a tool guiding companies to develop more sustainable products.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

IKEM
IKEM är kritiska till att golv och -material i PVC och PVDC helt utesluts. Att inte inkludera hållbara PVC-produkter gör det svårare för konsumenter att göra hållbara val.
Anledningen till att PVC och PVDC utesluts framgår inte i de föreslagna kriterierna. Ur de protokoll (Nordic Swan Ecolabel's position on PVC in floor coverings) som kommit från Nordiska miljömärkningsnämnden framgår dock att motiven lutar mot allmän opinion, snarare än accepterad vetenskap och genomförda investeringar för ökad hållbarhet hos PVC-golv.

Detta är beklagligt. Vi välkomnar dock att den svenska delegationen motsatte sig nämndens beslut.
Den svenska, skandinaviska och europeiska PVC-industrin har under en längre tid fasat ut skadliga ämnen ur sina produkter och moderna PVC-golv uppfyller till största utsträckning förutsättningarna för att kunna omfattas av miljömärkning. Råmaterialet går att härleda till tydliga källor och produktionen är hållbar och transparent avseende vilka ämnen som används. Därtill ökar andelen ingående bioråvara. Produkterna har en lång livslängd, släpper inte ifrån sig farliga ämnen vid slitage samt är till stor utsträckning återvinningsbara. Därför anser vi att PVC-golv bör kunna miljömärkas enligt de kriterier som gäller för andra material.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

Kährs
1) For us excluding PVC is a prerequisite for a trustworthy Ecolabel. Allowing PVC would lower credibility for flooring brands like Kährs who have developed flooring solutions without these harmful chemicals.
2) PVC often contains plasticizers, so-called phthalates. These are needed for the plastic to bend. In 2015, a ban was introduced within the EU against several of these plasticizers due to their dangerous properties. PVC that is manufactured before that can therefore contain harmful plasticizers. Although the most dangerous phthalates are banned, all soft PVC contains plasticizers – often phthalates. The building block of PVC itself, which is vinyl chloride, is classified as carcinogenic. This is also a factor that makes PVC problematic.
3) A proper accounting of the human health impacts of PVC across its lifecycle, including disposal issues and occupational exposure, finds that PVC leads to the release of dangerous quantities of dioxin and other carcinogens.
4) In response to PVC's toxic lifecycle, many of the world's biggest Fortune 500 companies have committed to phase out PVC and switch to safe and healthy products.
5) Even if PVC is recycled, it perpetuates the problem of harmful additives, and it interferes with the recycling of other plastics. If PVC is landfilled, it leaches toxic additives and releases dioxin.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

PVC Forum Sverige
I kriterium 05 understryks klart och tydligt att PVC och PVDC inte får inkluderas i den nordiska miljömärkningen, utan att några tydliga skäl för detta anges. PVC-Forum ställer sig starkt kritiska till detta.

Ur anteckningar från Nordiska Miljömärkningsnämndens bakomliggande beslut (Nordic Swan Ecolabel's position on PVC in floor coverings), framkommer att grunderna för ställningstagandet att utesluta PVC är direkt felaktiga och tendentiösa. Bland annat lyfts risken fram att det egna varumärkets trovärdighet ska ta skada. Detta baseras på att PVC sedan tidigare har dåligt rykte hos en bredare allmänhet. Vi tror inte att det är ett långsiktigt hållbart resonemang. Trovärdigheten hos Svanen bör främst ligga i att vara baserat på best practice, faktisk miljöpåverkan samt den omställning som PVC-branschen har gjort under de senaste årtiondena.

Vidare framförs vaga, felaktiga och irrelevanta argument samt argument som stämmer för de flesta sorters golv:

- Miljöproblem vid PVC-produktion. Argumentationen bygger till stor del på att kloret till PVC framställs genom användning av kvicksilvermembran. Detta stämmer inte, då metoden har fasats ut i EU. Den enda anläggning som framställer PVC i Sverige (Ineos Inovyn i Stenungsund) har avslutat sin kvicksilvermembrananläggning och gjort omfattande investeringar i en annan anläggning, med minimal negativ miljöpåverkan. Syftet med miljömärkningar bör vara att uppmuntra till investeringar i hållbar teknik och kunna visa upp för allmänheten att man gör nytta.
- Svårt att spåra ursprunget. Detta stämmer inte, då det finns standardiserade metoder för producenter inom EU att upprätta dokument för spårbarhet att uppvisa för kunder.
- Begränsade förutsättningar för återvinning. Uttjänta golv, oavsett material, har begränsade förutsättningar att återvinnas. PVC är ett av de material som har bäst förutsättningar att återvinnas, då det kan smältas om till ny produkt med motsvarande egenskaper. Det innebär att moderna PVC-golv, vars additiver är godkända i REACH-förordningen bör anses vara återvinningsbara.
- Med detta framfört, välkomnar PVC-Forum att diskussionen om att kunna ge PVC-golv miljömärkning förs. Vi uppskattar särskilt att Nordiska Miljömärkningsnämnden ser att skadliga additiver inte längre tillsätts. Därtill vill vi påtala att vi uppskattar att den svenska miljömärkningsnämndens beslut, som innebär att PVC-golv ska kunna omfattas på samma kriteriegrunder som andra material. PVC-Forum välkomnar en fortsatt diskussion med Svanen och finns tillgängliga för att bidra till en fortsatt stark och relevant miljömärkning.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

Tarkett EMEA
We strongly disagree with the proposed flooring criterions for the following reasons: The proposed ban on PVC floors is, according to documentation from the Nordic Ecolabel (NE), not based on scientific principles but rather on fear of:

- "*…negative reactions from the market (for instance producers who have developed alternative products*)"
- "*challenging communications if we include PVC (PVC reputation as a material is still tarnished*)"
- Brand image damage of Nordic Ecolabel expressed as "*there is a clear risk that the trustworthiness of the Nordic Ecolabel would be undermined if Nordic Ecolabelled vinyl flooring were to be found on the market*."

Nordic Swan is a type 1 ecolabel according to ISO 14024, which requires criterions to be developed and selected on scientific principles. The Nordic Ecolabel has not followed this when launching the new criterions for flooring. The "Basis for decision" and process behind the suggested new flooring criterions The quotes above are from the document "Basis for the decision", an official document from NE, giving insight into the background information that the decision body for Nordic Ecolabel, Nordiska miljömärkningsnämnden, NMN had. The document also gives a summary of the discussions on the 5 different national bodies during the final voting of the new criterions.

The "Basis for decision" also contains an extensive technical report on environmental/sustainability aspects of PVC and PVC floors in the Nordics today, written by experts at the Nordic Ecolabel. The conclusion in the report is that, due to the improvements done last decades regarding production, additives, circular solutions etc, it is possible to include PVC as a material for Svan-labelled floors. The technical report also contains a well elaborated proposal on criterions that put very tough, but relevant requirements on PVC floors. During the voting process, the Swedish representatives in NMN supported the technical report, its conclusions and the proposal to adopt requirements also for PVC floorings. However, the other four countries did not acknowledge the technical report and instead focused on brand image topics and turned down the proposal from the experts.

The official proposal and its background document in the official proposed criterion document "Floor coverings and flooring underlays Version 7.0" for the new criterions for floor coverings, the NMN's concern about brand image and fear of "challenging communication" is not expressed as clearly as in the "basis for the decision". Instead, a couple of technical oriented arguments are used as a band-aid to explain why PVC is banned for Svan-labelled floors. The arguments used are vague, not true, not relevant or if applied as a general argument they would probably ban most floorings and other product from being Svanen-labelled. The arguments are well analysed and dismantled in the official reply from companies /organisation like Golvbranschens Riksorganisation, Tarkett Sverige AB, PVC forum etc and I will not go further into these aspects.

The argumentation against PVC in the new criterions begins with the following inconsistent explanation: "Our role as an ecolabelling organisation is to set ambitious requirements that are meaningful in each product group. For this reason, Nordic Ecolabelling does not permit PVC as a material/component in Nordic Ecolabelled floor coverings and flooring underlays." Why isn't it meaningful to set ambitious requirements for a product category that represents the single most sold flooring type in the Nordics? The Nordic Ecolabel is founded and supporter by the Nordic Council of Ministers. It has a clearly expressed mission to "…enable consumers and professional buyers to choose the environmentally best goods and services…" . However, Nordic Ecolabel does not want to give customers and professional buyer this possibility when it comes to PVC-flooring.

Conclusion, The NMN, who takes the final decision on the new criterions, had sufficient scientific background for their voting, even including a complete proposal

on criterions for PVC-floors. Still, four of the five member states ignored the internal scientific report and voted to completely ban PVC. A majority of the Nordiska miljömärkningsnämnden, NMN, is apparently more concerned about:

- brand image
- avoiding conflicts with some powerful licence payers (of non PVC-floors)
- challenging communication than enabling customer to choose environmentally good floors.

This is not acceptable.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

Tarkett Ronneby, Tarkett AB, Tarkett FI, Tarkett DK, Tarkett NO
We strongly disagree with the proposed flooring criterions. This is due to topics such as PVC, recycled content, warranty, traceability, and durability.
The proposed ban on PVC is grounded on arguments which lack fact-based as well as scientifically based reasoning. We oppose this criterion with the following motive:

These are either vague, not true, not relevant, or not only applicable to PVC floors but most flooring in general. It results in inconsistent, non-fact-based arguments. Nordic Swan is a type 1 ecolabel according to the ISO 14024 standard which requires criteria's to be developed and selected on scientific principles. With the information available this is not the case in their assessment of PVC in flooring.

<u>The environmental problems caused by PVC manufacture</u>
This is neither fact-based nor precise. There's no further information as to what Nordic Swan refers to with "environmental problems". With this vague reasoning it's impossible for PVC manufacturers to respond/give feedback to such an argument and understand what needs to be improved, according to Nordic Swan. In the active version (6.13) it is specified that the environmental problems are primarily the mercury method and the possibility of mercury leakage. Note that PVC production using the mercury method is no longer used in EU. Arguments like these are also contradicting their overall goal with the Ecolabel, being a tool to develop sustainable products. It's not clear what the environmental problems are that needs to be improved upon:

"The goal is to enable consumers and professional buyers to choose the environmentally best goods and services by giving an effective tool to help companies develop more sustainable products and services."

<u>Difficulty in traceability</u>
This is not true. All PVC producers in EU have documents available for this. Traceability is an important topic for their customers. This was something Tarkett already highlighted during the consultation period for the now released "Nordic ecolabelling for New buildings version 4.0".

<u>The arguments concerning the end-of-life of vinyl flooring</u>
Recycling of post-consumer building materials is important regardless of product, including flooring. Recycling initiatives for post-use floorings are starting up in several countries in Europe, PVC-flooring being the first and most recycled plastic

flooring on the market. This is mainly due to the good recycling properties of the PVC polymer.
Recycling efforts is also something that Nordic Swan promotes in their new criterion called "Innovation". The fact that "limited recycling" is used as an argument against PVC is a clear example of their inconsistent reasoning. A key point to highlight in connection to their argument of Denmark's PVC waste management is that recyclable PVC products are not to be placed on landfill. Requiring PVC flooring to be recyclable could therefore be a valid criterion.
Another argument used against PVC connected to recycling is about additives (e.g. Cadmium and lead) in older floorings. Nordic swan's criterions already restrict the use of these substances in specifically recycled material (O19). Furthermore, the reference to such additives is not relevant for modern PVC-floors since these substances have been abandoned by the industry several decades ago. The concept that historical product properties should affect products sold today is un-logical.
Their final statement in this criteria-section clarifies that the decision on a PVC ban is not based on problems with additives but the Nordic Ecolabel's "attitude" towards PVC. This is another inconsistency as one of the key arguments was that additives in older flooring are a problem connected to recycling.

Conclusion
Based on what is presented in the available documents, it's clear that Nordic Swan's reason to ban PVC from the flooring product group is not based on facts of today's PVC situation but rather an "attitude" against PVC. This approach is not acceptable for an ecolabel claiming to certify products based on scientific principles with the goal of *" …enable consumers and professional buyers to choose the environmentally best goods and services…".*

Comments based on minutes from the document "Nordic Swan Ecolabel's position on PVC in floor coverings"
We, Tarkett support the Swedish Nordic Swan ecolabel board's opposition to the decision not to allow PVC as a material in flooring criterion that was made by the NMN (Nordiska miljömärkningsnämnden). Sweden highlights the fact that Nordic Swan should trust their independent experts' recommendation, which is to included vinyl flooring in the criterion. Before the NMN meeting each national board reviewed the criterions and arguments were presented. The arguments used are either similar to those in the suggested flooring criterion document or covered by the suggested criterions created by their independent experts, available in the same document in appendix 5.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

Unilin
In our opinion it's a missed opportunity that PVC floor coverings are still excluded for Nordic Swan certification. We understand the position of Nordic Swan in case of floors fully made of virgin PVC.
There is already a significant amount of PVC floors on the market and the current trend is moving even more towards PVC floors (eg. Rigid floor coverings). Label as Nordic Swan should be the front runner for a sustainable future for these floor coverings. The advantage of a PVC floor, is that it can be endlessly recycled "without" loss of material. Circularity in a very pure sense. It's an opportunity to make sure that these PVC floors don't end up as landfill, but are recycled into new PVC floors

instead. Therefor we ask you to reconsider the exclusion criteria for PVC floors and implement an acceptance for these type of floors in case they contain a minimum quantity of recycled content and a minimum limit of hazardous substances. Criteria O4 would be suited for that.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

VinylPlus (joint statement: Bolon, ERFMI, Golvbranschen, PVC Forum, Muoviteollisuus ry, PVC informationsrådet, PVC Forum Norge, VinylPlus-PlasticsEurope, Tarkett)
Nordic Swan misses an opportunity to offer consumers reliable information on PVC flooring

The Nordic Swan states that its goal is to "enable consumers and professional buyers to choose the environmentally best goods and services by giving an effective tool to help companies develop more sustainable products and services". Yet by excluding PVC from its proposed requirements for floor coverings and flooring underlays Version 7.0 without strong arguments, it misleads consumers and professional buyers and creates an unlevel playing field.
Not only do the proposed requirements themselves choose to dismiss PVC flooring without strong arguments, but the underlying rationale, as presented in the NMN basis for the decision document and subsequent Board minutes, reveals a very problematic thinking on PVC, which seems to favourprotecting its reputation and certain customers producing alternative products rather than abiding by sound scientific arguments to provide trustworthy information.
Three points will be elaborated in this paper:

- Reputational arguments have no place in a trustworthy certification
- The use of demonstrably false scientific arguments dismisses the real progress made by the PVC industry in developing more sustainable products
- Double standards in requirements mislead consumers

1. Reputational arguments have no place in a trustworthy certification

The NMN "basis for the decision" document which led to the decision by Nordic Swan national boards to exclude PVC states that the decision to include PVC presents a "risk of negative reactions from the market (for instance producers who have developed alternative products)", and "challenging communications if we include PVC (PVC reputation as a material is still tarnished)". It adds that "there is a clear risk that the trustworthiness of the Nordic Ecolabel would be undermined if Nordic Ecolabelled vinyl flooring were to be found on the market."
Yet shouldn't the bigger risk to trustworthiness be to mislead consumers by providing outdated information on a product instead of challenging consumers' perceptions and informing them about the true sustainability performance of said product?
Moreover, is it the role of a trustworthy certification to protect the business of "producers who have developed alternative products", rather than to equally assess and promote the most environmentally sustainable products?
To be trustworthy, we believe the Nordic Swan Ecolabel should provide an objective assessment of floor coverings and flooring underlays, without bias or double standards, so that the consumer can make the right choices.

Excluding PVC based on reputational concerns, instead of assessing it against strict requirements as is done with other materials where concerns have been raised (laminate, melamine), risks misleading consumers and undermining the trustworthiness of the Nordic Swan Ecolabel.

2. The use of demonstrably false scientific arguments dismisses the real progress made by the PVC industry in developing more sustainable products

The proposed requirements for floor coverings and flooring underlays Version 7.0 motivates the decision to exclude PVC based on the following scientific arguments:

a) The environmental problems caused by PVC manufacture.
   This argument seems to be linked to the use of mercury in the production process. Yet, as acknowledged by the NMN "basis for the decision" document, "the use of asbestos or mercury diaphragms to produce chlorine gas has been phased out by the industry in Europe and replaced by the more energy-efficient membrane cell technology." This is therefore a false argument.
b) It is difficult to achieve complete traceability regarding where the PVC has been manufactured. This is false, given that within the EU, manufacturers have to produce documentation on their products.

The justification then invokes three arguments linked to recycling:

c) Recycling of post-consumer flooring is very limited in the Nordic countries. It is partly the problem of additives that means that recycling does not work. Flooring has a long service life and old flooring that is taken up may contain cadmium and lead which were used as stabilisers, pigments, etc. Adhesive residues and the fact that the base "comes too" when flooring is taken up are additional problems.
d) Used PVC flooring incinerated in waste incineration plants is associated with difficulties. Large amounts of neutralising lime must be added to protect the equipment and to keep emissions within the limit values. It increases the costs of incineration and for handling the waste product, which is classified as hazardous waste.
e) Not all the Nordic countries allow incineration of used PVC. Denmark has waste legislation which states that all PVC must first be sorted for material recovery. Because this does not exist in practice for vinyl flooring, used vinyl flooring ends up in landfill. The Nordic Ecolabel finds it hard to accept Nordic Ecolabelled products going to landfill.

Yet on recycling, it is important to state that:

a) PVC flooring is the first and most recycled plastic flooring on the market. As such, accepting that other flooring products are landfilled, but not PVC, creates a blatant double standard.
b) Cadmium and lead were phased out a very long time ago in flooring and are not a significant issue in recycling PVC flooring.
c) Whilst the recycling of PVC containing legacy substances is a challenge, the industry is investing massively to innovate in this area (see projects such as Revinylfloor).
d) Modern incinerators have the capacity to deal with PVC waste.
e) New technologies are being developed in waste-to-energy plants to enhance the sustainability of the process (see Halosep).

Finally, the document states that "Nordic Ecolabelling's attitude is rather that PVC is not a sustainable material in flooring, whether or not harmful additives are substitute". Yet this assumption is not supported by the facts.

3. Double standards in requirements mislead consumers

Many of the "issues" raised for PVC are not PVC-specific. Therefore, excluding PVC, while other products are permitted to be assessed against strong requirements, creates double standards that are detrimental to the consumers.
Examples of requirements which could be used to ensure that Eco-labelled PVC is truly sustainable, and that are already used for other products, include:

- Description of the product, of the production process and overview of chemicals
- Share of renewable/recycled raw materials
- Chemicals requirements (which include prohibited chemicals)
- Circular requirements (including recyclability)
- Innovation requirement

As an example, the Nordic Swan criteria on buildings have an exception for PVC flooring in certain applications, which shows that PVC flooring can meet strict requirements.
As stated by the Swedish Nordic Swan's board, "Ecolabeling should promote the best products in the category and set uniform requirements for all floor types", and therefore, Ecolabelling of PVC should be possible if strict requirements are met. Such an approach would create a truly non-biased tool for consumers to choose the best environmentally sustainable products to fit their needs.

The use of PVC flooring is on the rise, which incidentally shows that the consumer's perception of PVC is changing. As PVC flooring meets several unique performance requirements, it is in certain applications the soundest choice. Today, the Nordic Swan has a huge opportunity to ensure that sustainable PVC is used. To do so, PVC must be included in the requirements for floor coverings and flooring underlays. Excluding PVC based on reputational concerns would be a significant missed opportunity to inform consumers and promote sustainable solutions.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

4.2.2 Raw materials

O6 Nordic Swan Ecolabelled laminate and wood-based panel

No comments received.

O7 Tree species – restrictions

Miljöstyrelsen
Miljøstyrelsen bemærker, at Nordisk Miljømærkning ikke har fuld tillid til FSC's og PEFC's retningslinjer for bæredygtig skovdrift, når der føres en liste med træarter, der ikke tillades i Svanemærket (http://www.nordic-ecolabel.org/wood/).
Miljøministeriet kan bifalde behovet for, at Nordisk Miljømærkning som frivilligt mærke går længere end lovgivningen i begrænsningen af træarter, der kan anvendes.
Miljøministeriet bemærker alligevel, at når Svanemærket kan anvende FSC og PEFC til at definere og dokumentere bæredygtigt træ og skovdrift, så kunne man også vælge at have tillid til at lade FSC og PEFC definere, hvilke træarter, der kan opnå et certifikat fra de to organer.

Når Nordisk Miljømærkning alligevel vælger at indsnævre feltet af træarter, så bør det til gengæld også ske med udgangspunkt i objektive kriterier, og her finder Miljøministeriet og Miljøstyrelsen det problematisk, at Nordisk Miljømærkning vælger en fremgangsmåde alene baseret på The Rainforest Foundation Norway, som meget ensidigt udelukker tropiske træarter.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement for restricted tree species were reviewed in 2019 and approved by the Nordic Ecolabelling board in 2020. The new 2020-requirement makes it possible to use tropical tree species on the list if certain requirements are met.

O8 Traceability and certification

Bauwerk

- Species name known is ok for Bauwerk Group.
- Chain of Custody certification: If it means that the production site is certified it is ok for Bauwerk Group. If we are FSC certified, we also commit to purchase non-FSC goods according to the FSC self-declaration. (FSC-POL-01-004). Thus we ensure a sustainable procurement.
- Certified wood raw material, bamboo and cork: 70% percent of volume of the wood raw material in Swan product is NOT ok for Bauwerk Group. The availability of certified wood in correct amount, quality, dimensions and delivered in time is not available at the wood raw market from our point of view. For example, Poland's forests don`t want to be FSC certified any more regarding the effort and costs. The 50% is hard to manage enough. We have big effort and extra costs to purchase the 50% in the Swan-certified products. If Swan changes the needed amount from 50% to 70% or more it is no longer manageable by us and in consequence it is possible that we lose the Swan certification.
- Proposal: Swan can add a additional requirements to purchase the Wood raw material. The Purchasing need to be according EUTR (EU) Nr. 995/2010) (and Swiss HHV (814.021).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The demand for a minimum of 70% certified wood raw material comes from Danish regulation for public procurement of wood. However, after several discussions, the requirement has been adjusted and a limit value of 70 % is now required for all wood-based products with exception for oak parquet. For oak parquet, a *stepwise increase share of certified wood raw material from 60 to 70% over 3 years is required .*

Kährs

We don't think this is an appropriate criterion since we have a very rigid own chain of custody buying timber, a big proportion from Sweden. In Sweden a lot of smaller farmers are not able to certify their land with FSC/PEFC because of costs, then this requirement would force us to buy and transport more timber from other countries that Sweden. We would propose that Kährs own chain of custody would be enough for the criteria.
70% is very high when using raw material from Sweden, where we buy our material in a very sustainable way. Smaller farmers are not FSC and PEFC certified because of high prices. We would propose to lower criterion to 60%.

Cork is not available from certified forests. All cork production should automatically beregarded as sustainable as no trees are harvested or harmed, so we suggest cork does not need to come from FSC/PEFC certified forests.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The demand for a minimum of 70% certified wood raw material comes from Danish regulation for public procurement of wood. However, after several discussions, the requirement has been adjusted and a limit value of 70 % is now required for all wood-based products with exception for oak parquet. For oak parquet, a *stepwise increase share of certified wood raw material from 60 to 70% over 3 years is required.*

Miljöstyrelsen
Miljøministeriet havde en kommentar til et lignende kriterie i revisionen af 'Byggeplader" (høringsfrist 31. august). Umiddelbart er kriteriet ikke helt klart beskrevet, og kan give anledning til tvivl om, hvilke procenter, der gælder og hvornår.
Svanemærkets krav lyder:
Chain of Custody certification
All wood raw material and bamboo used in Nordic Swan Ecolabelled products must be covered by a valid Chain of Custody certificate in accordance with FSC/PEFC schemes.
Certified wood raw material, bamboo and cork
A minimum of 70% by weight/volume of the wood raw material, bamboo and cork used in the Nordic Swan Ecolabelled product must come from forests that are managed in accordance with sustainable forestry management principles established by FSC and PEFC and/or be recycled raw material*.
For particleboard, a minimum of 50% of the wood raw material in Nordic Swan Ecolabelled particleboard must consist of post consumed recycled raw material*.
The remaining proportion of wood raw material must be covered by FSC/PEFC's control schemes (FSC controlled wood/PEFC controlled sources) or be recycled material.
Som kravet er anført for spånplader (med minimum 50 % genanvendt træ/indhold) om resten (op til 50 %) bare skal være FSC/PEFC kontrolleret indhold kan give indtryk af, at Svanemærkets krav ikke vil leve op til det krav som den offentliges sektor skal følge ved indkøb af træ/træbaserede produkter i Danmark, og Miljøministeriet kan ikke støtte et sådant krav.
Miljøministeriet støtter krav om et højt og bestemt indhold af genanvendt træ i spånplader så længe, at alt træ er omfattet af en FSC/PEFC CoC og maksimalt 30 % af indholdet er FSC/PEFC 'kontrolleret indhold.
Resten skal stamme fra FSC/PEFC certificeret skov.
Se i øvrigt indkøbsvejledning om indkøb sikring af bæredygtigt træ i offentlige indkøb, pkt. 6.3.1-6.3.3:
https://edit.mst.dk/media/4jifrt3t/vejledning-i-baeredygtigt-trae.pdf

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The demand for a minimum of 70% certified wood raw material comes from Danish regulation for public procurement of wood. However, after several discussions, the requirement has been adjusted and a limit value of 70 % is now required for all wood-based products with exception for oak parquet. For oak parquet, a *stepwise increase share of certified wood raw material from 60 to 70% over 3 years is required .*

Nordic Ecolabelling thanks you for your comments. We agree that the requirement is unclear formulated and therefore has been changed. The idea was to have a requirement for minimum share of recycled materials in particle boards simultaneously with complying with Danish regulation for public consumption of wood.
Due to dialog with stakeholder and other consultation comments the requirement for minimum share of recycled materials in particle boards has been removed. Particle board now has to comply with same wood requirements as all other wood based panels.

O9 Chemicals in resued wood and recycled material in wood-based panels

Unilin
Why putting limits on raw materials used for board products and not on the end product which is certified? During raw board process in the cleaning process of raw recycled materials also "chemical cleaning" can be done, which means that content of some substances can be higher than the limit as raw material but lower than the limit in the certified end product. Would be more logic to put limits on the final product, like this is done for Formaldehyde and VOC emissions. I think we all prefer to get the polluted materials into a process of "chemical cleaning" instead of leaving these products behind with the risk that they end-up as landfill.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement is based on the European Panel Federation standard and recommendation for delivery conditions of recycled wood. The largest possible source of heavy metals or halogenated organic compounds is the recycled wood raw materials. We are not familiar with panel manufactures testing the final product for these substances/compounds.

Miljöstyrelsen
Der er i dette nye kriterie angivet en grænseværdi på 0,5 ppm for indhold af creosot i genanvendt træ til brug i svanemærkede gulvbelægninger, undergulve og træpaneler. Med henvisning til restriktionsforslaget på creosot (https://echa.europa.eu/da/registry-of-restriction-intentions/-/dislist/details/0b0236e186d2119a) og konklusionen heri: "In addition, based on risk assessment, it was concluded that no safe uses can be identified when combining the outcomes of the human health and environment risk assessment", anbefaler Miljøstyrelsen, at genanvendt træ indeholdende creosot slet ikke skal kunne anvendes i svanemærkede gulvbelægninger, undergulve eller træpaneler.

Ifølge kriteriet må 'behandlet træ' ikke anvendes i ovenstående produkter. Definitionen for 'behandlet træ' angives på side 45 som træ indeholdende halogenerede organiske forbindelser og tungmetaller som følge af behandling med træbeskyttelse.
På baggrund af Miljøstyrelsens høringskommentar anbefaler Miljøministeriet, at definitionen af 'behandlet træ' også omfatter træ indeholdende creosot.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted.

O10 Flax (linen) and other bast fibres

Tarkett SpA
You should ask jute suppliers if it's really feasible to test acc. to ISO 6060. Jute suppliers work jute fibers they take from farmers, who treat the jute by water retting in streams. In 2016 I sent you a document where it was also described how water retting is done.
How this requirement applies to linseed oil? The requirement refers to fibres, so it's not clear to me how requirements for fibres apply to seeds. Indeed, in documents to be supplied you write "Statement from the fibre supplier that only approved pesticides are used", focusing on fibres and not on seeds. Probably wording should be slightly modified.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling kindly asks you to contact your supplier and assess if this requirement can be fulfilled. The renewal period will be used to test the requirement.
The requirement has been adjusted so that it is clear it is also set on jute and linseed oil. The requirement is now called O10 Flax (linen), other bast fibres and linseed oil. Nordic Ecolabelling is aware that linoleum flooring manufacturers may buy their raw materials from a multitude of suppliers making the documentation of this requirement a time-consuming task. That is why, it can be accepted that the license holder documents the requirement for 50% of its raw material purchases. This option may give more flexibility and may speed up the documentation process.

O11 Origin

No comments received.

O12 Recycled fibres – test for harmful substances

Miljöstyrelsen
Der stilles i dette nye kriterie krav til test af summen af en begrænset række PFAS i genanvendte fibre. OEKO-TEX standard 100 angiver i sine kriterier (OTS100Standard_02.2023_en_de.pdf (oeko-tex.com)) grænseværdier for flere PFAS samt for totalt indhold af ekstraherbart organisk fluor.
Miljøstyrelsen anbefaler, at testkrav samt grænseværdier for kemiske stoffer i genanvendte fibre til brug i svanemærkede gulvbelægninger og undergulve som minimum harmoniseres med krav til PFAS angivet i OEKO-TEX standard 100.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted to match the latest Oekotex standard regarding PFAS.

O13 Chemicals in recycled leather

No comments received.

O14 Raw materials for bio-based polymers

BASF
A complete ban on palm oil and its derivatives would mean that glycerine, a relevant building block, would be banned as well. This would have a big impact in the manufacture of ingoing substances used in many chemical products.

Moreover, please note that the substitution of palm (kernel) oil by other sources of biobased components is unfortunately not easy. Oil palms have the highest yield per hectare compared to other oil producing crops, hence oil palms need significantly less land to grow the amounts of raw materials needed.
We would like to point out that for palm oil and its derivatives there is a RSPO (Round table of Sustainable Palm oil) certification available, although a complete change to RSPO would be challenging. The use of RSPO certified Mass Balance palm (kernel) oil is already accepted in the current Nordic Ecolabelling criteria on "Cosmetic Products". The use of such certified raw materials would allow that renewable-based products containing palm oil would be produced from sustainable sourced raw materials.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling has not heard from any license holder that the plastic used in their products has been produced employing the renewable materials palm oil and its derivatives. To avoid the environmental impact associated of production of palm oil and its derivatives, Nordic Ecolabelling has decided to ban their potential use in the production of bio-based polymers included in floor coverings and flooring underlays. Palm oil and its derivatives are indeed much more relevant in cosmetics.

Bauwerk Group
Soybean oil or components of soybean oil are contained in some of our products.
Ikea: Must be proven where soy comes from, does not mean from former rainforests.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Please be aware that the use of soybean oil is banned only in the production of bio-based polymers. Soybean oil used as an additive or chemical product is not covered by this requirement.

Miljöstyrelsen
Miljøministeriet bemærker, at mens Nordisk Miljømærkning udelukker brugen af palmeolie og soja, må certificeret sukkerrør gerne indgå (O14, b).
Miljøministeriet anbefaler, at kravet til biogene råvarer stilles i forhold til om produktet kan indgå som fødevare eller det er et rest- eller sideprodukt, som kan oparbejdes til et biologisk materiale, der kan indgå i nonfood-produkter.
Dvs. skellet bør være mellem om der er tale om et 1. genererations biogent materiale eller 2. generation. Og ikke en blanding.
Med kravene i O14 stiller Nordisk Miljømærkning sig midt imellem, uden nærmere forklaring på den forskellig tilgang der er til fx palmeolie og sukkerrør.
Det er ministeriets vurdering, at hvis der gøres brug af certificeret (RSPO) palmeolie eller (RTRS) soja vil det ikke medføre større risiko for skovrydning end ved brug af certificeret sukkerrør. Det bemærkes endvidere, at EU's skovrydningsforordning (EUDR), der omfatter palmeolie, soja, kakao, kvæg, tømmer, naturgummi og kaffe – samt afledte produkter, fx chokolade, bøger og læder, men hverken sukkerrør eller majs, netop stiller krav om at dokumentere skovrydningsfri og legal produktion. EUDR får virkning for store virksomheder fra 30. december 2024, og for SMVer fra 30. juni 2025.

Det kan i den sammenhæng undre, at Nordisk Miljømærkning anerkender brugen af majs (O14, d), uden at stille yderligere krav end oprindelse. Majsproduktion kan også have medført skovrydning, hvilket der ikke tages højde for i udkastet.

Mens skovrydningsfri sukkerrør i højere grad sikres via Bunsucro certificeringen, så bliver det svært for Nordisk Miljømærkning at sikre, at majs i svanemærkede produkter ikke er dyrket på skovryddede arealer.
Miljøministeriet anbefaler stærkt, at Nordisk Miljømærkning fastlægger en overordnede strategi for brugen af biologiske materialer, som kan være dyrket på skovryddede arealer.
1) En tilgang for biogene materialer fra fødevareproduktion kunne være kun at anerkende brugen af 2. generations biogene produkter (dvs. rest- og sidestrømme fra fødevareproduktion), som er omfattet af EUDRs krav om information, der sikrer skovrydningsfri materiale.
Alternativt, kan rest- og sidestrømme fra produkter, der ikke er omfattet af Skovrydningsforordningen, også indgå, når materialet er omfattet af et anerkendt certificeringssystem (fx Bonsucro, RSPO, RTRS).
2) Hvis Nordisk Miljømærkning ønsker, at materialer der kan anvendes som fødevarer, også skal kunne indgå i et svanemærket nonfood-produkt, så bør der ligeså stilles krav om, at materialet er omfattet af et anerkendt certificeringssystem.
Miljøministeriet anbefaler desuden, at biogene råmaterialer, der kan anvendes i fødevarer, ikke må indgå i svanemærkede energiprodukter, hvor materialet kun anvendes til energiproduktion.
Mht. til dokumentation er dette tydeligt for de produktgrupper, der falder under EUDR. For øvrige produktgrupper anbefales det som minimum at kræve massebalanceniveau, men for hver type biogene materiale at vurdere om segregeret niveau vil være mere rimeligt (som er kravet for FSC/PEFC certificering).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been tightened so that only waste or residual products defined in accordance with (EU) Renewable Energy Directive 2018/2001 from other raw materials than sugar cane may be used in bio-based polymer production. In the consultation proposal, other primary raw materials (than Bonsucro certified sugar cane) could be used as long as the raw material was not GMO.
Nordic Ecolabelling is following the revision of EUDR closely and our experts will update relevant requirements in accordance to it.

Tarkett Ronneby
Are biobased polymers made of recycled palm oil, soybean oil or soybean flour ok to use? Can recycled raw materials be genetically modified crops?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Biobased polymers made of recycled palm oil, soybean oil or soybean flour may not be used. Recycled raw materials may not be GMOs.

O15 Emissions to water from production of foams

No comments received.

O16 Blowing agents in foams

No comments received.

O17 Rubber, synthetic latex (SBR) and natural latex

No comments received.

O18 Recycled plastic, rubber and foam – Traceability

Abriso-Jiffy

The document specifies the importance of traceability under section O18 with proof either by a Global Recycled Standard Certificate / Recycled Claim Standard certificate or by providing the name of the recycled material vendor. Abriso-Jiffy is certified with BQA, which is an international, independent, third party certification system for recycled content and should be valid in order to comply with this specific requirement.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The background document has been updated to give the possibility to assess additional certifications systems.

Kährs
We think this is an unnecessary restriction. Many plastic material manufacturing plants are producing products to the food industry, but also to other purposes. Food packages are often made from multilayer films and requirement to recycle this only to FDA products might cause waste instead of reuse.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement forbids the use of recycled material that has undergone recycling processes approved by FDA/EFSA so it can be used in food-contact packaging. The requirement does not forbid the use of recycled multi-layer films in flooring. It all depends on the recycling process used by the recycler.

Tarkett SpA
Regarding the requirement that "Recycled plastic must not come from manufacturing plants that are EFSA* or FDA** approved as food contact material or marketed as compatible with these", I see the risk to not encouraging suppliers to use recycled material if they have to face this additional requirement due to food contact.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. See answer to comment above.

Windmöller
Which are the valid certificates? Possible to list them? Please keep in mind upcoming EU regulations.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Certificates according to the certifications systems named in the requirement are the ones accepted. The licensing department responsible for Nordic Swan Ecolabelling application handling will be responsible to assess which ones are valid or not.

O19 Chemicals in recycled plastic, rubber and foam

Miljöstyrelsen

Kriteriet, som angiver stoffer, der ikke må forefindes i genanvendt plastik, gummi og skum indeholder ikke krav om fravær af polyaromatiske hydrokarboner (PAH).

Som man kan læse andetsteds i kriterieudkastet er mange PAH klassificeret som kræftfremkaldende. PAH kan dannes ved termisk behandling af plast og kan derfor forekomme i genanvendt plast og gummi, hvilket bekræftes i Miljøstyrelsens undersøgelse, Indledende sikkerhedsvurdering af genanvendt plast til emballering af kosmetiske produkter, juli 2021.

Otte PAH'er er begrænset via REACH bilag XVII, indgang 50, stk 5 i artikler til privat brug. Det bør derfor overvejes, om PAH bør tilføjes listen over stoffer, som genanvendt plastik, gummi og skum til svanemærkede gulvbelægninger og undergulve ikke må indeholde.

Miljøministeriet finder det ikke realistisk med et forbud mod PAH'er, men Nordisk Miljømærkning bør have opmærksomhed på PAH'er i genanvendt plast, og at det bør undersøges hvilke konsekvenser det vil have, hvis der sættes krav til disse stoffer i genanvendt plast.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted.

Tarkett SpA, Tarkett AB

It would be useful to have a list of CAS numbers of halogenated flame retardants that have to be detected. Are techniques listed "XRF, X-ray fluorescence or equivalent method" quantitative tests?

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. Test institutes such as Eurofins, RISE, SGS-Fresenius or Intertek all offer to test samples for their content in chlorinated/brominated flame retardants. Those found in the lists related to REACH, POP and RoHS regulations can be tested for, as basic routine.

Windmöller

The limit value of 100ppm for impurities in post-consumer recycling material is hard to achieve. To our knowledge there is hardly any material on industrial scale available!

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. For most of the substances or group of the substances listed in the requirement, XRF can be used first to determine if their content exceed 100 ppm. For all substances or group of the substances, GC-MS can be used to measure their content and all test institutes offer such testing programmes.

O20 Additives – Prohibited substances

Abriso-Jiffy

Under section O20, the document is referring to the requirements of additives to plastic, rubber and foam (both virgin and recycled plastic) actively added to the polymer raw material in the master batch or compound in production. Several products should not be present but threshold limit values are not listed. Abriso-Jiffy products are conform REACH (Registration, Evaluation, Authorization and Restriction of Chemicals, EC 1907/2006) legislation within its limit values which should cover this specific requirement.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comment. As an official type 1 ecolabel it is important that we set relevant requirements that goes further than the legislation and apply the precautionary principle when considered relevant. Extended dialogue with the plastic suppliers is necessary to ensure that the additives used fulfil the requirement. See Nordic Ecolabel's definition of ingoing substances/impurities for requirement level.

Windmöller

A Safety data sheet is normally not necessary for polymers, especially when there is no SVHC or hazardous chemical inside.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comment. As an official type 1 ecolabel it is important that we set relevant requirements that goes further than the legislation and apply the precautionary principle when considered relevant. Extended dialogue with the plastic suppliers is necessary to ensure that the additives used fulfil the requirement. See Nordic Ecolabel's definition of ingoing substances/impurities for requirement level.

O21 Wood fibre and plastic

IKEM

IKEM ifrågasätter av ovan nämnda skäl att PVC, PVDC och PET utesluts.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comment. The requirement has been changed. Stakeholder comments are sceptic to include traditional WPC in the product group. However, the requirement was formulated wrongly. The intention was that only recycled material that is already a composite material should be included in the criteria. See also answers to comments to requirement O5 (PVC).

Miljöstyrelsen

Miljøministeriet er meget skeptisk over for muligheden for at anvende WPC i et miljømærket produktet, og mangler miljøfaglige argumenter og dokumentation for, hvorfor det er miljømæssigt fordelagtigt.
Nordisk Miljømærkning bør dokumentere miljøpotentialet, hvis der åbnes for brugen af kompositmateriale i svanemærkede gulve lister.
Ligeså bør erfaringer mht. tilbagelevering af spild fra produktgruppen Udendørsmøbler og legepladser kvalificeres såvel som kvantificeres, og ikke mindst

bør der ses på de kvalitetsmæssige forhold om WPC produkter. Holder produkterne længe, og opretholdes kvaliteten gennem produktets levetid.
Yderligere er der ikke erfaring med sorteringen af WPC-produkter på genbrugspladser og om de skaber problemer i affaldsleddet, hvis de fx lægges i containeren til hård plast eller træ til genanvendelse, fremfor til brændbart affald, fordi WPC med den nuværende viden ikke kan genanvendes.
Miljøministeriet stiller sig derfor særdeles kritisk over for brugen af WPC-kompositmaterialer i svanemærkede gulve på grund af kompositmaterialers praktiske muligheder og lille potentiale for at blive genanvendt.
For produktgruppen Udendørsmøbler og legepladser kan der derimod være miljømæssige argumenter, da materialet ikke behøver tilsat og løbende vedligeholdes med træbeskyttelsesmidler og maling. Det er sådanne erfaringer, der bør samles op på, før WPC kan anvendes i andre svanemærkede produkter.
Endelig er der et ikke belyst forhold om indeklima ved brug af WPC i produkter til indendørs brug. Hvor rene fraktioner er træ-, hhv. plastfraktionen i WPC og giver det anledning til migration af farlige kemikalier under brug.

Fødevaregodkendt materiale:
Da genanvendt PET (rPET) specifik er nævnt og specifikt udelukket, er langt den største andel af den genanvendte plast godkendt til fødevarebrug udelukket i et svanemærket gulv.
Miljøministeriet foreslår alligevel, at det tilføjes, at der ikke må indgå fødevaregodkendt plast (EFSA- og FDA-godkendt) i WPC produktet, såfremt dette accepteres i kriterierne på trods af ovenstående bemærkninger.
Umiddelbart stilles der ikke de samme krav til indholdet af farlige kemikalier i træ, der indgår i WPC, som i øvrige kriterier for recirkuleret træ.
Hvis WPC inkluderes i produktgruppen er Miljøministeriet enig i, at kun post-consumer materiale skal kunne indgå i WPC.
Ligeledes mener Miljøministeriet, at der bør gælde de samme krav til kemikalier i WPC som til recirkulerede materialer i andre anvendelser, og er derfor enig i, at krav O18-O20 også skal gælde WPC.
Det foreslås også, at genanvendt træ i WPC skal overholde kravet til anden anvendelse af genanvendt træ: O9 Chemicals in reused wood and recycled material in wood-based panels.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The intention behind the requirement was not to introduce "traditional WPC, known from outdoor furniture/decking" into the criteria. The intention was that only recycled material that is already a composite material should be included in the criteria. Materials that are produced by mixing pure fractions of different materials, e.g., wood and plastic, should not be covered by the criteria, as this produced composite material is difficult to recycle/separate in the recycling process.
Composite materials as e.g., composite packaging can be a difficult material to recycle since it consists of different materials. The materials are normally sent to incineration. By manufacturing a panel from the recycled composite material, the material gets a new area of use (panel) with long technical lifetime (up to 30 years[7]).
The name of the requirement has been changed to "Recycled composite" and the requirement is now saying that the composite material must consist of 100% by weight of recycled materials of which at least 50% must be post-consumer recycled materials.

[7] https://se.recoma.com/product/basic-byggskiva, visited september 2023

New requirement has also been introduced to chemicals in recycled composite.

O22 WPC – Additives – Prohibited substances

Miljöstyrelsen
Miljøstyrelsen har ingen tilføjelser til listen over forbudte additiver til WPC (wood-plastic-composite).
Miljøministeriet bemærker dog, at der muligvis er overlap mellem krav O22 Additiver til WPC og så krav O20, additiver til virgin og genanvendt plast, gummi og skum.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.

4.2.3 Production

Sherwin Williams, SVEFF
Other comments We are missing exemption for 2K coating systems where the hardener can be classified as CMR 2 or have substances that are classified as CMR cat. 2 that are intentionally added. Please add any exemptions similar as in the current Floor requirements or same as in Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Your suggestion has been added.

O23 Antibacterial substances

IKEM
IKEM har inga synpunkter på förslagen om användning av kemikalier i produktionen av golv. Vi anser att kemikalier som faller inom ramarna för REACH-förordningen ska kunna användas inom gränsvärden som är godkända, för miljömärkning av golv.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. As an official type 1 ecolabel it is important that we set relevant requirements that goes further than the legislation and apply the precautionary principle when considered relevant.

O24 Classification of chemical products

Kährs
non-consistence

1. H412 is not mentioned in the table under Toxic to the environment, but it's stated as an exception for UV curing products processed in a closed system.
2. Why are H400 and H410 no longer excepted for UV curing surface treatment products regarding environmental hazardous classifications?
3. In criteria version 6.13 it says that UV curing surface treatment products are excepted from the environmental hazardous requirement, but in the new proposal just H411 and H412 are mentioned as exceptions.
4. Why is the two-component products exception described in section 1.1 and 4 of the current criteria version no longer included? (O24-O25)

5. NEW CMR cat2 is not allowed to be used. There should be an exemption for TMPTA (this product will be cancerogen cat2 in Dez 2023; classification limit 1 %)

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified and exemption for two-component products has been added in requirement O25. Nordic Ecolabelling will wait until the end of the renewal period before adding an exemption for the substance TMPTA. Nordic Ecolabelling hopes that one year is enough to phase it out. Continuous dialogue is desired.

Mercene
UV curing coatings have an exemption if they are classified H411 and H412. H412 is not mentioned in the table on page 31. Is this a typo? Should H412 be in the table, or should it be taken away from the exemption?
In previous criteria this exemption for UV coatings applied regardless of H4xx phrases, if the manufacturer can show the process is closed, controlled with no discharge to recipients etc. Especially for the roller coating process the possibilities to fulfil these requirements are very good. From our own experience visiting numerous roller coating lines at different manufacturers, this is something that is taken care of in a responsible way in all cases.
The alternatives to an acrylate monomer with e.g. H410 may be less reactive and could potentially result in lower performance and thus shorter life span for the final product, or alternatively require more energy to be cured in a good way. Again, alternatively it may be possible to find monomers that work technically but have higher risks for the workers, still being within what is allowed in your criteria.
We therefore propose not to limit this exemption to products classified H411 (and H412 if that was not a typo), but to leave it as a general exemption (provided closed process etc.). In this way you leave an opportunity for the formulator to minimize the overall risks. Possibly you could require a roller coating process for a valid exemption.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified.

Parador
1. Classification H372

Exemption should be granted for UV curing products containing a maximum of 0,5% by weight of quarz (CAS 14808-60-7) as long as it is non-respirable, bound in resin matrix.

2. Classification H361

Exemption should be granted for UV curing products containing a maximum of 3% by weight of Phenoxyethylacrylat (CAS 48145-04-6) as this substance is inhazardous after full cure.

3. Classification H410 should be added to the following exemption:
   Classifications H411 and H412 for UV curing products under the following conditions: There must be a controlled closed process where no discharge to recipient takes place. Spillage and general waste (e.g. cleaning residue) must be collected in containers approved for hazardous waste and handled by a waste contractor.

Add on question / remark:
Or does

- Exemption for UV curing products: Description of the process and how waste and residual waste are handled, including information about who receives the wastes. mean that UV cured products are in general exempted from criteria O24?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

1. *Exemption for UV curing products containing a maximum of 0,5 % by weight of quarz has not been added as its content should fall under the impurities limit value (1000 ppm in the chemical product).*
2. *Nordic Ecolabelling will wait until the end of the renewal period before adding an exemption for the substance. Nordic Ecolabelling hopes that one year is enough to phase it out. Continuous dialogue is desired.*
3. *Exemption in requirement O24 has been corrected and clarified.*

Sherwin Williams
The exception for Environmental hazardous substances is not in line with the table and O32. The exemption is mentioning H412 which is not stated in the table. In addition, this is H400 and H410 is not exempted anymore for UV curing products as in current requirements. To our understanding Nordic Swan is aiming to harmonize their criteria documents, but criteria does not harmonize in regards to Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified

SVEFF
The exception for Environmental hazardous substances are not in line with the table and O32. The exemption is mentioning H412 which is not stated in the table. In addition, this is H410 is not exempted anymore for UV curing products as in current requirements. To our understanding Nordic Swan is aiming to harmonize their criteria documents, but criteria does not harmonize in regards to Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified.

Tarkett Ronneby
This should not be a problem. Factories which are ISO certified have safety management protocols implemented covering this.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

Unilin
There is a special exemption for CMR in Isocyanates (used for PU underlays). about (free) Styrène (R2) in polystyrene products ?
In other Nordic Swan requirements (renovation of buildings) there is particular reference to free styrene.

*) In EPS and XPS insulation material manufactured by polystyrene, residues of styrene monomer are allowed in maximum l000 ppm in the polystyrene (i.e. in the raw material).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Definition for impurities is the following: "Residues from production, incl. raw material production, which remain in the chemical product at concentrations below 1000 ppm (0.1000% by weight). Examples of impurities are residues of reagents incl. residues of monomers, catalysts, by-products, scavengers (i.e., chemicals that are used to eliminate/minimise undesirable substances), detergents for production equipment and carry-over from other or previous production lines." Because of this definition the exemption for residues of styrere monomer is not needed. Impurities do not have to fulfil the requirements.

Välinge
Har en fundering kring de nya kriterierna och det gäller O24, där man gör undantag för H410 när det gäller linoleum produktion, men inte för UV-härdade lacker, enligt punkterna nedan. När lacken härdat finns inte råvaran kvar som har H410, så varför göra skillnad?

Vi har några nya produkter som behöver härda lite snabbare och då är det svårt att komma ifrån dessa råvaror vad jag förstår, accelerator som accelerator.

- Accelerators for linoleum production are exempted from classifications H400 and H410 and may be present in amounts up to 1% by weight of the linoleum.
- Classifications H411 and H412 for UV curing products under the following conditions: There must be a controlled closed process where no discharge to recipient takes place. Spillage and general waste (e.g. cleaning residue) must be collected in containers approved for hazardous waste and handled by a waste contractor.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified.

Windmöller
There are exceptions made for Linoleum accelerators: H400, H410, H411. Is it sure that these accelerators do not leech out of the product? Who is deciding on these exceptions?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The exemption for accelerators in linoleum has been removed. It is deemed as not relevant anymore. This exemption comes from the previous generation of the criteria.

O25 Classification of ingoing substances

Agfa
For water based inks:

- There might not be CMR substances added. This should be allowed with 0.1%w for category 1 Carc and Mut and 1%w for category 2 Car and Mut and 0.3% for cat 1 for Reprotox and 3%w for cat 2 Reprotox.

- VOC content=> definition should be the one of 1999/13, not the one of paints
- MIT concetratio allowed is too low: 500ppm should be allowed.

In general, hazard classification of substances can vary depending on the supplier. This should not be the case as depending on the raw material supplier, one ink supplier will have a disadvantage in comparison with another ink supplier.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. As an official type 1 ecolabel it is important that we set relevant requirements that goes further than the legislation and apply the precautionary principle when considered relevant. In definition of VOC is referred to 2004/42/EC also in our criterias for other product groups. We have updated the requirement 026 for preservatives and changed the limir for MIT to 200 ppm (0.02 % by weight).

Bauwerk Group
Benzophenone classified H350, 0.5% is in the process of being replaced.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We do not add exemption for benzophenone because it is in the process of being replaced. Nordic Ecolabelling will wait until the end of the renewal period before adding an exemption for the substance. Nordic Ecolabelling hopes that one year is enough to phase it out. Continuous dialogue is desired.

DFL
Vi har noteret, at man har valgt at tilføje de nye klassificeringer for ED HH, ED ENV, PBT/vPvB, PMT/vPvM på råvare-niveau. Til det skal vi bemærke, at det ikke er realistisk at stille kravet og forvente, at råvareleverandørerne er modne til at videregive disse informationer endnu.
Vi finder, at der bør henvises til de datoer, som er fastsat i selve CLP-forordningen for indfasning af de nye klassificeringer, hvor man har indtil den 25. maj 2025 for nye stoffer på markedet og indtil den 1. november 2026 for stoffer, der allerede er på markedet og for nye blandinger (inkl. råvareblandinger) indtil 1. maj 2026 og for blandinger, der er på markedet indtil 1. maj 2028 (jf. New hazard classes 2023 - ECHA (europa.eu).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. We realize that there might be some challenges. We will follow this closely to ensure that no problems are caused to applicants by this.

Kährs
In the table under Endocrine disruption for the environment EUH431 is mentioned two times, the hazard code for ED ENV 1 should be changed to EUH430.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. This error has now been corrected.

Parador
Classification H361

Exemption should be granted for UV curing products containing a maximum of 3% by weight of Phenoxyethylacrylat (CAS 48145-04-6) as this substance is inhazardous after full cure.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling will wait until the end of the renewal period before adding an exemption for the substance. Nordic Ecolabelling hopes that one year is enough to phase it out. Continuous dialogue is desired.

Sherwin Williams
We would like to have an exception for Hydroquinone (CAS:123-31-9) as it is used as a stabilizer in UV curing coatings. We do not intentionally add it in our products but are used by our raw material supplier. Why is there an end date for the TMP classification? What is the reason to this? There is no end date in Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling will wait until the end of the renewal period before adding an exemption for the substance. Nordic Ecolabelling hopes that one year is enough to phase it out. Continuous dialogue is desired. We have now removed the end date for exemption of TMP.

SVEFF
We would like to have an exception for Hydroquinone (CAS:123-31-9) as it is used as a stabilizer in UV curing coatings. The substance can be added by the raw material supplier.
Why is there an end date for the TMP classification? What is the reason to this? There is no end date in Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling will wait until the end of the renewal period before adding an exemption for the substance. Nordic Ecolabelling hopes that one year is enough to phase it out. Continuous dialogue is desired. We have now removed the end date for exemption of TMP.

O26 Preservatives

Bauwerk group
All our water based lacquer systems contains <0.1% per weight, means <0.05% total
We need these preservatives in our water based lacqueres, outherwise weh ave to change to 100% UV systems on fossil mineral oils.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have updated the requirement and changed the limit value of MIT to 200 ppm (0.02 % by weight).

Kährs
Add CAS numbers for the chemical substances included in the requirement

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have now added the CAS-numbers for the chemical substances.

Sherwin Williams
Much lower concentration then before. What is the background to have a much lower concentration that what is in the current criteria. Industrial coatings are many times classified as H317 1A. We do not understand the issue if a product contains MIT above the classification limit that it would be an issue.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have updated the requirement and changed the limit value of MIT to 200 ppm (0.02 % by weight).

SVEFF
MIT has much lower concentration than before. What is the background for this?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have updated the requirement and changed the limit value of MIT to 200 ppm (0.02 % by weight).

Tarkett SpA, Tarkett AB
it would be useful to have a list of CAS numbers of preservatives.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have now added the CAS-numbers for the chemical substances.

O27 Prohibited substances

Bauwerk Group
D's: are contained as an impurity in a raw material and can be detected now and then during the 3-day measurement. To explain: the raw material contains a silicone oil in small quantities. The D's are in equilibrium with it. Even if they are separated, they are found again after some time.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. For this reason requirement has exemption for D4, D5 and D6 which are residues from raw material production and they are allowed in concentrations up to 1000 ppm each in the silicone raw material.

Bona
Vi tolkade det som att ni specifikt ville få in vår bedömning kring textformuleringen för kemikalier som gäller ytbehandling: ftalater, flamskyddsmedel mm. Vi tycker att det är fullt rimligt att ställa dessa krav på framtida ytbehandlingsprodukter. Det ligger vidare helt i linje med vår uppfattning om vilken typ av kemikalier som bör undvikas för produkter som skall hävdas vara miljövänliga.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. As an official type 1 ecolabel it is important that we set relevant requirements that goes further than the legislation and apply the precautionary principle when considered relevant.

O28 Nanomaterials

AkzoNobel
Gällande O28 Nanomaterial inväntar vi svar från våra leverantörer angående modifierade SAS men vår bedömning är att det kan bli ett problem om modifierad SAS inte fortsätter vara undantaget.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. An exemption has been introduced again. The exemption is now more specific and only "surface-treated pyrogenic silica" and the surface treatment must meet our chemical requirements.

DFL
Vi har to kommentarer/ønsker til O28
Det første vedrører syntetisk amorf silica (SAS), som i forslaget er formuleret således:
"Synthetic amorphous silica (SAS). This exemption applies to non-modified SAS"
Vi håber, den formulering kan ændres. Vi ønsker, at undtagelsen formuleres, så den bliver den samme, som den, der gælder for syntetisk amorf silica i det forholdsvis nye kriteriesættet for svanemærket nybyggeri, der lyder således:
*** Dette gælder for umodificeret syntetisk amorf silica. Kemisk modificeret kolloid silica kan indgå i produkterne, hvis silicapartiklerne danner aggregater i det endelige produkt. Enhver overfladebehandling af nanopartikler skal opfylde O14 (klassificering af kemiske produkter) og O18 (forbudte stoffer).
Desuden savner vi en undtagelse for modificeret calciumcarbonat. Fyldstoffer, herunder CaCO3 er som oftest overfladebehandlet, så de må betragtes som værende modificerede. Derfor er det helt nødvendigt, at en undtagelse bliver formuleret her.
Vores ønske og forslag er, at undtagelses ordlyd bliver: "Calciumcarbonat (CaCO3) medeller uden kemisk modifikation", som også har været benyttet i andre kriteriesæt.
Vi håber, I har forståelse for vores kommentarer og at I vil skelne til dem i den efterfølgende proces. Har I spørgsmål til kommentarer, så tag endelig fat på os.
På forhånd tak.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The exemption is now more specific and only "surface-treated pyrogenic silica" and the surface treatment must meet our chemical requirements.
We have not heard from raw material producers need for this exemption and do not therefore add exemption in the requirement. Nordic Ecolabelling will wait until the end of the renewal period before adding an exemption for the substance. Continuous dialogue is desired.

Evonik
Annotation on the proposal for criteria for Nordic Swan Ecolabelling for Floor coverings and flooring underlays, Version 7.0.
In the draft version for Consultation concerning revised criteria for "Nordic Ecolabelling for Flooring coverings and flooring underlays, generation 7" all nanomaterial according to the following definition (Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01)) should be not allowed.

'Nanomaterial' means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50 % or more of these particles in the number-based size distribution fulfil at least one of the following conditions: (a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm; (b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm; (c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.
According to criteria O28, there are some exemption from this general exclusion. One of those is named“Synthetic amorphous silica (SAS). This exemption applies to nonmodified SAS.

As it refers only to non-modified synthetic amorphous silica, surface modified silica such as “Silane, dichlorodimethyl-, reaction products with silica”, can not be used in connection with the Nordic Swan Ecolabel. However, since surface-modified silica, are essential in many applications, this limitation is incomprehensible.
To our opinion the addition of surface-treated silica is needed for reasons concerning **application technology**.
Silica plays an important role in coating formulations; this is true for non surface treated types - having a very polar character – as well as surface modified types.
One key functionality of small particle size silica is rheology modification – silica is used to create a pseudoplastic rheology profile in water based as well as solvent based and solvent free – such as UV-curable - Architectural systems, Wood Coatings & Pigment Concentrates. Such pseudoplastic rheology profiles prevent sedimentation of high density particles in the liquid paints & intermediates and provide optimization of rheology for application like e.g prevention of sagging of coating films applied on vertical substrates. For the different formulations, hydrophilic grades (e.g. AEROSIL® 200) as well as surface modified grades (AEROSIL® R 972 & AERODISP® WF 7620) are used.
A second very important functionality is the improvement of mechanical film resistance – a rather high amount of silica particles is used to optimize the film properties like scratch & abrasion resistance. Choice of the grade depends on the formulation, surface modified grades (e.g. AEROSIL® R 9200) are preferred to obtain the needed high dosages. Compared to the non-modified SAS types, less energy is required in the dispersing process which results in a higher production efficiency.
Another very important effect obtained by the use of silica particles is adjustment of gloss and efficient matting of coating films. Surface modified silica grades are e.g. needed for UV-curable formulations to prevent inacceptable viscosity increase at high dosages or to avoid interaction with polyurethane thickeners in water based formulations.
Especially for hydrophobic AEROSIL® R grades there is no alternative eg. in UV Coating formulations which offer the required technical performance.

Furthermore the surface treatment of Silica does not change the size parameters (i.e. relevance for “nano”) significantly. The thickness of the “layer” caused by the attachment of Silanes or other surface modifiers onto the surface of the particles is so low compared to the size of the particles that it can be neglected.
Additionally, the surface modification step takes place after the particle genesis and the respective formation of aggregates and agglomerates. That means that the surface modifiers do not influence the presence of “nano-sized matter” in our processes. Due to the following arguments, it is not a cause for concern as modified

silica in comparison to the non-modified silica don't show significant differences in toxicological and ecotoxicological properties.

Reasons concerning toxicology
Modified Synthetic amorphous silica (SAS) are treated forms by silanization. This treatment does not affect particle size and particle size distribution but renders the material more hydrophobic by condensation of the surface silanol groups.
The surface treatment agents are alkoxysilanes, chlorosilanes, silazanes, and/or siloxanes and have been generally registered under REACH. The use as surface treatment agents is described in the REACH dossiers and exposure scenarios of specific alkoxysilanes, chlorosilanes, silazanes and/or siloxanes. The carbon content at the surface of silanized SAS is less than 20 wt.-% typically less than 10 wt-%. No significant concentrations of the unreacted surface treating agent remain in the final product.
The surface-treated and non-surface-treated forms are expected to have the same (eco)toxicological profile because the influence of surface treatment on dissolution rate and solubility which was demonstrated in various in vitro experiments has not resulted in biologically relevant differences in bioavailability and toxicokinetics nor were there significant differences in (eco)toxicological outcomes of representative materials tested in key in vivo studies.

SAS is a highly pure nanostructured powder material produced by the thermal or wet synthesis route. SAS powder is placed on the market as micron-sized aggregates and agglomerates with an internal structure in the nanoscale (ISO definition of nanostructured material). The aggregates cannot be broken down into smaller structures by the usual shear forces as applied in normal industry processing conditions.
For SAS particles, the abundance of negatively charged groups on the external particle surface and the number of accessible silanol groups mainly determine the extent of the interaction with biological structures. Condensation with surface silanol groups is the desired reaction when modifying SAS by surface treatment. The expected decrease in biological interactions has been demonstrated in multiple studies. Importantly, 99 % of the particles of both surface-treated and untreated marketed products are beyond the respirable size. Any mortality that was observed in acute toxicity animal studies was due to suffocation associated with the extremely high particle numbers administered and is not associated with any intrinsic toxicity of the product (Krueger et al. 2022).
Surface-treated and non-surface treated SAS may induce reversible pulmonary effects in animals via an inflammatory process (Weber et al. 2018). Recent in vitro studies with alveolar macrophages demonstrated that hydrophobic coating reagents, which bind covalently to the SAS surface, abrogate the bioactivity of SAS even under serum-free in vitro conditions (Wiemann et al. 2022).
The justification is based on information included in the REACH registration dossier (Please see: https://echa.europa.eu/de/registration-dossier/-/registered-dossier/15556/1/2.
None of the recent available data for surface-treated and non surface-treated SAS gives any evidence for a mechanism of systemic toxicity that may raise concerns with regard to human health or environmental risks.

Ecotoxicolocial effects and environmental fate of Synthetic Amorphous Silica (SAS)

➢ Non-surface treated (hydrophilic) SAS
Amorphous silica is a naturally occurring substance. The synthetic form (synthetic amorphous silica, SAS) is of higher amorphous purity than the naturally occurring amorphous silica and does not contain contaminants. Both natural amorphous silica and SAS have the tendency to aggregate and agglomerate but are not expected to undergo any transformation in the atmospheric or terrestrial compartment, apart from dissolution by water and precipitation in sediments. Based on the physicochemical nature and structure of SAS, no photo- or chemical degradation is expected. The hydrolysis process is considered a rate-limiting step in the dissolution of SAS in water. Once released and dissolved into the environment no distinction can be made between the initial forms of silica. At normal environmental pH, dissolved silica [Si(OH)4] exists as orthosilicic acid which is the bioavailable form for aquatic organisms and plays an important role in the biogeochemical silicon cycle in the natural environment. Dissolved silica is a major nutrient for many aquatic systems and certain terrestrial plants.
Freshwater and marine organisms such as diatoms, radiolarians and many plants use silicic acid to build up their skeletons or other structures. Grasses may contain up to 10 % dry weight of silica. Due to its inherent physico-chemical properties, such as the absence of lipophilicity as well as the capability of organisms to eliminate absorbed SAS components, bioaccumulation is also not expected.
Ecotoxicological effects of SAS are not to be expected due to the ubiquitous presence of silicon dioxide in the environment, as evidenced by several experimental studies conducted according to OECD test guidelines under GLP conditions (Please see: https://echa.europa.eu/de/registration-dossier/-/registered-dossier/15556).

Studies on fish, daphnia and algae using SAS showed no toxicity. Physical effects on daphnid mobility were observed in tests using unfiltered suspensions at 1000 mg/L and higher. Test results of SAS based on loading rates are as follows: 96h LL0 (Danio rerio): 10,000 mg/L (suspension); 96h NOEC (Pimephales promelas, colloidal silica): 500 mg/L; 24h EL0 (Daphnia magna): 1000 mg/L (suspension), 24h EL50 (Daphnia magna): >10,000 mg/L (filtered suspension). The 21d NOECs for daphnid reproduction were set to 100 mg/L or higher for the dissolved fractions of SAS. For algae, the 72h NOEC (growth rate, yield) was 173 mg/L (dissolved fraction, the highest tested concentration), with the EC50 values for both growth rate and for yield at > 173 mg/L. In the studies using earthworms, SAS also showed no toxicity after exposures to the levels exceeding current maximum recommended test concentrations. The lowest 4wk and 8wk NOECs for mortality and reproduction were at 50 g/kg soil (dw) and 25 g/kg soil (dw), respectively.

➢ Surface treated (hydrophobic) SAS
The surface treated synthetic form is of high purity and does not contain crystalline and other contaminants. SAS which is originally hydrophilic can be rendered physico-chemically by surface modification (i.e. organosilane). This surface treatment process does not change the solid properties of the core inorganic SAS and it alters only physico-chemical properties. The surface treated SAS is mostly hydrophobic, very stable and has a very low solubility in water. Hence, hydrolysis of the surface treated SAS is negligible, but limited breakdown may occur following wetting. Consequently, it is barely bioavailable via the water phase and also not accessible to biological transformation by microorganisms. Furthermore, the relative proportion of carbon (C) content of the surface treated SAS is less than 20 wt.-% typically less than 10 wt-% based on the elemental analytical. The weight of surface treatment agents is

substantially lower than that of the core inorganic SAS, and thus the surface treated SAS are essentially inorganic in nature, and thus, biodegradation is not expected. Surface treated SAS is not volatile and has no lipophilic character. It will therefore after being wetted settle mainly into soils/sediments and be expected to combine indistinguishably with their layer due to the chemical similarity of core SAS with inorganic soil matter. It is floated on the water surface before being wetted. Due to the inherent physicochemical properties of surface treated SAS, such as absence of lipophilicity, as well as no indication of bioaccumulation potential of core SAS, bioaccumulation is also not expected.
Therefore, ecotoxicological effects of surface treated SAS are not to be expected the same as non-surface treated SAS. It is evidenced by several experimental studies conducted according to OECD test guidelines under GLP conditions (Please see: https://echa.europa.eu/de/registration-dossier/-/registered□dossier/15556).
Additionally, terrestrial toxicity of surface treated SAS have been investigated by using earth worms according to OECD TG 222 recently and they substantiate no ecotoxicological effects of surface treated SAS (Senn, 2021a; 2021b).
Studies on fish, daphnia and algae using surface treated SAS (i.e. silanized SAS) showed no toxicity. Test results of surface treated SAS based on loading rates are as follows: 96h NOELR (Danio rerio, Oncorhynchus mykiss) 1,000 mg/L or higher (filtered and non□filtered suspension); 48h NOELR (Daphnia magna) 1,000 mg/L (filtered suspension) or higher. 72h NOELR (algae) 1,000 mg/L or higher (filtered suspension). No physical effects were observed in daphnia tests at 1,000 mg/L when filtered suspensions were tested. In the recent studies using earthworms, surface treated SAS also showed no toxicity at the current maximum recommended test concentration of 1 g/kg. Accordingly, the lowest 4wk and 8wk NOECs for mortality and reproduction were set to 1 g/kg soil (dw) and higher respectively (Senn, 2021a; 2021b).
Consequently, none of the recent available data for non-surface treated and surface treated SAS gives any evidence for a mechanism of toxicity that may raise concerns regarding environmental risks.

Summary
Based on the above mentioned reasons, we don't see any concern with respect to the nano structure of non-modified as well as surface treated silica.
So our proposal is to exempt from the nano restriction not only the"non-modified synthetic amorphous silica" but to enlarge the exemption also to the "surface-treated pyrogenic silica, as long as the silica particles form aggregates or agglomerates in the end product and fulfill also the other criteria given in the draft".

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The exemption has been reintroduced. The exemption is now more specific and only "surface-treated pyrogenic silica" and the surface treatment must meet our chemical requirements.

Mercene coatings
Regarding the withdrawn exemption for surface modified synthetic amorphous silica (SAS), I cannot put it is as eloquent and detailed as Mrs Cordula Blug of Evonik, but we fully support her statement submitted to you 3rd August. We think surface modified SAS should be allowed if the surface modification does not prevent the formation of aggregates.
However, we have a couple of additional points of view we want to submit:

A modern formulator of paints, lacquers, adhesives and the like, will always strive to optimize the product for best economy, least environmental impact, and best performance. To unnecessarily restrict the tools at hand means that one or more of these targets are impaired. In the coatings industry we still have a lot of work to replace old fashioned products with lousy environmental properties, for example solvent borne products. Such a development often includes environmental targets such as fulfilling the criteria of the Nordic Swan. If the formulators tools are unnecessarily restricted, this work may take longer time or may not meet the market at all because economical or performance targets are not met. Therefore, we think that new requirements should be based on actual hazards or at least potential hazards where there is still a risk that harm is done. This is a segway to the next point.
During the discussions we had this spring, Evonik, and to some extent Mercene, argued why surface modified SAS (of the type discussed) do not pose any higher nano related risks compared to unmodified SAS. We had a long discussion, so it is possible that I missed arguments from the Nordic Swan, but I did not hear a good argument why the surface modified SAS would pose a higher risk than unmodified SAS. If you are going to restrict the use of surface modified SAS (where the surface modification does not prevent aggregation) you need to show us that this material has a higher risk level than the unmodified ones.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The exemption has been reintroduced. The exemption is now more specific and only "surface-treated pyrogenic silica" and the surface treatment must meet our chemical requirements.

Sherwin Williams
Missing detailed information on what modified SAS. Difficult to make an impact assessment when there is not enough information.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. The exemption has been reintroduced. The exemption is now more specific and only "surface-treated pyrogenic silica" and the surface treatment must meet our chemical requirements.

O29 Volatile organic compounds

Agfa
For UV inks:
We have inks that comply, except for the VOC content=> definition should be the one of 1999/13, not the one of paints.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. In definition of VOC is referred to 2004/42/EC also in our criterias for other product groups.

AkzoNobel
Vi anser att i krav O30 om formaldehyd bör också parkettgolv ingå i undantaget eftersom samma typ av harts används för tillverkning av både laminat- och parkettgolv. Av samma anledning anser vi att parkettgolv även ska läggas till i undantaget för VOC i O29.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have not heard from any license holder manufacturing parquet that this requirement could cause any issue. Consequently, an exemption from requirement O29 is not granted for parquet. If during the consultation period, the license holders brings this topic again, granting an exemption will be reconsidered.

Kährs

1. Re-formulation desired for VAH in adhesives (max 0,1 w-%) to:

Exceptions:

- In adhesives volatile organic compounds (VOCs) may be present to a maximum of 3% by weight. Of which, VAHs may be present to a maximum of 0.1% by weight.

2. NEW for surface treatment (033) < 2g/m² chemical products in their uncured treatment must meet the requirement. In the actually Nordic Swan the VOC content for surface treatment is < 5%. With the new regulation we have to be VOC free to fulfill these requirement, which is impossible. (VOC in additives). We suggest reducing VOC content to < 3 % comparable to adhesives.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. We have now introduced an exemption for VAH in requirement 025 Classification of ingoing substances and updated requirement 029 volatile organic compounds. VAH may be added in 0,1% in adhesives and 1% in other chemical products. VAH in surface treatments is regulated in requirements O33/O34.
Other alternative "be below 5% by weight in total" has now been reintroduced in the requirement O33.

Sherwin Williams
VAH was before included in requirement Prohibited substances but is now moved. VAH does it included toluene and other VAH which are classified as CMR cat. 2? If so, a suggestion is to add it as an exemption in O25.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have now included introduced an exemption for VAH in requirement 025 for prohibited substancesClassification of ingoing substances and removed it fromupdated requirement 029 for volatile organic compounds. VAH may be added in 0,1% in adhesives and 1% in other chemical products. VAH in surface treatments is regulated in requirements O33/O34.

SVEFF
VAH was before included in requirement Prohibited substances but is now moved. VAH does it included toluene and other VAH which are classified as CMR cat. 2? If so, a suggestion is to add it as an exemption in O25.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have now introduced an exemption for VAH in requirement 025 Classification of ingoing substances and updated requirement 029 volatile organic compounds. VAH may be added in 0,1% in adhesives and 1% in other chemical products. VAH in surface treatments is regulated in requirements O33/O34.

O30 Free formaldehyde

AkzoNobel
Vi anser att i krav O30 om formaldehyd bör också parkettgolv ingå i undantaget eftersom samma typ av harts används för tillverkning av både laminat- och parkettgolv. Av samma anledning anser vi att parkettgolv även ska läggas till i undantaget för VOC i O29.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have not heard from any license holder manufacturing parquet that this requirement could cause any issue. Consequently, an exemption from requirement O29 is not granted for parquet. If during the consultation period, the license holders brings this topic again, granting an exemption will be reconsidered.

Tarkett Ronneby
Only relevant for wooden material. We think it'll not be an issue. To be confirmed.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment.

Unilin
Please specify which testing method should be followed

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. We have not mentioned test methods for this requirement in criterias for other product groups. Please be aware that this requirement isto be fulfilled by chemical product manufacturers/suppliers.

O31 Application method and quantity applied – surface treatment

No comments received.

O32 Environmentally harmful products and substances in surface treatments

Parador
Exemption
UV-curing surface treatment products are exempted from a) and b) if the requirement O24 is fulfilled. O32 Should be changed to old version (from criteria version 6.13) as follows UV-curing surface treatment products are exempted from a) and b) if the following is fulfilled:
UV curing surface treatment products must be applied to the material during a controlled closed process where no discharge to recipient takes place. Spills and residual waste (e.g. residues from cleaning) must be collected in containers that are approved for hazardous waste and handled by a waste contractor.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified.

Sherwin Williams
This requirement is misleading and not in harmony with O24. O32b) Our understanding is if there is one product in the coating system classified as H410,

H411 or H412 then we need to make the calculation for all products in the system. This is not the same understanding as before where it is only the product which is classified as H410, H411 and H412 that would need to be included in the calculation. The exemption for UV curing coatings are now stating that if it is classified as H410 is exempted from this requirement. However, according to O24 products that are classified as H410 are not allowed to be used for Nordic Swan Floors. We have had discussions with Nordic Swan in the past that this calculation requirements is not necessary and only gives more administrative burden. We would like to see that the criteria for environmental hazardous products to be the same as in Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified.

SVEFF
This requirement is misleading and not in harmony with O24.
O32b) Our understanding is if there is one product in the coating system classified as H410, H411 or H412 then we need to make the calculation for all products in the system. This is not the same understanding as before where it is only the product which is classified as H410, H411 and H412 that would need to be included in the calculation.
The exemption for UV curing coatings are now stating that if it is classified as H410 is exempted from this requirement. However, according to O24 products that are classified as H410 are not allowed to be used for Nordic Swan Floors.
This calculation requirements is not necessary and only gives more administrative burden. We would like to see that the criteria for environmental hazardous products to be the same as in Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comment. Exemption in requirement O24 has been corrected and clarified.

O33 Quantity of applied volatile organic compiunds (VOC) in surface treatments

Bauwerk Group
Right now we don't see a possibility for an oxidative curing oil with less than 2g/m2 applied VOCs and a surface with a minimum level of quality regarding chemical resistance and so on.

Regarding VOC-content of surface treatment products:
I think the VOC-content of materials (which increase the end-product quality and therefore elongate lifetime, …) in the production site shouldn't be the point of focus. It's important to have finished products "without" VOC-emissions and a production site which takes care of the workers. (otherwise oxidative curing oiled surfaces have no chance to achieve a Swan certificate. If UV-curing oiled surfaces are more sustainable is another topic to discuss….).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Other alternative "be below 5% by weight in total" has now been included in the requirement.

Unilin
We request to keep the current double possibility of compliance, namely: Be below 5% by weight in total, or Amount to a maximum of 2 g/m² treated surface in total. Unilin uses the "5%" method, since our specific designs lead to a small exceedance of the 2 g/m² limit. We understand that the "5%" method was left out for complexity reasons, but when clear described, it shouldn't give any difficulties.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Other alternative "be below 5% by weight in total" has now been included in the requirement.

O34 Emissions to air from production of laminate

No comments received.

O35 Polyurethane

Kährs
1) Clarification of the requirement is desired.
2) Are isocyanates processed in a closed system no longer excepted?
3) In O25, just MDI is excepted from the CMR classification H351.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.

1. *The requirement replace requirement O9 from the current criteria generation. Vi vet att PU-baserade golv kan släppa skadliga ämne vid svetsning. Kravet är ett försök för att skydda alla inblandade användarna genom produktens livscykel.*
2. *There has never been such an exemption. There are exemptions for isocyanates contained in chemical products (adhesives) and then there are requirements set polyurethane materials. Isocyanates used in materials must be processed in closed system. Additonally, according to our definition of ingoing substances/impurities, the material may not contain impurities classified according to the table in requirement O24 in concentrations higher than 1000 ppm.*
3. *This exemption is valid only for MDI used in chemical products. If more exemptions are needed, they can be suggested and Nordic Ecolabelling will assess them.*

O36 Energy mapping

Bauwerk Group
We are not certified according to ISO 50000 or ISO 50002. If this requirement is an obligation, we will lose the Swan certification.
Proposal: If the company have a energy management in the frame of ISO 14001 (and the company s certified according ISO14001) it is also acceptable for this new criteria. The consideration of renewable energies (purchase and self-production) should be considered in the new criterion.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Nordic Ecolabelling thanks you for your comments. The requirement states that equivalent standards/methods may also be accepted. If the methodology used for the energy audit is equivalent to the one name is the standard, there should not be any problem. The documentation provided will be assessed by Nordic Ecolabelling during the renewal period.
However, certification according to ISO 14001 does not usually go as far as the standards named in the requirement.
Renewable electricity generated onsite (from solar PV panels, wind turbine or geothermal powerplant) is not purchased and may be left out from the calculations of B and E. Onsite means on the property or immediate vicinity of the manufacturing site.

Forbo
An energy audit according to European laws, standards.
Forbo flooring systems falls under the energy-reduction-obligations in the Environmental Management Act/Activities Decree. And the European reporting obligation under the Energy Efficiency Directive (EED). Every 4 years there is an energy audit and is reported to the government (RVO). EED is a European obligation for all larger companies. For EED there is no certificate following ISO 50002 en EN 16247-1, but the audit is approved by an independent third party.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement states that equivalent standards/methods may also be accepted. If the methodology used for the energy audit is equivalent to the one name is the standard, there should not be any problem. The documentation provided will be assessed by Nordic Ecolabelling during the renewal period.

IKEM
IKEM välkomnar kriterier för energiåtgång samt hantering av avfall i produktionen (O36-O38).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.

Miljöstyrelsen
Miljøministeriet ønsker i baggrundsdokumentet en uddybning af forskellen på 'conducted/developped by a third party' og 'alternatively verified by a third party'? Ligesom det bør uddybes, hvad meningen er med kriteriet og hvilken effekt O36 vil have.
Det bør også forklares yderligere, hvorfor pre- og post-consumer materiale ikke skal indgå i beregningen, i stedet for at blive genanvendt i produktionen af nye materialer. Krav O36 betyder umiddelbart, at energiudnyttelse af materialer prioriteres før genanvendelse.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The energy audit and energy mapping can either be conducted by an independent third party (such as bureau veritas) or can be conducted by the manufacturer and the report sent for verification to a third party (such as a consultant with the right expertise).

The requirement has been adjusted. The background text explains the purpose of the requirement.

Parador
Even if it is not mentioned in the proposal yet – we would suggest to add a valid "EMAS-validation" as proof of conformity (as this energy is an essential part of the EMAS validation).
We´re mapping (as well) our energy consumption and resources and did / do define measures to work on in our "Sustainability report" (see link here).
Verification is done by third party certifier (EMAS environmental expert).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement states that equivalent standards/methods may also be accepted. If the methodology used for the energy audit is equivalent to the one name is the standard, there should not be any problem. The documentation provided will be assessed by Nordic Ecolabelling during the renewal period.

O37 Energy consumption

Bauwerk Group
Hard for calculation, because we don`t evaluate the different electricity and energy consumption by a specific line or machine. We must invest a large amount of money to realize this per machine or production line. The current solution is good for us to fulfil. The consideration of renewable energies (purchase and self-production) should be considered in the new criterion.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Appendix 8 has been added to list what steps and processes are to be included in the calculations.
It is often impossible to separate out energy consumption and ascribe it to a particular floor covering, since it applies to the whole factory. This means that the energy consumption data on which the requirement is based, and which is to be used for licensing may be an annual average and may not necessarily be the specific energy consumption linked to the particular Nordic Ecolabelled floor covering(s). Depending on how the energy meters are installed in the factory, energy consumption data may also include energy for heating and operation of the premises, which should not actually be included in the calculation. A solution could be to couple electricity and energy consumption of a production line, if possible, to a certain amount of time and to a certain batch or volume of manufactured flooring.
Renewable electricity generated onsite (from solar PV panels, wind turbine or geothermal powerplant) is not purchased and may be left out from the calculations of B and E. Onsite means on the property or immediate vicinity of the manufacturing site.

Forbo
Reward for electrification of fuel-operated processes is missing in this requirement. All our electricity is 100% green electricity. And we have an electrification strategy - this means making fuel-operated processes into electrical operated processes. This will not change the A value.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. An electrification strategy means less use of fossil fuel and this will affect the factor C positively. The limit value for the factor B has not been changed to take into account eventual electrification strategies. Renewable electricity generated onsite (from solar PV panels, wind turbine or geothermal powerplant) is not purchased and may be left out from the calculations of B and E. Onsite means on the property or immediate vicinity of the manufacturing site.

Miljöstyrelsen
Afgræsningen for hvilke dele/processer af produktionen, der skal indgå i beregningen er ikke tydelig. Miljøstyrelsen foreslår, at dette uddybes og tydeliggøres.
Miljøministeriet mener desuden, at det bør uddybes, hvilken effekt krav O37 vil have, og herunder forklare, hvorfor pre- og post-consumer materiale ikke skal indgå i beregningen, i stedet for at blive genanvendt i produktionen af nye materialer. Krav O37 betyder umiddelbart, at energiudnyttelse af materialer prioriteres før genanvendelse.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. An indicative list of activities that must be included and may not be included in the calculations of the energy consumption can be seen in in Appendix 8.
Only flooring underlays composed of 100% pre- and/or post-consumer materials were exempted from this requirement. Nordic Ecolabelling has had issues finding specific data for flooring underlays concerning this requirement. The requirement has been adjusted.

Tarkett AB
Is fuel composed of animal fats considered as renewable fuel? This should be clarified.
In the background information its stated that there should be a table clarifying which process steps are to be included:

"A table prior to the energy requirements clarifies which processes/steps are to be included in the energy consumption calculations."

It's not clear which table this is referring to.
Clarifications regarding what data should be included and how far back in the supply chain would harmonize the data collection. Since the topic is quite complex with different factors for different companies and different production set-ups

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Fuel composed of animal fats is considered as renewable fuel.
An indicative list of activities that must be included and may not be included in the calculations of the energy consumption can be seen in in Appendix 8.

Tarkett Ronneby
This is probably fine, even with the new limit values.
Is fuel composed of animal fats considered as renewable fuel? This should be clarified.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Fuel composed of animal fats is considered as renewable fuel.

Tarkett SpA

- Requirement for renewable fuel A is really challenging, also considering that there was no limit in the previous version, and, generally speaking, still difficult to be implemented at present time.
- Regarding E calculation, both acceptance value for E and calculation formula have been modified, making challenging also this requirement.
- We purchase only renewable electricity but unfortunately there's no possibility of giving value to it. We understand your position regarding renewable electricity as explained in the background, but, on the other hand, the choice of purchasing green electricity demonstrate the commitment of the company to environment and should be highlighted

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been tightened compared to previous generation. Nordic Ecolabelling assesses that 25% is a fair limit value. Renewable electricity generated onsite (from solar PV panels, wind turbine or geothermal powerplant) is not purchased and may be left out from the calculations of B and E. Onsite means on the property or immediate vicinity of the manufacturing site.

Windmöller
The given values seem to be quite high. Where do you get the data from?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The limit values are set according to the collected license data, meaning the data sent for fulfilling the current generation of the criteria.

O38 Handling of waste and production waste

Bauwerk Group
Handling of waste and production waste – no problem we sort according to the national legal obligations.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.

Miljöstyrelsen
Miljøministeriet mener, at Nordisk Miljømærkning bør følge virksomheder med licens og deres affaldshåndtering nøje, med henblik på at så meget som muligt af produktionsrester genanvendes, fremfor at blive sendt til forbrænding.
Der bør således indsættes et krav i handlingsplanen for at mindske forbrænding af restprodukter.
På sigt vil det være muligt at Nordisk Miljømærkning kan sætte bindende krav til andelen af restprodukter, der går til forbrænding.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.

4.2.4 Packaging

O39 Packaging

Bauwerk Group

- A minimum of 50% by weight of cardboard and paper must consist of recycled* material – works for us. Not a problem for us. Ok.
- A minimum of 50% by weight of plastic must consist of recycled* material. We are working on that but not to be ensure right now. Can be a problem, because of availability of the Plastic (plastic foil) in correct quality.
- A minimum of 50% by weight of cardboard and paper must consist of recycled* material – is possible.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. It is now only required that the packaging materials are recyclable according to current recycling systems.

Forbo
Our specification for wrapping paper currently is > 20%.
For cardboard tubes the specification is "produced with 100% recycled paper"
How is the requirement set up, do you count the weigh for both materials together or separate? Is the 50% requirement on the total weight of the wrapping and packaging material it is ok. It this should be the way since it will push in the right direction for more recycled packaging material all together.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. It is now only required that the packaging materials are recyclable according to current recycling systems.

IKEM
IKEM ifrågasätter anledningen till att förpackningar i PVC, i den utsträckning sådana förekommer, inte ska kunna tillåtas under samma förutsättningar som för andra plastmaterial. PVC-förpackningar kommer att sorteras ut vid Svensk Plaståtervinnings nya anläggning Site Zero och bör således betraktas som återvinningsbara. Se vidare här: https://www.svenskplastatervinning.se/site-zero/.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. We have been in contact with SpÅ over the past few years and if the PVC packaging that will be sorted is actually bought by recyclers and used again in new products, we might consider looking at our view on PVC in packaging again. The sorting/recycling issue must also be solved in the whole Nordics before Nordic Ecolabelling can change their guidelines.
Furthermore, there are other issues associated to PVC packaging than their lack of sorting/recycling today (e.g. additives).

Kährs
Paper for us would be ok, Plastic probably not possible. 50% might result in quality issues and durability issues of the packaging. We will try 40% soon. To just have percentages seem a bit strange since we rather work with total weight of plastic used per kg and part of this weight as recycled so the grand total of grams used per m2

divided in virgin vs recycled plastic is calculated. Proposal to lower % of recycled plastic in order to secure good quality products at delivery.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. It is now only required that the packaging materials are recyclable according to current recycling systems.

Miljöstyrelsen
Kommentar til tekststykket:
"A minimum of 50% by weight of cardboard and paper must consist of recycled* material."
Miljøstyrelsen og Miljøministeriet foreslår at der stilles supplerende krav til den resterende procentdel/mængde træfibre, for at sikre at denne andel kommer fra bæredygtig skovbrug, dvs. er "sustainable sourced", så emballagen lever op til den danske indkøbsvejledning til offentlige indkøb af træ/træbaserede produkter.
Kravet om: A minimum of 50% by weight of plastic must consist of recycled* material.
Miljøministeriet støtter Nordisk Miljømærknings krav om en høj andel af genanvendt plast i emballage.
Samtidigt er det vigtigt, at genanvendt plastmateriale, der er godkendt som fødevarekontaktmateriale (FMK), ikke anvendes i emballage til svanemærkede gulve.
Kravet bør derfor præcisere, at FMK godkendt plast ikke må indgå i emballagen.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. It is now only required that the packaging materials are recyclable according to current recycling systems.
Nordic Ecolabelling reckons that requiring that recycled plastic, that is approved for use in FCM, must not be used in packaging is too strict. Nordic Ecolabelling considers that FCM-packaging recycled to product packaging is not as much as an issue as FCM-packaging recycled to product (different levels of downcycling).
Furthermore, the RPS show relatively low relevance for this requirement. A packaging requirement has been implemented because of high potential. The strictest levels or limit values must be instead set in requirements making the most environmental benefit (highest RPS).

Parador
Comment with regards to critical level of 50% recycled content in plastic already shared by e-mail.
No, it does not contain any pre-/post-consumer recycled material so far (might be possible in the future (depending on cost)).
Cardbox packagings consist > 85% out of recycled material (share of pre/post-consumer recycled material not known) – FSC or PEFC certification of those is not part of our purchase agreements.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. It is now only required that the packaging materials are recyclable according to current recycling systems.

Tarkett Ronneby/Tarkett AB
Today our packaging does not contain this. We still need to confirm if this is realistic. If availability is scarce or price is high this will not be possible to achieve for any big-volume products.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. It is now only required that the packaging materials are recyclable according to current recycling systems.

Unilin
Are there certificates necessary to prove this? Or is a declaration of the supplier sufficient?
The minimum requirement for recycled material is an extremely high value, which is disproportional in comparison with the EU proposal in Art. 7 of the Proposal for the new "regulation on packaging and packaging waste".
Cardboard & paper: It has not only an impact on the packaging itself, but also on the printing parameters for cardboard.
Plastic: targeting a 50 wt% of recycled plastic has an impact on the full sustainability of the plastic packaging:

- The plastic needs to be significantly thicker compared to current foil, since the recycled content downgrades the strength of the packaging
  packaging weighs significantly more !
  thicker packaging means again more virgin plastic to be used.
- Temperature of the packaging lines need to be higher → more use of energy
- Some machines are not able to pack with the thick foil → machines that are still working need to be replaced by new machines

The approach of the EU is a step-by-step approach which gives the industry the possibility to adapt their systems.
We propose (still challenging):

- Paperboard: 80%
- Paper: 10%
- Plastic: 15%

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. It is now only required that the packaging materials are recyclable according to current recycling systems.

4.2.5 Use-phase requirements

O40 Emissions from floor coverings and flooring underlays

Bauwerk Group
In general, we agree with strict emission limits.
But the TVOC specification can lead to the failure of resin-rich wood species, such as pine. We think it should be a little bit more specific. We don't think the emissions of an Arolla pine is more harmful than a plastic product. Untreated wood should never be a problem.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. Limit values for Multi-layer wood and wood veneer flooring, laminate, linoleum and plastic flooring/underlays have been highered. In addition, the accepted test methods have been updated regarding formaldehyde emission.

Eurofins
Generally we are looking at very low limit values and certainly some products will have a difficult time complying with these requirements.
We do not understand why the limit values for Multi-layer wood and wood veneer floorings are lower than for other wood floorings. E.g. a parquet comprising of a spruce core, an oak top layer and a backing will be considered a multi-layer wood floor and not a solid floor and will have much stricter requirement to emission than a solid flooring.

As mentioned in my previous e-mail we have doubts why the solid wood flooring and Multi-layer wood and wood veneer floorings have different criteria. Since a multi layered wood flooring can be made of exactly the same materials as a solid wood flooring we imagine the limits should be the same. You can for instance have a solid oak flooring and a solid pine flooring that both need to fulfill the TVOC requirement of 0.3 mg/m3. If they are combined into one multi-layer product with a pine core and an oak top layer this product needs to comply with a limit value of 0.1 mg/m3. From our point of view this is not completely logical. As you also mention it is difficult to state limit values for wood floorings as the emission can vary greatly with different wood types and also within the same type of wood. We would suggest to have the same limit values for all wood based products.

For linoleum products the limit values are very low. It is our experience that these limit values can only be reached if you are using a high amount of varnish on top. From a sustainable point of view this is not desirable as this would exclude manufacturers that want to limit the use of varnish and accept more of the natural emissions from e.g. linseed oil. Our proposal would be to raise the limit value to 0.2 mg/m3 for TVOC and 0.03 mg/m3 for TSVOC.

We agree that the emissions and certainly emissions of undesired compounds should be limited as best as possible. It is a good idea to look at data from license holders. But effectively the emissions are only really comparable if the products in the group are nearly the same.

The test to perform is clear and is in line with other requirements.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. Limit values for Multi-layer wood and wood veneer flooring, laminate, linoleum and plastic flooring/underlays have been highered. In addition, the accepted test methods have been updated regarding formaldehyde emission.

Kährs

1. Why is the TVOC/SVOC limit lower for multilayer than solid wood flooring?
2. The TVOC limit level for multilayer wood and wood veneer flooring has been tightened to a lower level than M1. Though, in the background document on page 25 it says that the emission criteria are set equivalent to the level M1 which is 0,16 mg/m3 re-calculated from 0,2 mg/(m2h) and not 0,1 mg/m3 as in the proposal. A tightening from 0,3 mg/m3 to 0,1 mg/m3 is a very big step. Proposal: is it possible to start stepping down to the M1 limit level?
3. Why are VOC not in a same level with every product group. This kind of different TVOC values for different kind of floorings may create confusion in the market. Why is ecolabel steering this in that direction? Human health risks are absolute values and should not be evaluated differently for different products.
4. Change to plastic floorings TVOC is very tight requirement when earlier requirement was 160 ug/m3. Why is it changed so heavily? 20ug/m3 is really very low limit and this is very difficult to verify with quality control.
5. Emission tests analysis have usually 30% accuracy, but handling sampling may cause contaminations even at widely accepted sampling routines. Even though our product has reached result under this extremely low limit, we cannot be sure any product meets it again because of inaccuracy at the testing and sampling. As a comparison, many different emission certifications exist. M1 as an example is one of the tightest. It is correlating with 160 ug/m3 value which is today's requirement. At new proposal emission levels for other materials have not been decreased as dramatically than requirement for plastic flooring. This is not acceptable.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. Limit values for Multi-layer wood and wood veneer flooring, laminate, linoleum and plastic flooring/underlays have been highered. In addition, the accepted test methods have been updated regarding formaldehyde emission.

Tarkett AB

Regarding TVOC:
The tightening of TVOC can be challenging and alignment with suppliers would be needed to prioritize process control. As of today, it is unclear what kind of development work would be needed to pass this criterion. Additionally, the emissions of natural components of e.g. softwood can significantly exceed the outlined limits (alpha-Pinene, beta-Pinene, 3-Carene), without posing any threat to the user of the product. By selecting certain softwood materials these peaks can be mitigated. Lastly, average values would be less challenging to work with than absolute values.
Regarding SVOC:
Currently the dataset is limited for SVOC but the tightening of this criteria is challenging.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. Limit values for Multi-layer wood and wood veneer flooring, laminate, linoleum and plastic flooring/underlays have been highered. In addition, the accepted test methods have been updated regarding formaldehyde emission.

Unilin
The limit value taken is more strict than the official value communicated in the COMMISSION REGULATION (EU) 2023-1464 of 14 July 2023 of 0.062 mg/m³
The EU regulation does not mention ISO 16516 nor ISO 16000-9, the regulations states in his appendix 14 (a) -> (d) conditions which all refer to the EN 717-1 conditions (temperature, humidity, loading factor, air exchange rate), our experience is that a limit of 0.062 mg/m³ according 16516 with loading factor of 1 would be more severe than same measurement according 717-1 (Cfr. German ChemVerbotV where reference method limit according EN 16516 of <0.1ppm correlates with 717-1 limit of 0.05ppm, knowing there LF 1.8), reaching limit of < 0.06 mg/m³ by 16516 is impossible for parquet production when not using NAF glues.
EN 717-1 is still a valid testmethod for flooring. The testmethod is described in the standards EN14041 & EN14342 for CE-marking.
It would be logic that Nordic Ecolabelling follows the new EU regulation which comes active as from 2026 according limits and reference method?
If the goal is to be more severe compared to the EU regulations, we would propose:

- Multilayer wood flooring : 0,06 mg/m³ (which is identical to EU regulation)
- Laminate flooring : 0,03 mg/m³

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement was too strict. Limit values for Multi-layer wood and wood veneer flooring, laminate, linoleum and plastic flooring/underlays have been highered. In addition, the accepted test methods have been updated regarding formaldehyde emission.

O41 Product performance – third-party verification

Abriso-Jiffy
The underlay portfolio at Abriso-Jiffy with its main purpose to improve the accoustic performance of the flooring construction, is not subjected to a harmonised standard, therefore no CE/DOP requirements should be fulfilled (see O41); nonetheless the CE requirements will be used as a guideline.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The background text has been updated. Using CE requirements as guideline is a good suggestion.

IKEM
IKEM välkomnar tredjepartsverifikation, krav på kvalitet och slittålighet samt våtrumsgodkännande (O41-O44). Vi ifrågasätter att PVC-golv inte kan omfattas.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. See answers to comments on requirement O5.

O42 Quality and Durability of floor coverings

Bauwerk Group
Regarding Appendix 11:
EN ISO 10874 is not a wooden standard. The same topic is EN 685.

EN ISO 4918 is also no wooden standard, and it is a standard which is introduced to boost laminate floorings (melamine top layer).
The classification and evaluation of wood species according to their hardness does not reflect reality and only helps “hard” laminate flooring. For example, Walnut with a “too low hardness”. Walnut has been one of the most suitable parquet woods for decades without any problems. Classification according to wood density, which correlates with many strengths, could be a possibility. The classification into domestic, commercial and industrial and moderate, normal and heavy use is difficult, as there is no parquet standard. However, the detour via Brinell hardness makes little sense.
EN 13442 is a good standard for internal testing and quality control.
In summary unfortunately Appendix 11 is contra wooden floorings and pro-plastic floorings.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Appendix 11 has been simplified to only refer to the relevant standards. The background text has been updated. Nordic Ecolabelling assesses it is relevant to require more from products lacking standards. It is unfortunate that better methods have not been developed nor used by all manufactures.

Kährs

1. Juglans L (Walnut) is mentioned in class B of CTBA/EN 685 in the proposal (Annex 12), but should be moved to class C according to an earlier decision from Svanen informed by Josephine Jansson via e-mail 1st of October 2018. 2)
2. Why are the tests chosen for "appearance and stability" for Factory lacquer solid and multilayer wood floorings and what are the required limits? No demand limits can be found to fulfill class 23 in the standards mentioned for multilayer wood flooring.
3. Propose name change for stain resistance which is a chemicals resistance test. Use same naming as in the EN standard referred to: Resistance to chemical agents Non-consistence: Type of floorings differ from O40. Hybrid flooring is missing?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Appendix 11 has been simplified to only refer to the relevant standards. The background text has been updated. Nordic Ecolabelling assesses it is relevant to require more from products lacking standards. It is unfortunate that better methods have not been developed nor used by all manufactures.

Parador
Comment with regards to level of use class for factory lacquered solid and multilayer wood floorings already shared before.
I see no need to add such a table, as the individual parameters are already covered by the general / classifying requirements of the standards.
Unless there are justified additional requirements that go beyond the normative requirements (e.g. thickness of the top layer and wood hardness of the surface layer at multilayer wood flooring).

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Appendix 11 has been simplified to only refer to the relevant standards. The background text has been updated. Nordic Ecolabelling assesses it is relevant to require more from products lacking standards. It is unfortunate that better methods have not been developed nor used by all manufacturers.

Tarkett AB
Using the CTBA classifications (wearlayer thickness) to determine where a wooden floor should be used is inherently not great. Attributes such as resanding and refurbishments are good factors to consider for parquet floors. However, there are much more valid aspects to consider regarding longevity. Performance indicators such as micro scratch resistance, chemical resistance, construction stability, cleaning properties and available cleaning products do have a higher impact on longevity than wearlayer thickness. Out of above examples no one aspect captures the full picture, however in combination they are much preferred over CTBA.

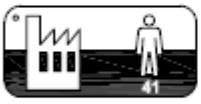
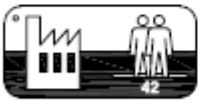
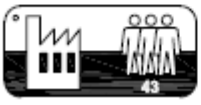
Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Appendix 11 has been simplified to only refer to the relevant standards. The background text has been updated. Nordic Ecolabelling assesses it is relevant to require more from products lacking standards. It is unfortunate that better methods have not been developed nor used by all manufactures.

Tarkett Ronneby
We disagree with the current methods of assessing durability of parquet. The methods used does not reflect actual wear of the products. we will formulate suggestions for measuring methods.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Appendix 11 has been simplified to only refer to the relevant standards. The background text has been updated. Nordic Ecolabelling assesses it is relevant to require more from products lacking standards. It is unfortunate that better methods have not been developed nor used by all manufactures.

Tarkett SpA
we already discussed this topic some years ago, and I explained that ISO 24011, which is the reference standard for linoleum, states for classification requirements (paragraph 6), that: “The classification scheme for resilient floor coverings is specified in ISO 10874. The requirements for plain and decorative linoleum in accordance with this scheme are related to the nominal overall thickness and the surface layer thickness of the linoleum, as shown in Table 2.” You agreed with us that statement is enough to satisfy requirement (O38 at that time) for linoleum (whose minimum thickness is 2.00mm), considering also that our linoleum is single layer, so the “surface layer” as indicated in the table corresponds to our whole layer.

Table 2 — Classification requirements

Class	Symbol	Intensity of use	Minimum surface layer thickness mm	Nominal overall thickness mm
Domestic				
21		Moderate/Light	0,8	2,0
22		General/Medium	0,8	2,0
22+		General	0,8	2,0
23		Heavy	0,8	2,0
Commercial				
31		Moderate	0,8	2,0
32		General	0,8	2,0
33		Heavy	1,3	2,5
34		Very heavy	1,3	2,5[a]
Light industrial				
41		Moderate	0,8	2,0[a]
42		General	1,3	2,5[a]
43		Heavy	1,3	2,5[a]

[a] Other thicknesses, e.g. 3,2 mm and 4,0 mm, may be specified to satisfy particular customer requirements.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. Appendix 11 has been simplified to only refer to the relevant standards. The background text has been updated.

Windmöller

How is the process of 3rd party verification? Who is licensed to do so?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The test institute must fulfil the requirements listed in Appendix 1 of the criteria.

O43 Quality and Durability of flooring underlays

Parador
Technical data sheet, declaration of performance or other documents where the parameters, the standards/test methods and the level of use of class are clearly stated.
From point of knowledge, there´s no level of use class existing for underlays – this part should thus be deleted.
It is essential / could be essential that for certain products specific underlays are used (which is possibly not Nordic Swan certified / registerred). E.g. Specific compressive strength required etc.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The part has been deleted. Nordic Swan Ecolabelled flooring underlays do neither have to be specific to a particular flooring nor specific to a Nordic Swan Ecolabelled flooring.

Tarkett SpA
"EN 12455 - Resilient floor coverings - Specification for corkment underlay" should be added

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Your suggestion has been added.

Windmöller
Unfortunately the technical bulletin of MMFA is not suitable to evaluate the quality and especially the durability of underlays by the given higher requirements. For instance, the bulletin is outdated with respect to the very fast growing segment of rigid floorings. Here a physically very stable underlay is a must which will have a strong effect on for instance acoustic performance. We therefore would like to propose to use the given physical parameters but with the extension that 80% of the performance/values must be maintained after castor chair testing. Castor chair testing is used here to simulate wear and tear and decades of usage of the flooring.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted so that the latest version of the bulletin is always used to assess the quality of the flooring underlays.

O44 Wet room approval

No comments received.

4.2.6 Circular requirements

O45 Warranty and spare parts

Bauwerk Group
origin of failure? production failure, damage due to transportation, unprofessional installation, "wrong" maintenance/way of use.... these are very critical questions. For example. A “medium” parquet which is installed in a “low” way by a carpenter and the end consumer is treating the parquet with wrong cleaning agents? Is this just good for lawyers?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Spare parts are no longer included in the warranty. Warranty is now focusing on reparability. A 5 years-warranty must be given instead of 10 years.

Forbo
The flooring industry has far-reaching guarantees for both contractors (5 years) and consumers (10 years). We are all following the common industry agreement ABM 07 which all different parties in the building sector have acknowledge and there these questions are covered for all flooring products. Longer warranty periods will be very problematic and will affect the industry standards. For example, how will you define a product fault during a quality inspection when a claim arises. Proof of product fault would be difficult to determine because extreme impact or mishandling of the floor over a long period of time is beyond the producer's control. It will be very hard to inspect an old floor (5-10 years) and determine if it is a product fault or wrong installation or that the customer has not done proper maintenance according to the manufacturer’s instructions. Today the common industry organization GBR have stipulated how to determine what issues is classified as a product fault and what is not. And if you extend the product guarantee we ask you to engage and follow the GBR recommendations.
Spare parts:
The flooring industry like many interior producers change their collections and the designs regularly. So, the design will not be able to be matched. And the material itself has a shelf life span so we can not store material for a very long time.
Technically, for example the hight of floor can be matched and be installed.
Practically, we have it hard to see that a customer will replace a smaller part of the floor with a floor with a different design and colour. And produce a specific product in a smaller scale for a spare part is not possible due to that every production is done in very based on the production technology in high volumes.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Spare parts are no longer included in the warranty. Warranty is now focusing on reparability. A 5 years-warranty must be given instead of 10 years.

Golvbranschen
We do not consider this to be an appropriate requirement for an ecolabel.

There are laws and regulations in place regarding warranties. The standard agreements used in Sweden are a result of substantial negotiations and compromise between different parties in the building sector.
The possibility of an extended guarantee partly depends on type of material, area of use and if the customer belongs to the public, commercial or private sector. Flooring manufacturers and suppliers deliver their material via several retailers and/or installers and it is primarily at this level that the issue of warranties must and should be handled, in negotiation with the manufacturer/supplier. This is a commercial aspect of sales and does not have a direct impact on the environmental profile of the product itself. A long warranty period may in fact require certain conditions that instead have a negative impact on sustainability aspects. (For example, additional storage space needed for spare parts, energy and resources to produce spare parts etc.) This should be taken into consideration. Consequently, each individual supplier should have the option to offer a suitable warranty in according to national regulations.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Spare parts are no longer included in the warranty. Warranty is now focusing on reparability. A 5 years-warranty must be given instead of 10 years.

IKEM
IKEM välkomnar förslagen (O45-O49). Spårbarhet och tydlig produktinformation är viktiga förutsättningar för reparationer och för ökad återvinning av golv.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.

Kährs
1. This requirement on spare parts will not be possible to fulfill with so many items in our product portfolio, with current solutions. Will need investments and new solutions.
2. We have very long warranties because of high product quality which also makes it harder to store spare parts for 30 years +.
3. Warranty period of 10 years is not a problem for us.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Spare parts are no longer included in the warranty. Warranty is now focusing on reparability. A 5 years-warranty must be given instead of 10 years.

Parador
We wonder if you could have a look on the following documents to check and assess if those are sufficient to show conformity with criteria O45 (assumed a warranty of 10 is granted)?
Additional question:
For which parameter / product performance parameter exactly needs the guarantee be granted? Is this up to the producer (I´m asking as there are many different guarantee terms of different producers existing in the market)?
We will add this later on in our comments as well, but:
What about products that are sold via regional sales partners (companies) to the end consumer / end user?

Wouldn´t it here be of importance that the sales partners are in charge of this requirement (as we as producer are no direct contract partner in this case)?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Spare parts are no longer included in the warranty. Warranty is now focusing on reparability. A 5 years-warranty must be given instead of 10 years.
The background text has been updated.
It is up to the retailer to communicate on *the warranty but it is up to the manufacturer to write the conditions and what is covered.*

Tarkett Ronneby, Tarkett AB
We do not agree with the suggested criterion. Today the limited consumer warranty we have is between 5-30 year depending on the flooring type and some countries define different warranty periods in addition to this. Spare parts cannot be made available at no extra cost when damages are outside of warranty.

There are a couple of things which are not clearly defined:
What is Nordic Swan's definition of a warranty, what should their warranty include? E.g. Tarkett's warranty for wood floorings cover the wear-through of the wearlayer.
What is their definition of a "spare part", is it a full board, a new tile or something else?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Spare parts are no longer included in the warranty. Warranty is now focusing on reparability. A 5 years-warranty must be given instead of 10 years.

Unilin
The requirement for keeping spareparts during the full warranty period creates a complex logistic problem to stock all this material
This requirement is feasible for a small company, but not for a company as Unilin which is worldwide present and has for the moment ± 850 different products certified.
These products are sold worldwide, which means that a huge amount of additional stock should be produced and stored to fulfil this requirement.
This means:

- Huge amount of additional storage space needed
- Unnecessary worldwide transportation of this additional stock
- Unnecessary use of resources to produce this stock.
- Impossible to calculate the necessary stock, which will lead to overproduction
- Huge amount of waste of material that possibly will never be used

In our opinion the focus should be on the repairability of the floor, eg:

- Possibility for replacing boards
- Possibility to take out a part of a damaged floor and replace it with board from another room (this other room can than get a new floor, with other reference)
- Repair options without replacing boards:
    - Repair dents with liquid wax
    - Sanding & refinishing possibilities
    - Floor polishing possibilities

EU Ecolabel also puts the focus on the repairability of the floor instead of keeping spareparts.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Spare parts are no longer included in the warranty. Warranty is now focusing on reparability. A 5 years-warranty must be given instead of 10 years.

Windmöller
Why are underlays excluded?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Flooring underlays are no longer exempted from the requirement.

O46 Labelling and traceability

Bauwerk Group
Labelling:
We're right now not able to add all the required information on the backside of our products.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted.

Forbo
Labelling:
All floors have different backings, both material and structure. Some are also glued down and it is not technically possible today to do that kind of labelling that you are referring to. This will be a development which will take some time to do. For glued down products it will not be possible/useful to use common printing techniques. And if this shall be done it must be a common system, not a separate system for each supplier.
Traceability:
Today the floor can be tracked via customer name/number, product name and batch number via GBR/Golvbranschen database for recycle labelling (kretsloppsmärkning) that gives information and control over contents throughout the life of the floor. From installation, care & maintenance to extraction. We suggest using the system that is already in place. Also, there is traceability on the content of a product via environment assessment system in Sweden. And even if you have this kind of system in place, it will be very difficult for not saying impossible, to keep it updated by all users/owners of the floors during a long lifespan.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Labelling is required only for not glue down products.
Nordic Ecolabelling has decided to wait for incoming EU legislation and product digital passports. A register or database for traceability of all B2B projects is no longer required.

Golvbranschen
Under the principle of proportionality, the requirement should not exceed what is necessary to achieve the objective. We do not believe it is proportionate to demand that each supplier creates their own system for registration and tracking with the obligation to follow up on every location where their products are installed. It is a great task to keep this sort of information up to date. The manufacturer/supplier have no control over and cannot keep track of renovations being made. The property owner is the only one who has an overview and must be the party responsible for both keeping and updating information about installed products. Traceability should instead be a part of the Nordic Swan Ecolabel criteria for buildings.
It would be far more practical to require a visible marking on the product itself (as suggested under "labelling"). This would ensure that the floor covering is traceable back to the flooring manufacturer. The requirement must of course be compliant with European and national regulations, like the impending Digital Product Passport.
With this said there are several general systems or logbooks on the market for tracing building material. We currently have a working system for this within the Swedish flooring industry. The flooring contractor, in a digital tool, registers which products are used in a project with the option to enter in detail which rooms contain which products. Documents such as BVD and maintenance advice can also be saved in the system. The information is then handed to the customer (and saved for future needs). It should be noted that this tool is only available for flooring contractors affiliated with the Flooring Trade Association and is a service primarily developed for the property owner.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Labelling is required only for not glue down products.
Nordic Ecolabelling has decided to wait for incoming EU legislation and product digital passports. A register or database for traceability of all B2B projects is no longer required.

Kährs
This needs to be in line with European and national regulations, like coming digital product passport both regarding timeline and requirements.
We do not think each supplier should create their own system for registration and tracking with the obligation to follow up on every location where their products are installed. The manufacturer/supplier have no control over and cannot keep track of renovations being made. The property owner is the only one who has an overview and must be the party responsible for both keeping and updating information about installed products. This is out of control for us and a database like this could be developed by a third party like Nordic Swan.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Labelling is required only for not glue down products.
Nordic Ecolabelling has decided to wait for incoming EU legislation and product digital passports. A register or database for traceability of all B2B projects is no longer required.

Tarkett Ronneby, Tarkett AB

Regarding the "labelling" section:

For some flooring we already mark the backing with Tarkett logo, even glue down flooring. This requirement is probably reasonable. Batch number is used to a lesser extent but would greatly improve the time it takes to verify a flooring's recyclability. Because floors are used for a long time this requirement should not be excluded for glue down floors as it might be helpful to identify those too in the future. We don't agree with adding private label, customer name or license holder. This limits the possibility for repacking in case of returns or cancelled orders.

Regarding the "traceability" section:

Today purchased/sold products are connected to a specific location however even with this information it'll be near impossible to keep that information up-to-date and relevant. In most cases we are not informed of when the flooring is removed/replaced. Systems specifying ingoing construction products are also already on the market such as the logbook in the Sundahus and Byggvarubedömningen -product databases or the system called "Kretsloppsmärkning" developed by the Swedish flooring association, GBR. Flooring producers should not develop their own system. Using all of these systems can already be very time consuming and adding a system specific to each producer will only make this worse.

The usefulness of these systems is questionable and we think that the "labelling" suggestion is far more impactful in order to find recyclable flooring in the future.

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Labelling is required only for not glue down products.

Nordic Ecolabelling has decided to wait for incoming EU legislation and product digital passports. A register or database for traceability of all B2B projects is no longer required.

Tarkett SpA

Labelling of underlays and floor coverings that are not glue down or that can be loose-lay installed: do you mean labelling on package of these products or on each piece of them?

We have full traceability with SAP for all batches. Traceability in SAP is applicable from raw materials to the buyer (who can be the final customer or distributor). Is this compliant with what you mean in this requirement?

Comments from Nordic Ecolabelling

Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted.

Labelling is required only for not glue down products.

Nordic Ecolabelling has decided to wait for incoming EU legislation and product digital passports. A register or database for traceability of all B2B projects is no longer required.

Unilin

Labelling:

The EU is working on a regulation for a Digital Product Passport, for which the final requirements are not fix yet.

So, eventually this will become a standard EU requirement, which doesn't need to be copied in the Nordic Swan standard

For the moment we don't know yet how the Digital Product Passport should be implemented in the product and we also don't know which information and in which format this information should be delivered.
The requirement O46 will lead to double work in order to fulfil this requirement between now and the moment that the EU regulation will come into force
Implementing a QR code should be used for much more product details than what is mentioned in the Nordic Swan standard.
Wouldn't it be sufficient for the course of time to have at least a clear production code at the back of the planks, which ensures traceability upto the raw materials that are used in production?

Traceability:
This requirement is maybe feasible for a small company, but not for a company as Unilin which is worldwide present and has for the moment ± 850 different products certified.
Our products are sold over the whole world, in all continents, via different business channels. It's impossible to keep track of all installations.
Additionally, this requirement will not help the person that wants to give his floor back since it'll be the producer that will have the database
Our proposal is to make this a obligatory requirement for the use of Nordic Swan Ecolabelled floor coverings in Nordic Swan Certified buildings.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Labelling is required only for not glue down products.
Nordic Ecolabelling has decided to wait for incoming EU legislation and product digital passports. A register or database for traceability of all B2B projects is no longer required.

Windmöller
This is a topic that is being discussed intensively in standardization and in EU policy. It seems to be too early to make this already part of the Ecolabelling requirements.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Labelling is required only for not glue down products.
Nordic Ecolabelling has decided to wait for incoming EU legislation and product digital passports. A register or database for traceability of all B2B projects is no longer required.

O47 Reparability

Bona
Vad det gäller paragraf O47 Reparability så är detta ett mycket viktigt steg i hållbarhetsarbetet för golv (en mycket stor miljövinst kan göras här men det är viktigt att tydliggöra att största miljövinsten faktiskt görs så tidigt som möjligt i värdekedjan), -både för nedlimmat och för flytande installation, vi menar att förlänga livet på plats bör tydliggöras ännu mer så att fokus inte bara ligger på att golvet skall vara förberett för återvinning vilket då är en process senare i hållbarhets kedjan. Vårt förslag är därför instruktion för flytande golv justeras med samma

kravställning som för nedlimmade golv. Detta ligger även i linje med vad FEP driver ”refinishable floor” alltså -must be possible to refurbish/refinish the top layer of the floor. Poängen är att alla golv som läggs flytande och som kan anpassas för renovering bör vara anpassade för renovering. Så som texterna är skrivna nu så kan tex trägolv som endast säljs för flytande applikation Svanen godkännas även om de inte skulle vara renoverbara. Vidare skulle vi gärna se att det vore bra om man kunnat visualisera detta genom en graf/bild. Det finns alltså idag lösningar för att förlänga livet på både för flytande och nedlimmade golv, på plats vilket ger den största miljövinsten.
Konkret ligger många golv i klassen A+B dvs ska klara båda kriterierna så den texten är viktig och att den går fram dvs det finns ju tre alternativa krav beroende på golvets applikation A, B och A+B. En bild som tydliggör värdekedjan utifrån ett hållbarhetsperspektiv, förlänga livet på plats-återbruk-återvinning skulle tydliggöra för läsaren vad som menas.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement is set on both glued down and not glued down floor coverings (A+B).
Nordic Ecolabelling thanks you for your suggestion. The MECO and RPS analyses have been written according to the 3 steps/actions you are referring to.
An exemple of maintenance schedule can be seen in appendix 14.

Kährs
COMMENT 1: WOOD & LT
This requirement will not be possible to fulfill, with current solutions. Will need investments and new solutions.
COMMENT resilient floors:
Technology exist. Practically how to implement this after decades when removed flooring has reached their end of life is the main question. As timeframe for floorings are typically more than 30 years, this will not happen in near future. More actual is handling installation waste, which is possible to recycle back to production to new floor
coverings.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement is set on both glued down and not glued down floor coverings.

Parador
We wonder if the above mentioned guide covers this criteria sufficiently?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement is set on both glued down and not glued down floor coverings.

Tarkett Ronneby
It’s not clear as to what Nordic Swan defines as a repair. This needs to be clarified. Information about reuse and/or recycling options should be mandatory regardless of if it’s a glue down flooring or not. . Depending on what Nordic Swan defines as a

repair, informing about the repairability options should also be mandatory for glue down floors.

Is refurbish/refinish the same as a repair according to Nordic Swan? if not, this possibility should be mandatory for loose-layed flooring as well.
Their wording of “maintenance plan/schedule” should be rephrased as “maintenance instructions” to minimize risk of misinterpretation.
The requirement suggests that: “Disassembly and replacement operations must be capable of being carried out using common and
basic manual tools.” It needs to be clarified whether electric tools are part of “basic manual tools”.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The phrasing has been adjusted. The requirement is set on both glued down and not glued down floor coverings.

Tarkett SpA
we suggest modifying the requirement indicating that a method for repairing has to be available but without limiting it to sanding.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The phrasing has been adjusted. The requirement is set on both glued down and not glued down floor coverings.

Windmöller
The given technical solution seem to bee too limited. There is a broad discussion ongoing on Recycling, Remanufacturing, Refurbishing, Repairing…. Could be wise to open the requirements to a much wider view.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. The requirement is set on both glued down and not glued down floor coverings.

O48 Recyclability

Abriso-Jiffy
Abriso-Jiffy aims to have 100% recycable products in the portfolio in order to contribute to a better and sustainable environment; however under section O48 there is reference made underlays are exempted from the requirement to be recycable. From the scope of the Nordic Swan ecolable underlays, the recyclability should be part of this requirement.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Flooring underlays are no longer exempted from the requirement.
The requirement has been adjusted. The manufacturer must be able to recycle its own worn-out products into new products, and not only into new flooring underlays and/or new floor coverings. However, downcycling is not allowed.
The background text has been updated.

Kährs
Kährs
COMMENT 1: WOOD & LT
This requirement will not be possible to fulfill, with current solutions. Will need investments and new solutions.
COMMENT resilient floors:
Technology exist. Practically how to implement this after decades when removed flooring has reached their end of life is the main question. As timeframe for floorings are typically more than 30 years, this will not happen in near future. More actual is handling installation waste, which is possible to recycle back to production to new floor coverings.

A take back service for end of life will require a completely new logistics set-up, and not applicable to Kährs today since only selling B2B. What is the definition of take back service? The material should be able to be recycled into other products as well, not just floor coverings.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement and the background text has been adjusted. Flooring underlays are no longer exempted from the requirement. Plastic and limoleum floor coverings manufacturers must be able to take-back and recycle installation waste.
The manufacturer must be able to recycle its own worn-out products into new products, and not only into new flooring underlays and/or new floor coverings. However, downcycling is not allowed.
The background text has been updated.

Tarkett Ronneby, Tarkett AB
What is Nordic Swan's definition of recyclable?
It needs to be specified which types of flooring that requires post-consumer recycling.
In the background information it's stated that worn out products needs to be recyclable "in some cases".
It's not clear why wood floorings are excluded from "b)". The reason for this is not highlighted in the background information.
It's stated that the obtained post-consumer material must be usable to produce new floor coverings. Does "floor coverings" include underlays? Would this requirement be fulfilled if the material obtained is used in underlays?

In "b)" its stated that "…the manufacturer must have a technology enabling recycling of the material into new floor coverings." What is meant by "technology enabling recycling"? is this requirement fulfilled if it's been proven possible in laboratory tests/pilot tests? Does a logistical flow to manage the material at industrial scale need to be in place?
"production waste" can be many different types of fractions during a production process, e.g. scraps, damaged parts due to excess heating, dust from sanding, excess chemicals etc. Is the requirement fulfilled only if all fractions of waste are reused in some way? If not, it should be specified what I meant by "production waste".

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement and the background text has been adjusted. Plastic and limoleum floor coverings manufacturers must be able to take-back and recycle installation waste.

The requirement would be fulfilled if the material coming from floor coverings is used in flooring underlays.
The manufacturer must be able to recycle its own worn-out products into new products, and not only into new flooring underlays and/or new floor coverings. However, downcycling is not allowed. Pilot tests may be accepted and the logistical flow at industrial scale does not have to be in place. Production waste is handled by requirement on waste. The requirement should have meant "post-installation" waste. This has been corrected.

Windmöller
Why are underlays exempted? See also O47.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Flooring underlays are no longer exempted from the requirement.

O49 Product information

Bona
Vad det gäller paragraf O49 så förstår vi inte riktigt varför det är olika rekommendationer på lim respektive lack

- "if a glued down installation is recommended due to the possible longer duration, recommendation of using a Nordic Ecolabelled adhesive/glue or a low emission adhesive must be included. Method for in case the flooring must be welded together."
- "Recommended finish products (e.g., oil, lacquer and other surface treatments) in case of flooring refurbishment. If there are suitable Nordic Ecolabel finish products, these are to be recommended."
- Vi hade rekommenderat att det även nämns alternativet, low emitting finish product i det senare uttrycket.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Low-emission adhesives and coatings have been defined according to harmonised EU standards and directives.

Forbo
Regarding
• Information about the duration of the extended warranty.
Information/recommendation of keeping spare floor covering elements in stock for possible event of repair and/or replace/re-install must be written. See requirement Warranty and spare parts O45 for more information.
Please see our answer under the requirement 045.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted in accordance with adjustments made in other requirements.
Some points have been better defined as well.

Kährs
this requirement will not be able to be fulfilled. Information could be provided through the web.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement and the background text have been adjusted. Information available digitally or through diverse homepages may be accepted.

Parador
We wonder if the above mentioned guide covers this criteria sufficiently?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted in accordance with adjustments made in other requirements.
Some points have been better defined as well.

Tarkett Ronneby, Tarkett AB
Regarding "recommendations for the installation"
Recommending installation components based on one ecolabel will create issues when the flooring is being sold in many countries with different needs. Who decides what is the most suitable installation component, e.g. underlayer? The customer should always be recommended the most suitable installation component regardless of ecolabel as this will increase the possible lifespan of the product.
It's not clear what Nordic Swan defines as a "low emission adhesive".

Regarding "Information related to end of use of the product"
Cardboard and plastics have pictograms on them describing how the packaging should be sorted. Putting this into installation instructions. Is this enough?
If a take-back system is in place in one country but not the other, e.g. Norway but not in UK. Can the product still be sold as Nordic Swan ecolabelled in UK?
What is Nordic Swan's definition of "Take-back system in place"? What if there's a take-back system in place for B2B customers but not B2C? is the criteria fulfilled if the B2B customers are informed?
How is this criterion verified/controlled by Nordic Swan?
For products which have no take-back system in place it should be mandatory to inform the customer about this as well.
It should be mandatory to inform the customer about the recyclability options for installation waste. Not only end-of-use.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted in accordance with adjustments made in other requirements.
Some points have been better defined as well.
As long as the information required can be found somewhere on the documentation handed out to the customer, the requirement is fulfilled.
As long as the right information is handed out to the right country/customer, it should not be an issue for Nordic Ecolabelling.

4.2.7 Innovation

O50 Innovation

Bauwerk
Suggestion BG: Exclude wooden floorings from O50 mentioned points below to be in line with paragraph O48:

- The flooring manufacturer has a fully operational take-back system and new floorings contains more than 10% of post-consumer recycled flooring material from reprocessed own products collected via the system.
- The pre- and post-consumer recycled fractions used in the Nordic Ecolabel product are regularly tested for relevant SVHC and CMRs.
- Manufacturer of wood floorings (solid wood, parquet or veneer) have developed a process to recycle/reuse these products and the new Nordic Ecolabel flooring contains at least 10% recycled/reused flooring material.

Explanation: Parquet has a top layer thickness above 2.5 mm and can be re-sanded directly on the site. So no additional CO2 emissions due to transport, no production losses due to re-profiling and re-use of 95 % of the available material installed on the site. For wooden flooring with thicknesses below 1 mm no sanding possible directly on the site.

⇨ Differentiation between wooden flooring and parquet:

- Parquet: The solid wood or multilayer parquet is certified according to the FEP Parquet Refinishable Program administered by the European Parquet Federation (FEP). Expected lifetime of 75 years.
- Wooden floors (below 1 mm): No on-site sanding possible (product needs to be recycled. Expected lifetime = Warranty = 30 years.

VOC regulations in Production:
The quantity of environmentally harmful substances, calculated in a wet state, applied in the surface treatment system is below than 40 g/m2.
Suggestion BG: Set focus on VOC content on finished products according to Eco-Institute label regulations. Set requirements for safety requirements in production regarding VOC content.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted make some of the innovations clearer. The background text has been updated. Nordic Ecolabelling thanks you for your suggestions but reckons that the innovation requirements in question are relevant for all wood-based flooring, even if the environmental benefit of recycling these is inferior compared to other types of floor coverings.
Please note that requirement O47 Reparability has been updated and all flooring must be able to go through renovations, regardless of the type of installation.
A requirement on VOC emissions of finished products is included.
A requirement on occupational hazard for production of laminate is included.
Nordic Ecolabelling trusts manufacturers to follow other OELs required by national legislations.

Golvbranschen
The innovations listed might be in the forefront today, but perhaps there are other innovations that far exceed the results the Nordic Swan are aiming for. We suggest that this requirement includes an option for the manufacturer/supplier to present other innovations as well.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement and the background text have been adjusted. Your suggestion has been added.

IKEM
IKEM anser att den innovation som gjorts inom PVC och PVC-produktion bör lyftas fram.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. See answers to comment done to requirement O5.

Kährs
Would it be possible to fulfill different requirements for different product types?
Would it be possible to add a stepwise introduction of amount of (%) biobased raw materials?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted and you suggestion added.
It is possible to fulfil different requirements for different product types.

Parador
- Am I right that we only do have to fulfil at least 2 out of the 22 innovation points? Or would we have to fulfil 2 out of each area?
- Do UV-cured surface finishing this criteria automatically (as long as O32 is fulfilled – by fulfilling O24)?
- Would a certificate from our energy supplier be accepted as well (confirming 100% renewable sources)?
- Could you please indicate to which hazard-phrases this refers (H410, H411, H412 or all listed in the table in criteria point O25)?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Only 2 of the 22 proposed innovations need to be fulfilled.
The green electricity must be environmentally labelled according to standards written by the labels Bra Miljöval, EKO Energy or similar (standard would need to be assessed and approved by the Nordic Ecolabel). The hazard classifications H410, H411 and H412 are now mentioned.

Sherwin Williams
"The binder in the chemical product (e.g., adhesive or surface treatment) used in the production of the Nordic Swan Ecolabel product is made of renewable raw materials and fulfil requirements O14." Not clear if there are any concentration limits. It can be interpreted as it means 100% of binder should be made of renewable raw

materials. We suggest to gradually introduce renewable binders in surface coatings. We are open to have any needed discussions with Nordic Swan to further look in to this. Other comments We are missing exemption for 2K coating systems where the hardener can be classified as CMR 2 or have substances that are classified as CMR cat. 2 that are intentionally added. Please add any exemptions similar as in the current Floor requirements or same as in Furniture and Fitments.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. A threshold of 30% have been introduced in the innovation requirement in question. The exemption on 2-components products have been added to requirement O25.

Tarkett AB
There's not much detail concerning methods for testing and calculation in the requirements.
In requirement:
"Chemical products, such as adhesives and surface treatment products, used in the production of the Nordic Swan Ecolabel product are Nordic Swan Ecolabel."
it needs to be specified if all chemical products need to be Nordic Swan ecolabelled, only a certain amount or only products used for specific applications such as surface treatment. This is not clear.
In requirement:
"The quantity of environmentally harmful substances, calculated in a wet state, applied in the surface treatment system is below than 40 g/m2."
If "environmentally harm substances" are based on hazard classifications Nordic Swan should specify which ones they are referring to. Specify that the requirement is not relevant for UV treated surfaces.
In requirement:
"The flooring manufacturer has a fully operational take-back system and new floorings contains more than 10% of post-consumer recycled flooring material from reprocessed own products collected via the system."
It should be clear whether "new floorings" means Nordic ecolabelled flooring or "on average all produced flooring at that factory".
Concerning the requirement:
"The concentrations of substances classified as CMR and/or environmental hazardous, in the final cured/hardened chemical product (such as acrylate monomers and photoinitiators in UV-cured chemical products) used in the production of the Nordic Swan Ecolabel product, is below 100 ppm according to analytical tests performed by a third party."
What test method is valid and what substances are relevant?

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted/clarified and your suggestions added.

Tarkett Ronneby
No comments on this yet.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments.

Tarkett SpA
it's not clear if, once "chosen" 2 areas to fulfil, it's necessary to fulfil all requirements of that area. If this is the case, it's really hard to satisfy this requirement.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. Only 2 of the 22 proposed innovations need to be fulfilled.

SVEFF
Not clear if there are any concentration limits. It can be interpreted as it means 100% of binder should be made of renewable raw materials. We suggest to gradually introduce renewable binders in surface coatings. We are open to have any needed discussions with Nordic Swan to further look in to this.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement has been adjusted. A threshold of 30% have been introduced in the innovation requirement in question. The exemption on 2-components products have been added to requirement O25.

Unilin
In our opinion, Nordic Swan can give some examples for innovation, but it should be open for proposal from the certified company itself.
Continues research and internal insights an lead to innovative ideas which are not yet know in the market. There should be an option to propose other innovations than the ones that are listed.
Timeframe to fulfill a innovative criteria.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement and the background text have been adjusted. Your suggestion has been added.

Windmöller
Filler out of 100% recycled material is simply not possible today, there are often no industrial quantities available.
Same with pre/post-consumer material on industrial scale amounts!
We would like to suggest to use also or instead fastly renewable raw materials.
CLIMATE:
Include also: energy management system with 3rd party verification and/or an EPD as possible alternatives to fulfil requirements.
CIRCULAR ECONOMY:
Today to include 10% post-consumer recycled material is not feasible because it is not available for all types of materials and flooring. This requirement should be included later, when material is readily available. See also plans in EU policy!

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. Only 2 of the 22 proposed innovations need to be fulfilled.
The use of fastly renewable raw materials is already promoted by the criteria.
Nordic Ecolabelling has been skeptical to use EPDs as documentation to its requirement as the methodology to develop them is not standardized enough (e.g., use of different PCR).

Some of the manufacturers will be able to fulfil this requirement in the coming years and the new criteria are valid until 2028. Furthermore, the purpose of these innovation requirements is to show the path forward and what mandatory requirements the next generation of criteria may include.

4.2.8 License maintenance

O51 Customer complaints

No comments received.

O52 Traceability

No comments received.

4.2.9 Appendices

Appendix 1 Laboratories and methods for testing and analysis

Windmöller

- Where to find which Institute is approved for 3rd party certification / verification. What are the criteria for approval,
- dito as to the laboratories.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. All well-known test institutes/third party fulfil these requirements (Eurofins, SGS-Fresenius, Intertek, Bureau Veritas, RISE…etc.)

Appendix 11 Standards for quality and durability testing of floor coverings

Windmöller

- EN 660-1 is no longer a valid standard for wear testing, 16511 uses other standards.
- EN 16776 is missing for polyurethane flooring within your "Plastic flooring".
- EN 660-2 is no longer a valid standard for wear testing.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. The requirement O42 and appendix has been updated. Appendix 11 has been simplified to only refer to the relevant standards. The background text has been updated.
Your suggestion on PU-flooring has been added.

5 Comments to the background, in detail

5.1 Comments on bakground to requirement O5 (PVC)

1. **The environmental problems caused by PVC manufacture.**
2. **It is difficult to achieve complete traceability regarding where the PVC has been manufactured.**

3. **Recycling of post-consumer flooring is very limited in the Nordic countries. It is partly the problem of additives that means that recycling does not work. Flooring has a long service life and old flooring that istaken up may contain cadmium and lead which were used as stabilisers,pigments, etc. Adhesive residues and the fact that the base "comes too" when flooring is taken up are additional problems.**
4. **Used PVC flooring incinerated in waste incineration plants is associated with difficulties. Large amounts of neutralising lime must be added to protect the equipment and to keep emissions within the limit values. It increases the costs of incineration and for handling the waste product, which is classified as hazardous waste.**
5. **Not all the Nordic countries allow incineration of used PVC. Denmark has waste legislation which states that all PVC must first be sorted for material recovery. Because this does not exist in practice for vinyl flooring, used vinyl flooring ends up in landfill. The Nordic Ecolabel finds it hard to accept Nordic Ecolabelled products going to landfill.**
6. **Nordic Ecolabelling's decision to ban PVC in flooring is not based on problems with additives. Phthalates and other harmful additives can be replaced and phthalate-free vinyl flooring is already on the market. Nordic Ecolabelling's attitude is rather that PVC is not a sustainable material in flooring, whether or not harmful additives are substituted.**

Golvbranschen

- What environmental problems are being referred to? This argument is very vague and therefore hard to present feedback on. In the past Nordic Swan has specified the environmental problems primarily to be the use of the mercury method and the possibility of mercury leakage. However, PVC production using the mercury method is no longer in usewithin the EU.
- Traceability is a big issue for most customers of building materials overall, including PVC flooring. Producers consequently have the capacity to show relevant documentation regarding this issue. This could also be a requirement to receive the Nordic Ecolabel.
- Cadmium and lead in flooring were phased out a very long time ago and are not a significant issue in recycling PVC flooring. Modern PVC flooring (in question of receiving the Nordic Ecolabel), meeting strict requirements regarding chemical content, should not pose a problem for recycling. Regarding the comment that "Adhesive residues and the fact that the base "comes too" when flooring is taken up are additional problems" we would like to point out that this would pose problems to other glued down flooring materials as well. Why is this argument only brought forward regarding PVC flooring? Moreover, there are already available techniques on the market today for separating glue and residues of levelling compounds from post-consumer PVC flooring to enable recycling.
- Modern plants for waste incineration have the capacity to deal with PVC waste.
- It is inconsistent to apply this argument on PVC flooring alone, since other Nordic Ecolabelled products also risk ending up in landfill. Because of the good recycling properties of the PVC polymer, PVC flooring is the most

recycled plastic flooring on the market. Also,several countries in Europe are initiating recycling for post-use PVC flooring. A clear condition for receiving the Nordic Ecolabel could be that the PVC flooring is recyclable, and that the manufacturer is able to present how this works in effect.

- In point three, referring to old flooring products, the argument is made that "problem of additives means that recycling does not work". Here the argument is made that additives does not pose a problem. We find this reasoning very inconsistent. Also, we find the statement highly alarming that it is the Nordic Ecolabelling's attitude that PVC is not a sustainable material in flooring. This attitude should be able to be supported by clear unbiased scientific arguments. In what way is PVC flooring not a sustainable material compared to other plastic flooring?

Again, if it would be possible to include PVC flooring and underlays meeting strict requirements, The Nordic Ecolabel has an opportunity to ensure that the best and most sustainable PVC products are used.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments and present an updated background text in the final version of the Criteria and Background document gen 7.0.

Nordic Ecolabelling acknowledges that much has been done by industry to reduce the climate and health impact of PVC manufacturing and PVC products within the last 10 years. However, Nordic Ecolabelling reckons that the use of PVC in floor coverings and flooring underlays is still problematic for the following reasons:

- *Although the recyclability of PVC and PVC products is undeniable, and PVC recycling systems are under development, it is still a challenge for the industry to collect, sort and process the material so that it does not contaminate new products with harmful legacy chemicals. Nordic Ecolabelling has looked into the possibilities of requiring take back systems for specific PVC product areas. Unfortunately, it may take time before all actors involved throughout the service life of a floor covering manage to run a fully functional take-back system.*

- *Although emissions of polyaromatic hydrocarbons (PAH), benzo-a -pyrene, dioxins and furans from incineration plants have been significantly reduced, and technologies for the management of air pollution control residues have been developed, not all the Nordic countries allow incineration of PVC. Denmark has a waste legislation that states that all PVC products must be sorted for material recycling. However, the difference in composition of products made of soft PVC (such as flooring) render their recycling difficult and must currently be sent to landfill, resulting in potential leaching of additives to the environment.[8] Furthermore, as a principle matter, Nordic Ecolabelling does not want to certify products that end up in landfills.*

- *Although the use of the most problematic phthalates is now restricted in the EU, other additives hazardous to the environment and health (e.g., plasticizers*

[8] https://op.europa.eu/en/publication-detail/-/publication/e9e7684a-906b-11ec-b4e4-01aa75ed71a1

and stabilizers) can still be used in PVC as well as in other plastics.[9] The recent ECHA's work on a restriction proposal on the use of PVC and its additives is in line with Nordic Ecolabelling's specific concerns with PVC.[10,11]

- *Although mercury cells are not used in Europe anymore, the replacing membrane technology requires the use of harmful substances (PFAS) to produce the chlorine gas needed in PVC and other chemicals/plastics production.[12,13] How much PFAS are released to the environment throughout the service life of the membrane and how the membrane is disposed afterwards as waste, are issues in need of more investigation.*

- *Although the purpose of Nordic Ecolabelling is to guide the consumer to choose the best products from an environmental perspective, communicating on potentially Nordic Ecolabelled PVC products could be challenging and be regarded as misleading. Additionally, there is a risk that the trustworthiness of the Nordic Ecolabel could be undermined if Nordic Ecolabelled vinyl flooring were to be found on the market, as many NGOs still advise to avoid the use of soft PVC products.*

5.2 New criteria

Bauwerk Group
That is a problem now, we have no take back system for the certified products! Proposal: A criterion here can be that the removability on the site is possible. Sand and provide with a new surface.

Comments from Nordic Ecolabelling
Nordic Ecolabelling thanks you for your comments. These are just suggestions of future requirements.

6 Discussion and conclusion

Several consultation comments have been received to the proposed draft proposal criteria for floor coverings and flooring underlays, generation 7. The comments concentrate on the proposed new and adjusted requirements. Nordic Ecolabelling is grateful for responses.

The main comments apply to the following sections and requirements:

Product group definition
Both flooring underlays that installed under not glued down flooring and under glued down flooring can now be Nordic Ecolabelled according to these criteria.

[9] https://echa.europa.eu/sv/mapping-exercise-plastic-additives-initiative
[10] https://echa.europa.eu/documents/10162/17233/mandate_pvc_and_additives_rev_en.pdf/a860fd87-4231-5ed4-157b-f6cda1ee5832?t=1655721970555
[11] https://echa.europa.eu/documents/10162/7d64f1d7-b29f-94ec-4477-9bcebf737a82
[12] https://eippcb.jrc.ec.europa.eu/reference/production-chlor-alkali-0
[13] https://www.eurochlor.org/publication/fluoropolymers/

Indeed, neither Nordic Ecolabelling or the manufacturer have the possibility to demand a specific type of installation after the product has been sold.

Share of renewable/recycled raw materials
The requirement level of 80% proposed in the hearing was too high.
The limit value for alternative c) has been adjusted back to 70% and fillers can be left outside the calculations again. However, the factor promoting the use of renewable materials over recycled material has not been reintroduced.
Alternative b) has been tightened to stimulate the use of post-consumer recycled material. The limit value is still of 60% but half of it must come from post-consumer recycled material.

Chlorinated plastics in floor coverings and flooring underlays
Several stakeholders have questioned our forbid on PVC and PVC products.
The background text to requirement O5 has been updated.

Traceability and certified wood
The limit value for PEFC/FSC certified wood fibre has been kept 70% for all wood-based products with exception for oak parquet. A stepwise increase share of certified wood raw material from 60 to 70% over 3 years is required specifically for oak parquet.

Raw materials for bio-based polymers.
The requirement has been tightened so that only waste or residual products defined in accordance with (EU) Renewable Energy Directive 2018/2001 from other raw materials than sugar cane may be used in bio-based polymer production. In the consultation proposal, other primary raw materials (than Bonsucro certified sugar cane) could be used as long as the raw material was not GMO.

Recycled plastic, rubber and foam – Traceability
The requirement has been clarified. Recycled plastic, rubber and foam must not have undergone any recycling process approved and published on EFSA's* and/or FDA's** official list.

Recycled composite
Stakeholder comments are sceptic to include traditional WPC in the product group. However, the requirement was formulated wrongly. The intention was that only recycled material that is already a composite material should be included in the criteria. The requirement has been changed.

Classification of chemical products
The exemption for UV-curing products has been corrected.
The exemption for accelerators in linoleum has been removed.

Classification of ingoing substances
The exemption for the hardener in two components product has been reintroduced.
We have now introduced an exemption for VAH in requirement 025 Classification of ingoing substances and updated requirement 029 volatile organic compounds. VAH may be added in 0,1% in adhesives and 1% in other chemical products. VAH in surface treatments is regulated in requirements O33/O34.

Nanomaterials
The exemption for modified SAS was reintroduced with a slight change to the wording. The exemption is now more specific and only "surface-treated pyrogenic silica" and the surface treatment must meet our chemical requirements.

Quantity of applied volatile organic compounds (VOC) in surface treatments
The second alternative to fulfil this requirement has been reintroduced ((b) 5% by weight).

Packaging
The requirement was too strict. It is now only required that packaging materials are recyclable according to current recycling systems.

Emissions
The requirement was too strict. Limit values for Multi-layer wood and wood veneer flooring, laminate, linoleum and plastic flooring/underlays have been highered. In addition, the accepted test methods have been updated regarding formaldehyde emission considering EU taxonomy and incoming national legislations.

Quality and durability of floor coverings
Appendix 12 has been simplified to only refer to the relevant standards.

Warranty and spare parts
Flooring underlays are no longer exempted from the requirement on warranty.
The requirement has been changed. A 5 years-warranty must be given.
Warranty is now only coupled to reparability. Spare parts must not be made available through the warranty time.

Labelling and traceability
The requirement level was too high. The requirement has been changed. A register or database for treacability of all B2B projets is no longer required.

Reparability
The requirement level was too low. The requirement is set on both glued down and not glued down floor coverings.

Recyclability
The requirement has been adjusted.
Flooring underlays are no longer exempted from the requirement.
Only linoleum and plastic floor coverings manufacturers must offer that installation waste is material recycled. The part about purchase and faulted product returns has been deleted.
The manufacturer (wood floorings are still exempted) must be able to recycle its own worn-out products into new products, and not only into new flooring underlays and/or new floor coverings. However, downcycling is not allowed.

Product information.
The requirement was not clear.
Requirement adjusted in accordance with adjustments on other requirements.
Some points have been better defined as well (such as definitions for low VOC-emitting adhesives and coatings).

7 Appendix 1: Summary of all changes done after the consultation period

Requirement	Consultation comments	Change in the requirement after the consultation
Product group definition	Requirement not clear.	Both flooring underlays that installed under not glued down flooring and under glued down flooring can now be Nordic Ecolabelled according to these criteria.
O4 Share of renewable/recycled raw materials	Requirement level too high.	The requirement has been adjusted. The new limit is 70% and fillers may be left out from the calculations again. Alternative b) has been tightened to promote the use of post-consumer material over pre-consumer material. The limit value is still of 60% but half of it must come from post-consumer recycled material. The background text has been updated
O5 Chlorinated plastics in floor coverings and flooring underlays	Requirement outdated/ Requirement level too high.	The background text has been updated.
O8 Traceability and certification	Requirement level too high.	The limit value for PEFC/FSC certified wood fibre has been kept 70% for all wood-based products with exception for oak parquet. A stepwise increase share of certified wood raw material from 60 to 70% over 3 years is required specifically for oak parquet.
O10 Flax (linen) and other bast fibres	Requirement not clear.	The requirement has been clarified. The requirement has been adjusted so that it is clear it is also set on jute and linseed oil. The requirement is now called O10 Flax (linen), other bast fibres and linseed oil.
O11 Origin	Requirement not clear.	The requirement has been clarified. The recycled plastic used as raw materials in recycled synthetic fibres must not have undergone any recycling process approved and published on EFSA's and/or FDA's official list.
O12 Recycled fibres - test for harmful substances	Requirement outdated	The requirement has been updated to match the lastest standard from Oektoex regarding PFAS.
O14 Raw materials for bio-based polymers.	Requirement level too low.	The requirement has been tightened so that only waste or residual products defined in accordance with (EU) Renewable Energy Directive 2018/2001 from other raw materials than sugar cane may be used in bio-based polymer production.
O18 Recycled plastic, rubber and foam – Traceability	Requirement not clear.	The requirement has been clarified. Recycled plastic, rubber and foam must not have undergone any recycling process approved and published on EFSA's and FDA's official list.
O19 Chemicals in recycled plastic, rubber and foam	Requirement outdated	The requirement has been thightned to include PAHs restricted by REACH.

O21 wood fibre and plastic	Requirement not clear. The name and requirement should change and focus on recycled composite materials – Not traditional WPC.	The requirement has been changed and is set on recycled composite material instead of WPC. The background text has been updated.
Chemical in recycled composite	Requirement added	Requirement added
O24 Classification of chemical products	Requirement not clear.	The exemption for UV-curng products has been corrected. The exemption for accelerators in linoleum has been removed.
O25 Classification of ingoing substances	Requirement level too high.	The exemption for the hardener in two components product has been reintroduced. We have now introduced an exemption for VAH in requirement 025 Classification of ingoing substances and updated requirement 029 volatile organic compounds.
O26 Preservatives	Requirement level too high.	The limit value for MIT has been changed back to 200 ppm. CAS numbers have been added.
O28 Nanomaterials	Requirement level too high.	The exemption for modified SAS was reintroduced with a slight change to the wording. The exemption is now more specific and only “surface-treated pyrogenic silica” and the surface treatment must meet our chemical requirements.
O30 Volatile organic compounds	Requirement not clear.	VAH may be added in 0,1% in adhesives and 1% in other chemical products. VAH in surface treatments is regulated in requirements O33/O34.
O33 Quantity of applied volatile organic compounds (VOC) in surface treatments	Requirement level too high.	The second alternative to fulfil this requirement has been reintroduced (5% by weight).
O36 Energy mapping	Requirement level not consistent.	Flooring underlays are no longer exempted from the requirements.
O37 Energy consumption	Requirement level not consistent or too high.	Flooring underlays are no longer exempted from the requirements.
O39 Packaging	Requirement level too high.	The requirement was too strict. It is now only required that packaging materials are recyclable according to current recycling systems.
O40 Emissions	Requirement level too high.	The requirement was too strict. Limit values for Multi-layer wood and wood veneer flooring, laminate, linoleum and plastic flooring/underlays have been highered. In addition, the accepted test methods have been updated regarding formaldehyde emission considering EU taxonomy and incoming national legislations. The background text has been updated.
O42 Quality and durability of floor coverings	Requirement not clear.	Appendix 12 has been simplified to only refer to the relevant standards. The background text has been updated.
O43 Quality and durability of floor coverings	Requirement not clear.	It is now clarified that it is always the latest published bulletin that must be used to assess the quality and durability of the flooring underlay.

O45 Warranty and spare parts	Requirement level too high.	Flooring underlays are no longer exempted from the requirement on warranty. A 5 years-warranty must be given and is now only coupled to reparability and not to spare parts anymore. An appendix has been added to illustrate how an extended warranty can look like.
O46 Labelling and traceability	Requirement level too high.	The requirement has been changed. A register or database for traceability of all B2B projets is no longer required.
O47 Reparability	Requirement level too low.	The requirement is set on both glued down and not glued down floor coverings.
O48 Recyclability	Requirement level too high.	The requirement has been adjusted. Only linoleum and plastic floor coverings manufacturers must offer that installation waste is material recycled. The part about purchase and faulted product returns has been deleted. The manufacturer (wood floorings are still exempted) must be able to recycle its own worn-out products and use the post-consumer recycled material into new products, and not only into new flooring underlays and/or new floor coverings. However, downcycling is not allowed. Flooring underlays are no longer exempted from the requirements. The background text has been updated.
O49 Product information	Requirement not clear.	Requirement adjusted in accordance with adjustments on other requirements. Some points have been better defined as well (such as definitions for low VOC-emitting adhesives and coatings).
O50 Innovation	Requirement not clear.	The requirement has been adjusted to make some of the innovations clearer (e.g., limit values, methods, hazard classifications, scope). The background text has been updated.