

Consultation response document for

## Paints and Varnishes



Version 4.0

9th February 2023

# Nordic Ecolabelling of Paints and Varnishes – Consultation response document

096/4.0, 9th February 2023

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# 1 Summary

Nordic Ecolabelling highly appreciates the involvement of all stakeholders that participated in the consultation. The delivered comments and suggestions have been most helpful in the process of finalizing the criteria. Chapter contains a table of the main changes to the criteria document after the consultation. Smaller adjustments and clarifications have been made to several requirements.

Below is a summary of common viewpoints about the proposed criteria.

- Several stakeholders appreciated that Nordic Ecolabelling has decided to tighten the criteria for paints and varnishes.
- Several stakeholders appreciate the inclusion of outdoor and industrial paints and varnishes in the criteria document for paints and varnishes.
- Many stakeholders expressed concern about the titanium dioxide requirement not being representative and a one-size fit all solution is not applicable. After consideration we believe we have found the right balance to set requirements for titanium dioxide while still maintaining a level of representation for the industry.
- Many stakeholders have expressed concern about the use of renewable binders for acrylic based paints. While the requirement was a policy requirement to increase the use of renewable raw materials based on EU-REDII, the requirement has been changed slightly and made clearer and focuses on certification of raw materials and a supply chain policy and code of conduct.
- Many stakeholders expressed concerns about possible rise in costs of emission testing and risk of even further exposure as certain substances have lower emission than what was previously regulated in the criteria in regards to in-can testing. After careful consideration, Nordic Ecolabel has decided for indoor paints and varnishes to keep both emission testing and in-can testing requirement in order to make sure that the risk for consumers, formulators and raw material manufacturers are reduced. Nordic Ecolabel will maintain a pragmatic approach to emission testing due to the cost, and do not require all products to be tested if their formulations are similar.
- Several stakeholders expressed concern regarding metal packaging and the prohibition. After consideration of the comments, Nordic Ecolabel has decided to maintain the prohibition of metal packaging but has included several exemptions where it is not technically possible.
- Several stakeholders have expressed concern about the requirement for 50% PCR in plastic packaging as a result of demand increase with this new requirement. Several exemptions have been made where PCR-plastic cannot technically be used, and the requirement now includes pre-consumer plastics (also known as post-industrial plastic waste).

## 2 About the consultation

This document consists of feedback received during the public consultation for revised criteria for Paints and varnishes (version 4.0), and Nordic Ecolabelling's response to the feedback. The purpose of this document is to show how external feedback has affected the development of the criteria in compliance with the ISO 14024 standard.

The criteria proposal was sent to several hundred stakeholders in the Nordic region and internationally. The consultation period ran from 30 November 2022 to 8 February 2023. All stakeholders were also invited to a public consultation webinar that was arranged in English at the beginning of the consultation period. Separate meetings with several individual stakeholders were also held during the consultation period. Nordic Ecolabelling particularly requested feedback on the most important suggested changes compared to criteria generation 3:

- O9 Titanium dioxide (energy related requirements). The proposed requirement is a first draft. Input on the proposed requirement and suggestions for alternative requirements are most welcome. We have proposed energy limits for the traditional sulphate and chloride processes in point a. If you consider other, emerging processes to be relevant, you are welcome to comment on this as well.
- O18 Cement/Hydraulic binder (global warming potential). Input on the proposed requirement is most welcome.
- O31 Metal packaging (prohibition of metal packaging). Input on the proposed ban is most welcome.
- O32 Recycled material in hard plastic packaging. Input on the proposed percentage is most welcome.
- O33 Recycled material in flexible bags and pouches. Input on the proposed percentage is most welcome.
- O4 Environmentally harmful substances (updated calculation formula and new limit value).
- O5 Preservatives (limit value lowered for outdoor and industrial paints).
- O6 Formaldehyde (indoor emission requirement).
- O12 Prohibited substances (Endocrine disruptor lists I, II and III <http://edlists.org>) and bisphenol restriction.
- O13 Emissions of Volatile and Semi-Volatile Organic Compounds in indoor paints and varnishes.
- O14 Content of Volatile and Semi-volatile Organic Compounds in outdoor paints and varnishes and industrial paints.
- O16 Acrylic resins. Requirements on renewable raw materials including a ban on palm oil and PFAD.
- O17 Alkyd resins. Requirements on renewable raw materials including a ban on palm oil and PFAD.
- O26 Quality requirements for industrial paints and varnishes for furniture (regarding standards, is the requirement up to date?).
- O27-O29 Quality requirements for UV-cured applications (Are the requirements clear that UV-coatings must fulfil these requirements?).

Nordic Ecolabelling is grateful for all the answers that help us in our development and help us to ensure that the work on the criteria is compliant with the ISO 14024 standard.

### 3 Summary of incoming comments and feedback

In total, 28 stakeholders commented on the proposal, and an additional 5 refrained from commenting. Out of the 28 stakeholders that commented on the proposal, one supported the proposal with or without comments, 26 stakeholders were just commenting, and one stakeholder rejected the proposal.

An overview of the respondents and their standpoints is given in the following Tables below.

Individual follow-up meetings were held with several stakeholders, for clarifying specific questions.

**Tabell 1: Nordiska remissvar**

| Land          | A. Bara kommentarer. | B. Stöder förslaget. | C. Stöder förslaget med kommentarer. | D. Avstår från yttrande. | E. Förkastar förslaget med motivering. | Totalt |
|---------------|----------------------|----------------------|--------------------------------------|--------------------------|--|--------|
| Danmark       | 3                    |                      |                                      | 1                        | 1                                      | 5      |
| Sverige       | 14                   |                      | 1                                    | 3                        |  | 18     |
| Finland       | 3                    |                      |                                      | 1                        |  | 4      |
| Norge         | 6                    | 1                    | 1                                    |                          |  | 8      |
| Island        |                      |                      |                                      |                          |  |        |
| <b>Totalt</b> | 26                   | 1                    | 2                                    | 5                        | 1                                      | 35     |

**Tabell 2: Danska remissvar**

| Remiss-instans                 | A. Bara kommentarer. | B. Stöder förslaget. | C. Stöder förslaget med kommentarer. | D. Avstår från yttrande. | E. Förkastar förslaget med motivering. |
|--------------------------------|----------------------|----------------------|--------------------------------------|--------------------------|--|
| Miljöministeriet               | x                    |                      |                                      |                          |  |
| Beck & Jørgensen A/S           | x                    |                      |                                      |                          |  |
| Danske Regioner                |                      |                      |                                      | x                        |  |
| Danmarks Farve- og Limindustri | x                    |                      |                                      |                          |  |
| Aalborg Portland A/S           |                      |                      |                                      |                          | x                                      |
| <b>Σ Danska svar:</b>          | 5                    |                      |                                      |                          |  |

Tabell 3: Svenska remissvar

| Remiss-instans   | A. Bara kommentarer. | B. Stöder förslaget. | C. Stöder förslaget med kommentarer. | D. Avstår från yttrande. | E. Förförkastar förslaget med motivering. |
|--|----------------------|----------------------|--------------------------------------|--------------------------|---|
| Sveriges Kommuner och Regioner                             |                      |                      |                                      | x                        |   |
| Folkhälsomyndigheten                                       |                      |                      |                                      | x                        |   |
| Organik Kimya  | x                    |                      |                                      |                          |   |
| Metal Packaging Europe                                     | x                    |                      |                                      |                          |   |
| Målning  | x                    |                      |                                      |                          |   |
| Hagmans Nordic AB  | x                    |                      |                                      |                          |   |
| Flügger Group A/S  | x                    |                      |                                      |                          |   |
| European Polymer Dispersion and Latex Association          | x                    |                      |                                      |                          |   |
| Emballator Group AB  | x                    |                      |                                      |                          |   |
| Celanese Services Germany GmbH                             | x                    |                      |                                      |                          |   |
| Boverket   |                      |                      |                                      | x                        |   |
| AkzoNobel Paint & Coatings NL                              | x                    |                      |                                      |                          |   |
| AkzoNobel Decorative Coatings AB                           | x                    |                      |                                      |                          |   |
| Upphandlingsmyndigheten                                    |                      |                      | x                                    |                          |   |
| Teknos Group Oy  | x                    |                      |                                      |                          |   |
| Verband der deutschen Lack- und Druckfarbenindustrie e. V. | x                    |                      |                                      |                          |   |
| Titanium Dioxide Manufacturing Association                 | x                    |                      |                                      |                          |   |
| Sveriges Färg och Lim Företagare                           | x                    |                      |                                      |                          |   |
| $\Sigma$ Svenska svar:                                     | 18                   |                      |                                      |                          |   |

Tabell 4: Finska remissvar

| Remiss-instans                    | A. Bara kommentarer. | B. Stöder förslaget. | C. Stöder förslaget med kommentarer. | D. Avstår från yttrande. | E. Förförkastar förslaget med motivering. |
|-----------------------------------|----------------------|----------------------|--------------------------------------|--------------------------|---|
| Allergia-, Iho- ja Astmaliitto ry | x                    |                      |                                      |                          |   |
| Nordkalk                          |                      |                      |                                      | x                        |   |
| PPG                               | x                    |                      |                                      |                          |   |
| CH-Polymers                       | x                    |                      |                                      |                          |   |
| $\Sigma$ Finska svar:             | 4                    |                      |                                      |                          |   |

Tabell 5: Norska remissvar

| Remiss-instans                   | A. Bara kommentarer. | B. Stöder förslaget. | C. Stöder förslaget med kommentarer. | D. Avstår från yttrande. | E. Förkastar förslaget med motivering. |
|----------------------------------|----------------------|----------------------|--------------------------------------|--------------------------|--|
| Jotun A/S                        | x                    |                      |                                      |                          |  |
| Gjøco AS                         | x                    |                      |                                      |                          |  |
| Norsk Metallgjenvinning AS       | x                    |                      |                                      |                          |  |
| Olje- og energidepartementet     |                      | x                    |                                      |                          |  |
| Arbeidstilsynet                  |                      |                      | x                                    |                          |  |
| BASF                             | x                    |                      |                                      |                          |  |
| Kronos Titan AS                  | x                    |                      |                                      |                          |  |
| Maling & Lakkindustriens Forbund | x                    |                      |                                      |                          |  |
| Σ Norska svar:                   | 8                    |                      |                                      |                          |  |

## 4 Comments to the criteria, in detail

The various comments from the consultation parties have been inserted in this chapter, and grouped as general comments or in relation to specific requirements. Nordic Ecolabelling has given a response to the comments and described if and how the requirement has been adjusted. If several stakeholders have given the same or similar comment, a common response is written to all. A table containing the main changes to the criteria document after the consultation can be found in section 5. The numbering of criteria always refers to the criteria proposal, unless it is explicitly referred to the (final) criteria document and its numbering.

### 4.1 General comments

#### **Beck & Jørgensen A/S**

Reduced energy consumption for production of paint – this ensures energy efficiency and reduces the climate impact.

Jeg mener at miljødagsordenen i dag i høj grad handler om reduktion af CO<sub>2</sub> på alle niveauer i samfundet. Jeg ser ikke dette indarbejdet i kriterierne i tilstrækkelig høj grad – og slet ikke for selve produktionen. Det synes jeg er meget skuffende at Danmarks officielle miljømærker ikke indarbejder dette i kriterierne. I bør tvært imod være foregangsinstution for disse tiltag. Hvis der ikke bliver taget hensyn til dette, håber jeg at en kommende revision af EU Blomsten i højere grad vil tage dette i betragtning, hvorefter man vil kunne søge om EU Blomsten som alternativ til Svanen.

#### **Nordisk Miljömärknings kommentar**

*Nordisk Miljömärkning tackar för erat svar. Texten är inkluderad och gäller för färgens hela livscykel, inklusive råvarufasen. Ett specifikt krav för produktion av färg kopplat till energi och CO<sub>2</sub>eq har utretts via LCA-data och har inte kunnat kravställa eftersom mer än 75 % av färgens all koldioxidavtryck finns inom färgtillverkarens leverantörskedja. Nyare EPD-data från färger visar också att för produktion av färg ligger koldioxidavtrycket på ca 5%. Nordisk Miljömärkning har istället valt att fokusera på de stora bidragen till färgens klimatpåverkan inom råvarufasen och*

*utreda mer ingående ett energi och CO2-krav för färgproduktion vid en senare revision.*

### **Beck & Jørgensen A/S**

Det fører mig hen til sætningen ”**Through strict requirements the product group is a better choice for users and the environment.**” Jeg mener slet ikke at de nuværende kriterier er strenge og stiller spørgsmålstegn ved om kriterierne, som denne revision omhandler, bliver strenge. Det kan jeg ikke endeligt gennemskue på nuværende tidspunkt. Men overfor den uvidende, der ikke har indblik i kriterierne, lyder det jo meget godt at skrive det. Derfor bør kriterierne måske have en mere neutral ordlyd, idet ordlyden i de nuværende kriterier er (med tiden er blevet) misvisende. ’

### **PPG**

The new criteria document covers several paint types. We expect that the total fee to be paid for the products covered by the current 096 and 097 criteria does not change significantly.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för erat svar.*

### **Gjøco AS:**

- Det er viktig at Miljømerking Ecolabel tar hensyn til at det ikke bare er store konsern med milliard omsetninger som skal søke om Svanen. Det er viktig at kostnadene for å kunne oppnå Svanen på et produkt holdes nede, slik at små og mellomstore bedrifter ikke skvises ut. Det som vi opplever som mest kostnadskrevende er at det kreves tester utført av akkrediterte laboratorier.
- Det er viktig at der hvor det kreves tester, er en mulighet for å dele produkter inn i grupper etter type bindemiddel og råvarer for øvrig, og at det er nok å sende en worst case til testing. Det vil holde kostnadene nede.
- Vi anser det også som viktig at det å oppnå Svanen skal være noe å strekke seg etter. Kriteriene må være såpass strenge at merket betyr noe, men samtidig ikke strengere enn at det er mulig å få til en god maling. Med forslaget som er på høring, ser dette ut til å være ivaretatt.
- Det er veldig viktig at det alltid er en overgangsperiode på minimum ett år, når det innføres nye kriterier. Vi må få tid til å sette oss inn i kriteriene, og eventuelt gjøre tilpasninger på produkter, samt å sende inn til nye tester om nødvendig. En overgangsperiode er også viktig for å bruke opp ev. emballasje, for å unngå at emballasje må skrotes.
- Det er nevnt at det skal bli en samkjøring mellom Svanen og Breeam Nor, men jeg kan ikke finne noe om dette i høringsdokumentet. Det er en veldig stor fordel hvis dette blir en realitet. Det tror jeg vil gagne både Svanen og Breeam Nor. Jeg vet ikke hvordan dette skal gjøres i praksis, men om det blir en forståelse av at om produktet er Svane-merket, så holder produktet også Breeam Nor sine kriterier og vise versa. Jeg legger ved det jeg finner om emisjonskrav i Breeam Nor v6.0 til info.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för era kommentarer. Vår avsikt med kriterierna är att hitta en samhörighet mellan stora och små företag, så att alla har liknande villkor att förhålla sig till när de ansöker. När kriterierna blir publicerade så kommer licensinnehavarna ha ca 1½ år på sig att ompröva licensen för de nya kriterierna.*



*Samhörigheten med Breeam Nor är kopplat till emissioner av färger och lacker enligt baskravet i v6.0 kriterier for emisjoner fra byggeprodukter.*

### **Miljøministeriet**

Herved fremsendes Miljøministeriets samlede høringskommentarer til Nordisk Miljømærknings kriterier til maling og lak, idet der er indhentet bidrag fra Miljøstyrelsen.

Ministeriet forventer at kunne stemme for kriterierne i denne udgave ved senere stillingtagen i Danmarks Miljømærkenævns, eller med ændringer der ikke væsentligt forringer miljøbeskyttelsesniveauet.

Indledningsvist gør ministeriet opmærksom på, at brugen af begreberne ”forbudt” eller ”forbyder” indikerer, at miljømærkekriterierne har en status af lovgivning. I stedet bør miljømærkekriterierne anvende begreber som ”udelukke” eller ”ekskludere”. I den engelske udgave bruges begreberne ”prohibited”, hvor ”excluded substances” er mere korrekt. Det bemærkes i øvrigt, at begge begreber i materialet bruges uden skelen til kontekst.

### ***Nordisk Miljømærknings kommentar***

*Nordisk Miljømärkning tackar för era kommentarer.*

### **Danmarks Farve- og Limindustri**

Indledningsvis skal vi gøre opmærksom på, at vi fortsat finder det uheldigt, at der findes to sæt kriterier for samme produkttype. Både Svanen og Blomsten er officielle miljømærker i DK, men hvilken er bedst, når kriterierne ikke er ens og derfor ikke ”lige gode? For virksomhederne er det uden tvivl en ulempe, især de som i dag har valgt både at have både Svanen og Blomsten, men også dem, der f.eks. pga. markederne, de sælger på, har valgt Blomsten, der nu på sin vis devalueres. En anden generel kommentar er, at vi finder, at kemikalielovgivningen efterhånden er så stram, bl.a. med flere og flere stoffer, der klassificeres som problematiske på forskellige måder, at man ikke kan fortsætte med at stramme kravene i kriterierne på den traditionelle måde ved at sænke grænser for indholdet af eller forbyde bestemte stoffer. I så fald vil det betyde, at de miljømærkede malinger og lakker ikke vil kunne præstere, som man vil forvente, på de tekniske og kvalitetsmæssige parametre også. Derfor finder vi, det vil være naturligt at begynde at fokusere mere på at stille krav til emballagerne og produktionernes miljømæssige fodaftryk. Og det vil vi gerne kvittere for at man tager hul på.

### **Høringsproceduren**

Hvis der sker væsentlige ændringer i forbindelse med høringen, ville det være ønskeligt, hvis vi fik mulighed for at se det endelige udkast inden det vedtages og offentliggøres med henblik på eventuelle supplerende kommentarer.

### ***Nordisk Miljømærknings kommentar***

*Nordisk Miljømärkning tackar för er kommentar. Generellt försöker vi att ha liknande kriterier som andra miljömärkningar för samma produktgrupper. Men Miljömärket Svanen har också egna miljömål att utgå från som inte alltid är i samma linje med andra. Dessutom så är revisionen av EU-blommans färger planerade inom snar framtid, och då kommer kriterierna att skilja. Vårat mål är att ha en dialog med dem för att i framtiden se till att kriterierna är så samordnade så*

*långt som möjligt, då det är vanligt att många kunder dubbel märker sina produkter med både Svanen och EU-blomman.*

## 4.2 Definition of the product group

### 4.2.1 Definitions

#### **Akzo Nobel Decorative Coatings AB**

Föroreningar: Föroreningar i råvarorna med koncentrationer över 1000 ppm (0,100 viktprocent) betraktas alltid som ingående ämnen oavsett deras koncentration i den Svanenmärkta produkten. Gränsen har sänkt från 1 til 0,1%.

Vi tycker att det är en mycket stor ändring (sänkning med en tiopotens!) som påverkar nuvarande råvaror. Även de råvarorna som kanske ingår i slutprodukten i en liten mängd där halten förorening hamnar på väldigt lågt nivå. Vi anser att halten i slutprodukten borde vara det viktigaste kravet. Som exempel hänvisar jag till texanol, som numera innehåller en förorening 2,2,4 trimethyl-1,3-pentanediol diisobutyrate som är klassat Repr, 2, H361d i 0,8%. Råvaran texanol är inte klassat, och halten av förorening i våra Svanenmärkta slutprodukter ligger under 0,01%. Men enligt de nya krav skulle vi inte kunna använda texanol längre. Den föreslagna gränsen kommer att missgynna de råvaruleverantörer som undersöker sina produkter noggrant vad gäller föroreningar.

#### **Maling & Lakkindustriens Forbund**

*“Impurities in the raw materials exceeding concentrations of 1000 ppm (0.1000 w%) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.”*

The level has been reduced by a factor 10 from 1% to 0,1%. This affects even the raw materials that are included in the final product in a small amount with the level of contamination ending up at a very low level. We believe that the content in the final product (<0,01%) should be the most important requirement. The proposed limit will disadvantage those raw material suppliers who scrutinize their products for contamination.

#### **Sveriges Färg och Lim Företagare**

Angående sänkning av halten föroreningar i råvarorna, i de nya kriterier betraktas föroreningar i råvarorna med koncentrationer över 1000 ppm (0,100 viktprocent) alltid som ingående ämnen oavsett deras koncentration i den Svanenmärkta produkten. Gränsen har sänkts från 1 till 0,1% och det är en mycket stor ändring (sänkning med en tiopotens). Även de råvaror som kanske ingår i slutprodukten i en liten mängd där halten förorening hamnar på väldigt lågt nivå, får inte längre används.

Vi anser att halten i slutprodukten borde vara det viktigaste kravet. Den föreslagna gränsen kommer att missgynna de råvaruleverantörer som undersöker sina produkter noggrant vad gäller föroreningar.

#### **PPG**

The proposed definition of impurity in a raw material is too strict, 1% should be kept as definition. The amount in the final product should be of greater importance.

### **Svar fra Nordisk Miljømerking**

*Takk for kommentarene. Her har det blitt en trykkfeil i høringsdokumentet. Feilen er rettet, slik at definisjonen av forurensninger nå er i samsvar med version 3 av kriteriene.*

### **Arbeidstilsynet**

Jf. EU-kommisjonens anbefalte definisjon av nanomaterial (2022/C 229/01) som gjengitt i kapittel O11 på side 18 gjelder denne «nanomaterial: ett naturligt, oavsiktligt framställt eller avsiktligt tillverkat material bestående av **fasta** partiklar.....».

I definisjonen av nanomaterial i kapittel 1 fremkommer det ikke at dette gjelder faste partikler.

Bilag 1 tabell O11 Nanomaterialer/-partikler: Bør stå O11 Nanomaterialer/- faste partikler.

### **Svar fra Nordisk Miljømerking**

*Takk for kommentaren. Teksten er oppdatert slik at definisjonen i krav O11 benyttes i hele dokumentet.*

### **PPG**

The definitions of Identity preserved, Segregated, Mass balance and Book and claim need better explanations. It is unclear if these terms are related to a requirement or documentation need.

### **Nordisk Miljömärknings kommentar**

*Nordic Ecolabelling thanks you for your comments. The background document has been updated explaining the different levels of traceability.*

## **4.2.2 What can carry the Nordic Swan Ecolabel?**

### **Flügger Group A/S**

We support the inclusion of outdoor paints and varnishes in the criteria set. This is in alignment with the EU Ecolabel criteria and makes good sense from a product point of view. Products approved under the criteria-set for Chemical Building products today, must be transferred to the license for indoor paints and varnishes, which requires some implementation time with regards to label updates. We would like to have a reasonable transition period, where it is okay to sell out products with the old license-number.

### **Nordisk Miljömärknings kommentar**

*Nordic Ecolabel thanks you for your comments. We believe that there is enough transition time between the old criteria for paints and varnishes and outdoor paints (chemical building products) as outdoor paints criteria will expire in 2025.*

### **Danmarks Farve- og Limindustri**

Vi vil gerne kvittere for, at man samler indendørs og udendørs maling, samt giver mulighed for også at kunne søge om Svanen på malinger til industriel brug.

I kriterierne fremgår det, at det ikke er muligt at søge mærket til preservation product for wood impregnation. Er muligt at præcisere, hvilke produkter, det præcist vedrører. Er det alle produkter, der er godkendt under PT8 i Biocidforordningen

(BPR nr. 528/2012)?

#### **Nordisk Miljömärknings kommentar**

*Nordisk Miljömärkning tackar för kommentarerna. PT7 och PT8 är produkttyper enligt förordningen om biocidprodukter (BPR) i Europeiska Unionen. PT7 täcker filmkonserveringsmedel, medan PT8 täcker träskyddsmedel.*

*Den primära funktionen hos biocider i PT7-produkter är att kontrollera tillväxten av mikroorganismer såsom alger, svampar och bakterier på ytan av material. Dessa produkter används för att skydda målade ytor, beläggningar och andra material från missfärgning och nedbrytning som orsakas av mikroorganismer.*

*Samtidigt är den primära funktionen hos biocider i PT8-produkter att skydda trä från träförstörande organismer såsom svampar, termiter och skalbaggar. Biocider som används i PT8-produkter inkluderar aktiva substanser såsom azoler, karbamat och kopparföreningar. Dessa biocider är utformade för att tränga in i träet och ge långvarigt skydd mot tränedbrytande organismer. Intentionen för kriterierna är produkter som innehåller sådana biocider som behöver godkännande enligt PT-8 inte ska kunna Svanenmärkas i kriterierna för färg och lack. Detta har förtydligats i produktdefinitionen.*

#### **Sveriges Färg och Lim Företagare**

Vi ser positivt på att industrifärger och lacker flyttas till denna del.

#### **Nordisk Miljömärknings kommentar**

*Nordisk Miljömärkning tackar för erat svar.*

### 4.2.3 What is a Nordic Swan Ecolabelled paint or varnish?

#### **Danmarks Farve- og Limindustri**

I dette afsnit lægges således op til en ”reduced energy consumption for production of paint”. Det synes vi er vigtigt, at der kommer fokus på. Vi kan blot ikke se det afspejlet i selve kriteriesættet.

Vi kan se, at man har tilføjet krav for energi og klima for råvareproduktionen af cement/hydrauliske bindemidler og titaniumdioxid, men ser det ikke andre steder. Vi opfordrer til, at der formuleres mere konkrete krav, som virkshederne kan forholde sig til på det energi-/klimamæssige område.

#### **Nordisk Miljömärknings kommentar**

*Nordisk Miljömärkning är enig med er kommentar. Ett krav för att minska energiproduktionen för färgtillverkning utvecklades och ingick i avsnittet för ”Vad är en Svanenmärkt färg eller lack”. Den meningen är borttagen efter att utredningen färdigställdes.*

*Kravet undersöktes utifrån tidigare LCA-rapporter som beskrivs i den preliminära rapporten av revisionen av EU:s europeiska miljömärke och utveckling av EU:s gröna offentliga upphandlingskriterier för inomhus- och utomhusfärger och lacker. Dessutom identifierade PEF CR för färger elnät för tillverkning av färger som en miljöpåverkan med avseende på klimatförändringar för färger. Den data som granskades i den preliminära rapporten visade att verksamheten vid fabriken bidrar till ca 25 % av färgens totala miljöpåverkan. Uppgifterna är dock baserade med referensdata från en fabrik för generisk kemisk tillverkning. En ytterligare*

*undersökning av dessa data var berättigad eftersom de kan ha en inverkan på färgtillverkningens miljöpåverkan. Genom att granska nyare EPD från flera färger och färgtillverkare bidrog miljöpåverkan energimässigt endast med upp till 5 % av den totala påverkan. Därför är mer utredning berättigad för framtida kriterier innan ett krav tas med.*

### **Sveriges Färg och Lim Företagare**

Vi menar att påståendet (Svanenmärkta färger eller lacker har minskad miljöpåverkan) inte är sant då en icke Svanenmärkt produkt kan vara tillverkad på precis samma sätt och med samma innehåll.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för erat svar. Vi kan inte garantera att en Svanenmärkt produkt är bättre än en icke Svanenmärkt produkt. Skillnaden är att den Svanenmärkta produkten är kontrollerad och klarat tuffa miljökrav.*

## **4.3 Comments to the specific requirements**

### **4.3.1 Section 1, General requirements**

#### **O1 Information about the product**

#### **Beck & Jørgensen A/S**

Sidste punkt om oplysninger om indgående stoffer:

Jeg kunne godt tænke mig at det stod skrevet at man kan opgive recepten med råvarer i intervaller. Når der produceres maling, vil to produktioner aldrig være ens uanset hvem der producerer det. Der vil altid være justeringer, hvilket medfører at råvarer aldrig vil indgå med et bestemt indhold. Dette bør også afspejles i appendix 3, anden kolonne fra højre.

#### **Danmarks Farve- og Limindustri**

Der er krav om angivelse af den fulde sammensætning. Det er vigtigt i den forbindelse at understrege, at det er en mulighed at angive sammensætningen i intervaller, som naturligvis ikke er bredere end, det kan forsvares i forhold til blandingens klassificering og kriteriedokumentets øvrige krav.

Baggrunden er, at der ved produktionen af en blanding altid vil være behov for at justere inden for en relevant ramme, det kan være ved tilsætning af ekstra vand til justering af viskositet, eller benytte en anden tilsvarende råvarer (med samme funktion og farlighed). Dette er vores indtryk, at det også i en vis udstrækning tillades vis fleksibilitet. Det vi efterspørger, er at det beskrives, så udgangspunktet for behandlingen af ansøgninger er ens.

#### ***Svar fra Nordisk Miljømerking***

*Takk for kommentarene. Det er alltid worst case resepten som danner grunnlag for beregning av kravoppnåelse. Nordisk Miljømerkings erfaring er at kravteksten er godt forståelig for alle søkere, og den vil dermed ikke endres.*

#### **PPG**

Directive 2004/42/EC only covers coatings for buildings and their trim and fittings, and associated structures for decorative, functional and protective purpose.

This definition does not necessarily cover paint for furniture or similar. Does this reference mean that only products covered by 2004/42/EC can be Swan labeled as paint? (This is already in the current criteria, but perhaps something to consider.) The question is relevant also to criteria O13, table 13 and Appendix 1.

***Svar fra Nordisk Miljømerking***

*Takk for kommentarene.*

**4.3.2 Section 2, Chemical requirements**

**Arbeidstilsynet, Norge**

Gjelder de ulike O2-avsnittene i kapittel 1.2.

Her oppgis fullstendig klassifisering (CLP-forordningen 1272/2008) av de ulike produktene, både klassifiseringene som gjelder helseskadelige og miljøskadelige produkter og ämner.

Når det gjelder avsnittene om «Yrkesmässig eksponering» er det viktig at disse også inneholder informasjon knyttet til mulig helsefare ved å bruke disse produktene, selv om det er miljøkrav for det ytre miljøet som er hovedtema her. Avsnittene «Yrkesmässig eksponering» bør altså vise til klassifiseringen av de helseskadelige effektene ved bruk av de ulike produktene.

«Yrkesmässig» er ikke et godt begrep, og vi bruker ikke dette. Man kan bli eksponert for ulike arbeidsmiljøfaktorer som for eksempel kjemiske produkter i sitt arbeid, men ikke for yrket.

***Svar fra Nordisk Miljømerking***

*Takk for kommentaren. Kravenes utforming og oppbygning følger samme lest som alle de øvrige kriteriedokumentene fra Nordisk Miljømerking. Kravene er hovedsakelig skrevet med tanke på malingsprodusenter og deres råvareleverandører, med fokus på å minimere både helseskadelige og miljøskadelige effekter av maling.*

*Vi vil forsøke å unngå begrepet «Yrkesmässig», og finne et mer presist begrep.*

**O2 Classification of the product**

**Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

Exemption for H412, if triggered because of the pigment Zinc oxide (CAS no. 1314-13-2). ZnO occurs naturally as the mineral zincite and is used as an additive in numerous materials and products including cosmetics, food supplements, rubbers, plastics, ceramics, glass, cement, lubricants, paints, ointments, adhesives, sealants, pigments, foods, batteries, ferrites, fire retardants, and first-aid tapes.

***Comments from Nordic Ecolabelling***

*Nordic Ecolabelling appreciates your comments. We want to limit the content of environmental substances as far as possible and the exemption for zinc oxide is based on dialogue with stakeholders in order to provide paints for different technical solutions, such as biocide free paints or paints that use zinc oxide as stabilizer. Therefore, zinc oxide is derogated up to 2500 ppm, but an exemption for H412 is only applicable for dry-film preservatives as they are necessary in order to guarantee a durable paint.*

### **Akzo Nobel Paints & Coatings Netherlands**

1. Propose to align with current EU Ecolabel criteria for allowed product classification: remove from the text that the lowest Acute toxicity class 4 H302, H312 and H332 as final classification is not allowed.
2. Within EU Ecolabel: H412 product classification is also exempt for wet room paints like Kitchen/Bathroom paints.  
Propose to exempt H412 product classification also for wet room paints like Kitchen/Bathroom paints to align with EU Ecolabel

### **PPG**

The exemptions listed are good and necessary for durable paint products. The use of preservatives in paint prolongs the durability and reduces the risk of unused products going to waste. Openness for criteria adjustments may be necessary.

Suggestion:

- add exception for H412 to be accepted for wet room paints. This is a specific product type with extra technical requirements that are similar to requirements for outdoor paints.
- add an extra transitional period for the CLP classifications coming from an ATP (biocides), to allow Swan labeled products to be labeled with e.g. H411 for 18 months after the CLP deadline.

### **Svar fra Nordisk Miljømerking**

*Takk for kommentaren. Flere av dagens svanemerke maling oppfyller de nevnte klassifiseringene, og Nordisk Miljømerking ser dermed ikke noen grunn til å endre det foreslåtte kravnivået.*

### **BASF**

Introduction of UV curing paint systems in the scope of the criteria: Due to the inherent reactive nature of UV curable paint systems, most of the currently used products are classified and labelled as H317 and/or H411 and/or H412. However, those H-phrases are excluded according to requirement O2. A derogation of H317, H411 and H412 for UV curing paint systems analog to the derogation in requirement O63 in Nordic Ecolabelling criteria "Furniture and Fitments" would be needed. In that case, an application as specified under requirement O64 in Nordic Ecolabelling criteria "Furniture and Fitments" would again be mandatory.

Further, the derogations and exceptions described in requirements O65 and O66 in the already mentioned Nordic Ecolabelling criteria "Furniture and Fitments" are needed as well.

### **Nordisk Miljömärknings kommentar**

*Nordic Ecolabelling thanks you for the comments. We have been reviewing the possibility of including UV-curing paint systems and have removed a prohibition of EUH-208 which prior to consultation was intended to open up for more UV-curing systems. Setting similar derogations for UV-curing paints as the criteria for Furniture and Fitments would neglect the possible environmental gains that can be made for UV-curing paint systems if we allow all types. For Furniture and Fitments, a life cycle perspective is used, and the coating system is a small part of the overall furniture where other environmental gains can be made. Nordic Ecolabel will continue investigating the possible environmental benefits of setting the following derogations for UV-curing paints, but not for this version of the criteria.*

### **Akzo Nobel Decorative Coatings AB**

Undantaget på H317 har vi ikke anvendt, derimod kræves undtaget H412 for udmalingsfarver og -lakker og industrifarver om klassificeringen beror på indholdet af konserveringsmidler.

### **Danmarks Farve- og Limindustri**

Vi vil gerne kvittere for ændringerne under dette krav:

- Den nye mere stringente udgave af Tabel 1, inkl. undtagelser.
- Fjernelse af "Contains (name of sensitising substance). May cause an allergic reaction." fra Tabel 1 og som konsekvens også fjernelse af sætningen fra undtagelserne.

### **Svar fra Nordisk Miljømerking**

*Takk for at dere støtter kravet.*

## **O3 Classification of ingoing substances**

### **Akzo Nobel Decorative Coatings AB**

Undantaget for TMP er tidsbegrænset til 2025-05-31. Vår TiO<sub>2</sub> leverantør jobber på et alternativ, men det er uklart om de kommer at finde det i tid. I værste fald kræves en forlængelse af undantaget.

Undantaget for TiO<sub>2</sub> kræves måske ikke længere, emnet er ikke klasset som CMR. Det findes et undtagelse for Bisphenol A (CAS no. 67-56-1) up to 5 ppm in epoxy paints som mangler i den svenske versionen.

### **Beck & Jørgensen A/S**

I kan måske fjerne Titandioxid for undtagelsen, hvis klassificeringen af titandioxid endeligt fjernes efter at klassificeringen er blevet underkendt af EU Kommissionen.

### **BASF**

At the exemptions, Bisphenol A (CAS 67-56-1) up to 5 ppm in epoxy paints is mentioned. We would like to point to a typo regarding the mentioned CAS number of Bisphenol A. It should be CAS 80-05-7. Please note that CAS 67-56-1 corresponds to the CAS number of methanol.

### **Danmarks Farve- og Limindustri**

I bedes være opmærksomme på, at der er kommet en afgørelse fra EU-domstolen vedr. titandioxid, der underkender Kommissionens klassificering af titandioxid og betyder, at klassificeringen af titandioxid muligvis trækkes tilbage. Hvis det ender der, bør undtagelsen for titandioxid fjernes for at undgå forvirring.

### **PPG**

The exemption for formaldehyde given in O3 is unnecessary, as it follows the other criteria O6.

The exemption for TMP is set to expire 31 May 2025. We propose that the TMP criteria would be valid until 31 Dec 2025 like in EU Ecolabel.

### **Jotun A/S**

#### **Maling & Lakkindustriens Forbund**

Unknown if TiO<sub>2</sub> producers will be able to comply with the deadline 2025-05-31.



### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for the comments. For TMP, the time-based exemption is set to 31 May 2025 and will not be harmonized with EU-Ecolabel as we have a separate dialogue with raw material manufacturers. For titanium dioxide, the exemption will remain in the criteria as long as titanium dioxide is still classified according to the CLP regulation.*

## **O4 Environmentally harmful substances**

### **Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

Similar to exemption in O2: Zink oxide (CAS no. 1314-13-2) not taken into account for calculation, if used as a pigment.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel appreciate your comments. We have included a derogation for zinc oxide up to 2500 ppm, if used as pigment, UV-blocker, stabiliser or used as substitute for preservatives in biocide free paints.*

### **Hagmans Nordic AB**

Lite svårt att tolka texten om ämnen som saknar information om miljötoxicitet. Vad innebär att information inte finns tillgänglig, om ett ämne saknar miljöklassificering, dessa har det sällan någon eco.tox. info, är det tillräcklig information? Vad är minimumkrav på information? Vi kan ju inte räkna H410 M=1000 på oklassificerade ämnen.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för kommentaren. Texten är baserad på ämnen/blandningar som inte är testade. För ämnen som är testade och inte uppfyller kriterierna för klassificering ska det inte stå att data inte är tillgängligt. Syftet med kravet är att begränsa ämnen som saknar tox-data och dessa ämnen ska inte ingå i färger innan de har utretts för att se om produkten inte behöver klassificeras som miljöfarligt.*

### **Akzo Nobel Decorative Coatings AB**

$M*100*H410 + 10*H411 + H412 \leq 6\%$

Tidigare var gränsvärdet  $\leq 9\%$ .

[Verkar rimligt.](#)

Zinkoxid som används som stabilisator för konserveringsmedel får undantas i högst 400 ppm i slutprodukten. Varje mängd över 400 ppm ska läggas till i beräkningen enligt ovanstående formel.

[Detta krav är inget problem för oss.](#)

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för era kommentarer.*

### **Flügger Group A/S**

To lower the limit to 6% for both indoor and outdoor paints is a large decrease. Especially when the limit for outdoor paints is 11% today. As more and more information on ingoing substances in raw materials become available, it might be difficult to meet this requirement -especially for outdoor paints. We would like to

suggest having the limit of 6% for indoor paints and add a limit of 8% for outdoor paints. This way, both product groups will have a decrease in the limits of 3%.

### **Danmarks Farve- og Limindustri**

Vi kan se, man har valgt at opdaterer beregningsformlen og sat en ny grænseværdi på 6%, hvor den tidligere var 9%. Det vil være acceptabelt for indendørs malinger, men for udendørs maling vil det være svært at opfylde. Grænsen for udendørs malinger i kriterierne for kemiske byggeprodukter er i dag 11 %, så det er et stort fald. DFL foreslår at differentiere grænsen, så den er på 6% for indendørs maling som foreslået og derudover tilføje en grænse på 8 % for udendørs maling. Det vil betyde et fald på 3 % for begge.

### **PPG**

We agree on the new criteria for the sum of environmental harmful substances for interior wall paints as 6%. For other products group we suggest to keep 9%.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comments. Based on feedback from stakeholders, we have separated the limit values which now include two groups, indoor wall and ceiling paints with 6% and other indoor paints and varnishes, outdoor and industrial paints and varnishes with 9%.*

### **Akzo Nobel Paints & Coatings Netherlands**

“Ingoing substances classified as environmentally harmful with hazard phases H410, H411 and/or H412, according to CLP Regulation (1272/2008), are limited in the product according to the following formula:  $M \cdot 100 \cdot H_{410} + 10 \cdot H_{411} + H_{412} \leq 6\%$ ”  
Remarks: this calculation has to be done manually, as automatic CLP H412 checks calculate with  $\leq 25\%$  level, which is already quite stringent.  
Propose to keep out this additional criterium as standard H412 CLP checks are already stringent.

### **European Polymer Dispersion and Latex Association**

Related to criterion O4 on Environmentally harmful substances that “ingoin substances classified as environmentally harmful with hazard phases H410, H411 and/or H412”, EPDLA has noted the change in the formula from 9 to 6% in the proposed formula:  $M \cdot 100 \cdot H_{410} + 10 \cdot H_{411} + H_{412} \leq 6\%$ .

Our members see a potential issue for producers of high-quality paint formulation with good wet adhesion: the reduction from 9 to 6% would affect the use of certain wet adhesion promoters/ crosslinkers classified with H 411. Due to their chemical reactivity, such crosslinkers are firmly bound in the final dried paint film, so that leaching becomes virtually impossible.

As an example: This is the reason Adipidic acid dihydrazide (ADH) as wet adhesion promoter with an unsurpassed application profile has received an exemption in the EU Ecolabel for Indoor and outdoor paints and varnishes up to 1% - in the Nordic Ecolabel such derogation was not needed as long as the factor was at 9%.

We see the risk, that going from 9 to 6%, the Nordic Ecolabel might get out of reach for such high-quality paints.

## **BASF**

Fulfilling of this requirement might be challenging for certain systems containing cross-linkers. Those substances are added to the paint to enhance resistance and adhesion to the substrate and hence, increasing the use life of the film.

## **Celanese Services Germany GmbH**

Here a significant reduction from 9% to 6% has been made in the draft. This reduction also affects the usage of the crosslinker Adipidic acid di hydrazide (ADH), which is classified with H 411. Due to the fact that this substance is often used to improve adhesion, hardness and chemical resistance of a coatings the new limit would severely limit the use of ADH, and the performance of certain coatings would suffer.

On the other hand, ADH reacts during the film formation and is therefore fixed in the coating and cannot be washed out easily. Due to this fact a derogation up to 1,0 % w/w. was made for ADH for the EU Ecolabel (see attachment). Such a derogation was not needed so far for the Nordic Ecolabelling because of the formula in O4 with the 9% limit here and factor 10 for H 411 classified substances. In case that a reduction was to be made from 9% to 6%, certain high quality coating formulations might no longer be able to obtain a Nordic Ecolabel. According to my estimation a reduction to 8% would be possible without too many restrictions.

## ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel thanks you for your comments. The purpose of restricting environmentally harmful substances is to reduce the ability for such substances to be emitted to water, for example when washing brushes and tools. Although the formula for calculating environmentally harmful substances is based on the classification rules for environmentally harmful substances, Nordic Ecolabel believes that the requirement has made environmental gain in reducing environmental harmful substances and will proceed with it in the next generation of the criteria. Regarding ADH, we have not been able to fully see the issues in the final paint formulation. We understand the potential benefits of having ADH in formulation, and if the limit value is proven to be too strict, we will consider a derogation.*

## **Beck & Jørgensen A/S**

Det er ikke et problem for B&J at leve op til den nye 6% grænse, men der indgår ikke konserveringsmidler i vores Svanemærkede maleprodukter, hvilket kan være en medvirkende årsag at vi kan overholde kriteriet på bare 6%.

## ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för er kommentar.*

## **Jotun A/S**

### **Maling & Lakkindustriens Forbund**

Biocides and boosters are mentioned under exemption in the current criteria. In the proposed criteria the term «boosters» is removed. This will make it more difficult for paint manufacturers to place label free and bacteria free products on the market in the future. The term “boosters” should remain in the criteria document.

Up to 2500 ppm ZnO is used as a technical solution for special products. The proposed new criteria allow us to add a maximum of 600 ppm in addition to 400 ppm if used as a stabilizer for biocide. The new criteria proposal is not acceptable.

***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling agrees on the beneficial use of zinc oxide in paints, and after consideration have increased the limit value up to 2500 ppm in order to allow for the use of fully biocide free paints. The term “boosters” is in our opinion not clearly defined within the industry and has been removed from the text.*

**Miljøministeriet**

Listen under tabel 4, side 21

I baggrundsdokumentet bør der opdateres med nye harmoniserede klassificeringer.

***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för era kommentarer. Tabell 4 är nu omskriven.*

**CH-Polymers**

There are certain substances in the raw material recipe which we consider to be valuable intellectual property. The surfactant system for the binder is one example. Current proposal states CAS number and chemical name should be stated for ingoing substances classified as environmentally harmful in the raw material declaration. Such information can be disclosed directly to Nordic Ecolabel but assurance is needed that it will be kept confidential. It cannot be disclosed to the main applicant or made more generally available. There is no problem in sharing amounts of classified substances for main applicant to make calculations easier.

If or when a portal for the declarations will be available what information will be visible for others? Will the applicant see all declared information? Same applies here, commercially sensitive information should not be visible to main applicant.

***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel thanks you for your comments and values the confidentiality and secrecy of formulators and raw material suppliers. Nordic Ecolabels portal will work in such a way that the manufacturer can choose to only show their raw material to their primary customer and no one else.*

**Sveriges Färg och Lim Företagare**

Här vill vi kunna ha en dialog med Svanen vid publicering av nya ATP:er.

***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för erat svar och välkomnar sådana dialoger.*

**O5 Preservatives**

**Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

The proposed restriction to PT-6 and PT-7 excludes all products suitable for wood protection. Will this be covered by a different Nordic Ecolabel catalogue? Otherwise, we suggest to include PT-8 preservatives.

There seems to be a mistake in the following table (ppm varies from %w/w):

| Industrial and outdoor paints and varnishes |                       |
|---|-----------------------|
| Product type                                | Isothiazolinones*     |
| Indoor industrial paint and varnish         | 600 ppm (0.0500% w/w) |

***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks for the comments. PT7 and PT8 are product types according to the Biocidal Products Regulation (BPR) in the European Union. PT7 covers film preservatives, while PT8 covers wood preservatives.*

*The primary function of biocides in PT7 products is to control the growth of microorganisms such as algae, fungi, and bacteria on the surface of materials. These products are used to protect painted surfaces, coatings, and other materials from discoloration and degradation caused by microorganisms.*

*At the same time, the primary function of biocides in PT8 products is to protect wood from wood-damaging organisms such as fungi, termites, and beetles. Biocides used in PT8 products include active substances such as azoles, carbamates, and copper compounds. These biocides are designed to penetrate into the wood and provide long-lasting protection against wood-degrading organisms. The intention of the criteria is that products containing such biocides that require approval under PT8 should not be able to receive the Nordic Ecolabel in the criteria for paints and varnishes. This has been clarified in the product definition. Regarding the total level of isothiazolinones, this has been corrected in the criteria, the correct value is 500 ppm (0.0500% w/w).*

**Hagmans Nordic AB**

Angående alternativet att analytiskt mäta halten konserveringsmedel i färdig färg. Räcker det att mäta halterna en gång eller ska man testa flera gånger och få ett genomsnittsvärde eller ska man mäta stickprov kontinuerligt? Om man har en serie liknade recept med samma konservering ska alla recept testas eller räcker det med ett?

Kan man göra ett mellanting att mäta halten kvarvarande biocider i råvarorna när det kommer till produktionsanläggningen, för att lättare avgöra hur mycket konservering som kan tillsättas i receptet?

***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för kommentaren. Tanken med kravet är att göra det så robust som möjligt och inte behöva göra tester för varje produkt. Det går bra att mäta halten biocider i råvarorna för att få ett gränsvärde för att sedan se hur mycket som kan tillsättas vid produktion. För formuleringar och produkter så är det själva biocidpaketet som kan testas. Om detta inte ändras i andra formuleringar behöver det inte mätas igen.*

**Flügger Group A/S**

We consider the lower limit for outdoor paints as durable and would like to support this adjustment.

***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comment.*

**Akzo Nobel Decorative Coatings AB**

Mängden konserveringsmedel: ska beräknas utifrån tillsatta konserveringsmedel och den maximala mängden i råvarorna.

[Det är hur vi alltid har räknat.](#)

Alternativt kan mängden konserveringsmedel mätas analytiskt med högpresterande vätskekromatografi (HPLC) eller liknande metoder.

Det krävs mer information om när man ska mäta detta (direkt efter tillverkningen?) och hur ofta (för varje batch?).

Utomhusfärg och -lack: mängden Konserveringsmedel totalt har minskat från 6700 till 4500 ppm.

Denna gräns känns för låg för oss för att kunna ha ett rimligt skydd mot påväxt. **Vi skulle helst vilja ha det på 5000 ppm.** Annars känner vi oss tvingat att gå till inkapslade biocider. Eftersom Competent Authorities aldrig kommit med några bestämda uttalanden att det skulle vara OK för klassificering och märkning, då räknar vi inom Akzo ändå med max halten biocid och inte med halten fri konserveringsmedel från leverantören för CLP klassificeringen

### **Beck & Jørgensen A/S**

Jeg forstår ikke at der er et krav til Isothiazolinones på 600 ppm. Ifølge den nuværende CLP lovgivning er det ikke muligt at tilsætte så meget uden klassificering med SKIN SENS H317 på produkterne. I en traditionel maling hos B&J (både med og uden miljømærker) vil der maksimalt tilsættes 400 ppm.

600 ppm svarer til 0,0600 % W/W, både i tabel 3 og 4.

I skriver der skal vedlægges HPLC rapport der dokumenterer indhold af konserveringsmidler. Dette bør være et alternativ til selv at kunne beregne koncentrationen ud fra råvareerklæringer (Appendix 2) (som også er et krav), hvilket jeg mener fungerer godt på nuværende tidspunkt. HPLC analyser fordyrer ansøgning/godkendelse af Svanen.

### **Nordisk Miljömärknings kommentar**

*Nordisk Miljömärkning tackar för era kommentarer. Tanken med alternativ till beräkning av ingående konserveringsmedel med hjälp av ex. HLPC-analys är att mäta färgen direkt efter den tillverkats för att ge en indikation på mängden konserveringsmedel när burken försluts. Tanken med kravet var inte att det skulle mätas per batch, men ska redovisas i samband med en ansökan med en worst-case formulering för att säkerställa att produkten klarar kravet. Kravet infördes som ett alternativ till traditionell beräkning av konserveringsmedel efter förfrågan från licensinnehavare, där licensinnehavaren har två alternativ att välja vilket sätt de vill rapportera konserveringsmedel.*

*Gällande isotiazolinoner så har gränsvärdet justerats ner till 500 ppm.*

*Gällande utomhusfärger och total mängd konserveringsmedel så har gränsen justerats till 5000 ppm baserat på feedback från remissen.*

### **Jotun A/S**

#### **Maling & Lakkindustriens Forbund**

H317 and gloves:

Wearing of gloves is proposed as an accepted appropriate risk mitigating measure (RMM) for paints that contains isothiazolinones above the SCL by eCA in Europe. The industry (CEPE) will give feedback to the 99th CA Meeting with proposal regarding the practicalities. As this will be accepted by European authorities, we ask that Nordic EcoLabel accepts use of gloves for H317 classified products as there is a need

to use isothiazolinones > 15 ppm (>360 ppm for BIT) to ensure products free of bacteria.

Publicly available documents on the topic:

- CA-Oct22-Doc.5.4 - Skin sensitizers(1).docx  
[https://circabc.europa.eu/ui/group/e947a950-8032-4df9-a3f0-f61eefd3d81b/library/49c99159-36b8-441b-9da0-9a2318de59b3?p=2&n=10&sort=modified\\_DESC](https://circabc.europa.eu/ui/group/e947a950-8032-4df9-a3f0-f61eefd3d81b/library/49c99159-36b8-441b-9da0-9a2318de59b3?p=2&n=10&sort=modified_DESC)
- CA-Dec22-Doc.5.5 - Skin sensitizers.docx  
[https://circabc.europa.eu/ui/group/e947a950-8032-4df9-a3f0-f61eefd3d81b/library/9d599ded-39c6-462b-96d6-8787a9e5cf99?p=3&n=10&sort=modified\\_DESC](https://circabc.europa.eu/ui/group/e947a950-8032-4df9-a3f0-f61eefd3d81b/library/9d599ded-39c6-462b-96d6-8787a9e5cf99?p=3&n=10&sort=modified_DESC)

Encapsulated biocides:

CLP classifies the substance/mixtures inherent hazards. The substance is equally hazardous even though it is encapsulated. There is no decision from Competent Authorities in Europe yet if classification according to free content only is acceptable. Authorities have a different view, and some (e.g. KEMI) are very negative. The topic is on the agenda for the CARACAL meeting March 2023. Furthermore, the topic will be addressed at the 99<sup>th</sup> CA meeting. As there is no legal decision yet we recommend that Nordic Eco Label contact local authorities for clarification on the matter.

Publicly available documents: <https://circabc.europa.eu/ui/group/a0b483a2-4c05-4058-addf-2a4de71b9a98/library/a3d9d18c-e4f3-47cf-8149-cc10bff4d378/details>

Analyses of biocides with HPLC:

The proposal is very much welcome. Documentation not described. What level of testing or documentation will be needed?

OIT in tinters:

Colorants/tinters are prone to mould growth when in use in shops (canisters in tinting machines). In fact, this is already a big problem per today. Effective fungicides are needed as wet-state preservatives (PT 6). OIT is widely used and effective for this purpose. We ask for an exemption that allows use of OIT in colorants/tinters.

Importance of DBNPA:

DBNPA is proposed restricted under O12 (ED list II). We wish to highlight that for certain products, especially the most health friendly ones, DBNPA is needed as a PT 6 substance to ensure bacteria free products. It will be dramatic if DBNPA is only allowed in production water etc. See other arguments under comments for O12.

### **Teknos Group Oy**

We suggest adding in the criteria document that for encapsulated biocides only the free actives are considered in the calculations -now, this is mentioned only in the background document. We welcome measurement as an alternative way of reporting biocides but ask that "HPLC or similar" is clarified in terms of which other methods are allowed, is there any requirements for the testing laboratory and are in-house reports accepted?



### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comments. Regarding the 99<sup>th</sup> CA-meeting, we will await the decision from the commission before we conclude on how to proceed with gloves as proposed as an accepted appropriate risk mitigating measure (RMM) for paints that contains isothiazolinones above the SCL.*

*For analysis of biocides with HPLC, we expect that this option to report preservatives is to be presented in an analysis report of the final product. In-house reports are accepted if the laboratory fulfils the requirements in appendix 5.*

*For OIT in tinters, OIT is allowed in tinting machines as long as the concentration of OIT is < 15 ppm in the final product in accordance with the requirement of ingoing substances.*

*DBNPA has been added as an exemption for both O5 and O12 in order to allow for more technical solutions for biocide free products.*

*Regarding encapsulated biocides, Nordic Ecolabelling will remove the background about calculation of free actives for encapsulated biocides until it becomes clearer within the legislation how these should be handled to ensure correct risk assessment.*

### **Miljøministeriet**

Miljøstyrelsen bemærker, at det foreslåede tilladte indhold af isothiazolinoner i svanemærket indendørs maling, som angivet i tabel 3 i baggrundsdokumentet (0,05 %), bør reduceres. Dette begrundes med, at fem isothiazolinoner er harmoniseret klassificeret med en lavere grænse end de 0,05 % for hudallergi, og at Udvalget for Risikovurdering (RAC) for nyligt har lavet en ny vurdering af 1,2-benzisothiazol3(2H)-one; 1,2-benzisothiazolin-3-one (BIT) og nu anbefaler en klassificeringsgrænse på 0,036 % (360 ppm).

Miljøministeriet supplerer Miljøstyrelsens bemærkninger med, at der i tabel 3 og 4 er angivet ppm- og procentgrænser, der ikke er ens, fx isothiazolinoner: 600 ppm (0,05 %). Ministeriet bemærker, at kravet i EU-miljømærket er 500 ppm, som også bør være det maksimale i Svanemærket maling og lak.

Tabel 4 \*markeringen.: Svært at forstå, sådan som det fremgår her. Det var nemmere at læse i den gamle tabel 4b (kriterie version 3.11).

Fsva. brugen af indkapslede biocider (encapsulated biocides). Miljøministeriet er skeptiske i forhold til denne brug – og hvilke koncentrationsgrænser der kan og skal beregnes ved denne brug. Det er også en diskussion, der pågår i EU-miljømærket for samme produktgruppe.

På et møde med danske interessenter har Miljøstyrelsen for nylig oplyst, at en blanding vil blive klassificeret ud fra totalindholdet af det indkapslede konserveringsmiddel, uafhængigt af om det findes på en indkapslet form. Miljøministeriet anbefaler, at der er en konservativ tilgang til beregningen af indholdet af konserveringsmidlet, indtil der vides mere om, hvor meget der frigives og er frit tilgængeligt (over tid, opbevaring og temperatur).

Miljøstyrelsens fortolkning er i modsætning til Nordisk Miljømærknings baggrundstekst til kriterium 5 (engelsk version):



"For the calculation only the content of free actives is ecotoxicologically relevant and is subject to the classification of mixtures regarding environmental hazardous properties. Therefore, Nordic Ecolabel accepts calculations of total preservatives based on free actives as stated in the safety data sheet from the biocidal manufacturer."

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för kommentaren. Vi följer processen om det nya förslaget för att sänka den specifika koncentrationsgränsen för BIT, men vi är avvaktande eftersom licensdata indikerar att BIT fortfarande används > 360 ppm. Ur ett livscykelperspektiv så är färgens hållbarhet och livslängd en viktig faktor för att minska klimatpåverkan, därför är användning av konserveringsmedel viktigt men samtidigt viktigt att det begränsas för att minimera riskerna. Kriterierna tittar på nya sätt att märka hållbara färger som innehåller mindre mängd konserveringsmedel.*

*Gällande gränsvärdet för isothiazolinoner så har det sänkts från 600 ppm till 500 ppm. Tabell 4b markering har ändrats så den blir lättare att läsa.*

*Gällande inkapslade biocider så kommer Nordisk Miljömärkning ta bort skrivelsen om inkapslade biocider tills det blir tydligare inom lagstiftningen hur dessa ska hanteras för att säkerställa korrekt riskbedömning.*

### **Danmarks Farve- og Limindustri**

Indledningsvist skal det bemærkes, at der er fejl i tabel 3 + 4. For isothiazolinoner står der: 600 ppm (0.0500 % w/w). Der skal vel i stedet stå 600 ppm (0.0600 % w/w) – eller 500 ppm (0.0500 % w/w)? Efter vores opfattelse er 500 ppm tilstrækkelig. Af baggrundsnotatet, står der, at de nye krav tillader brugen af indkapslede biocider og at kun de frie aktivstoffer er relevante og skal tages med i beregningerne. Vi foreslår, at det tilføjes i selve kriteriedokumentet og ikke kun i baggrundsdokumentet.

Vi hilser desuden muligheden for at måle velkommen som et alternativ til beregning, men vil understrege vigtigheden af, at beregningsmuligheden bevares. Vi vil dog bede om, at "HPLC or similar methods" præciseres i forhold til hvilke andre metoder, der er tilladte, om der krav til testlaboratoriet eller om interne rapporter accepteres, således at det sikres, at miljømærkesekretariater administrerer dette på ensartet vis.

### **PPG**

We welcome that the criteria allow that measured amounts of preservatives can be used as an alternative route to verify compliance with this criterium. The current limits are challenging to ensure efficacy, and it is generally known that many of the active substances will drop in concentration during the transportation, storage and mixing.

Table 3 and Table 4 have inconsistent amounts in ppm and %, this should be corrected. Table 3 is ok (assuming 600/900 ppm is the value for indoor paints and varnishes and 600/1600 ppm for wet room paints).

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for the comments. The correct value of isothiazolinones is 500 ppm and not 600 ppm, so it is a decrease from the previous version of the criteria.*

### **Allergy, Skin and Asthma Association**

We appreciate that the environmental label takes a stand on preservatives and we would like to inform your company that our health organization has taken isothiazolinones for a more detailed analysis. This is due to the fact that in the past the substances in question have been classified as sensitizers/irritants through skin contact, but recently sensitizations have also been estimated to be inhaled, especially among professional painters. For this reason, it would be good if we could jointly find out even better in the future whether it is advisable to use isothiazolinones in paints, if they evaporate into the air in such a way that they can cause, for example, sensitization and irritation symptoms for those already allergic to isothiazolinones. Due to investigation work, we do not yet know what this evaporation means from the point of view of indoor air. I'd be happy to discuss this further.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel thanks you for your comments.*

### **Sveriges Färg och Lim Företagare**

Här menar vi att första punkten är ett lagkrav varför det inte behöver stå i kraven här.

Tabell 3 MVK (Måleribranschens Våtrumskontroll) menar att det borde vara 2500 ppm för våtrumsfärger).

Tabell 4 Här menar vi att kravet borde vara 5000 ppm för utomhusfärg.

Hur ofta menar ni att mätning med HPLC eller liknade för att uppvisa att kravet på konserveringsmedel behöver göras? Är det tillräckligt med en mätning så länge man inte förändrar receptet?

Kommer haltnivåerna att kvarstå vid uppdaterade ämnesklassificeringar (ATP:er)? Hur ser Svanen på utfasningsperioder efter en ATP? (Finns förslag på klassificering för IPBC och Bronopol som kan få stor inverkan på O5). Önskvärt om undantag för O2 kunde göras under 18 månader efter att produkten måste klassas om, dvs om t.ex. 3000 ppm IPBC gör att produkten får död fisk från 1 mars 2025, så kan produkten ha både svan och död fisk till 1 aug 2026.

### **Maling & Lakkindustriens Forbund**

The limit on total preservative has been lowered from 6700 to 4500 for exterior paints. We propose to lower the limit value to 5000 ppm instead to assure an effective in-can preservation as well as reasonable film preservation.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för erat svar. Vi har använt oss av licensdata för att fastställa gränsvärdet för våtrumsfärger och menar att vi inte ser ett behov av att justera det till 2500 ppm. Detta för det saknas tydliga krav för de riktlinjerna om hur mycket mängd konserveringsmedel som faktiskt är nödvändigt, samt att det finns Svannemärkta våtrumsfärger som klarar det befintliga gränsvärdet och även godkända för våtrum av tredje part.*

*För HPLC-analyser ser vi att ett recept behöver mätas en gång i samband med ansökan. Precis som andra krav kan man göra worst-case mätning för en färgserie och endast testa en produkt. Skulle biocidpaketet ändras signifikant behöver en ny mätning göras för det receptet.*

*För total mängd konserveringsmedel för utomhusfärger har gränsvärdet justerats till 5000 ppm.*

*För utfasningsperioder i samband med revideringen av ATP så använder vi också av de 18 månaderna som behövs för att produkten ska klassas om. Förbudet gäller*

*egentligen när beslutet är publicerat men vi förstår att det är en process att fasa ut eller ersätta det specifika ämnet med något annat. Svanen ska inte associeras med död-fisk märkningen för konsumentprodukter, därför så tillåter vi att fram till ATP publicerats tills kunden har ändrat formuleringen att produkten får fortsätta säljas (upp till 18 månader). Men produkten får inte säljas med de nya märkningarna, eftersom vi helst ser att utfasningsarbetet börjar mycket tidigare innan ATPn har beslutats.*

## O6 Formaldehyd

### **Hagmans Nordic AB, Sverige**

Emissionstester är dyra att utföra. Hur olika får recepten vara för att ett test ändå ska kunna gälla för flera recept? Tex så har vi olika produkter med samma bindemedel, men olika fyllmedel och förtjockare för att skapa olika glans/struktur på den torra färgfilmen, räcker det med ett test för dessa eller hur avgörs det?

### **Flügger Group A/S**

We understand the need for implementing emission-testing of indoor products, but would like to highlight that it will increase the price for the industry a great deal. When all formulations must be tested at an external company, it will be more time consuming and increase the price of the product. In the end, this will mean a higher cost for the consumer, which might result in less products with the Nordic Swan label to be sold. We suggest that only the worst-case formulation in a series must be tested, and that only one emission-test is needed to support both the formaldehyde and TVOC requirement.

### **Nordisk Miljömärknings kommentar**

*Nordisk Miljömärkning tackar för er kommentar. Vi kommer tillämpa samma metodik för att bedöma när ett recept behöver göra ett nytt formaldehydtest som för med in-can mätning. Tanken är att receptet ska testas för emissioner vid ansökan, sedan vid receptändringar, beroende på råvaruändring så kan vi kräva in ett nytt emissionstest om det anses att den teoretiska halten av formaldehyd skulle vara mycket högre. Generellt ska vi tillämpa "read-across" mellan recept, och i vissa fall kan kunden komplettera med ett in-can test mellan två olika recept. Precis som tidigare tillämpas också "worst-case" för mätningar, dvs det receptet som mest troligt har den högsta teoretiska halten formaldehyd ska testas för emissioner.*

### **Akzo Nobel Decorative Coatings AB**

Utsläppen av formaldehyd från slutprodukten får inte överstiga 0,06 mg/m<sup>3</sup> (60 µg/m<sup>3</sup>) uppmätt i luften i en provningskammare enligt EN 16 516.

Det är 28-dagar testmetod och i metoden finns hänvisningar hur man ska ta prov. Det finns krav på minimum mängd som ska appliceras. Referensrummet ligger med i metoden, och det betyder att man räknar med olika ytor för olika typ av färg (T.ex. väggfärg eller snickerifärg). RISE har förklarat att deras mätningar enligt M1-metoden också kan användas för Svanen.

Gränsen i Svanen kriterier ligger på samma nivå som BREEAM.

Halten fri formaldehyd får i den färdiga produkten inte överstiga 25 ppm (0,0025 viktprocent, 25 mg/kg) mätt med HPLC eller liknande metoder\*. \* Merckoquant-metoden kan också användas, men då får nivån vara max 20 ppm.

Vi undrar varför Svanen har lagt gränsen lägre när Merckoquant-metoden används. Den här förklaringen finns i bakgrundsdocumentet:

Merckoquant-metoden är ett kolorimetriskt test där **inga analysresultat ingår** och därför är remsorna begränsade inom specifika intervall för formaldehyd i mg/l. Den tidigare 25 mg/l-gränsen skulle då hamna mellan 20 mg/l och 40 mg/l, vilket innebär att det finns en risk att produkten innehåller mer än den tillåtna gränsen eftersom det är ett kolorimetriskt test. Vid Merckoquant-metoden har därför den högsta tillåtna gränsen sänkts till 20 mg/kg för att ligga inom det kolorimetriska intervallet, medan gränsen på 25 mg/l behålls för alla andra analysmetoder.

Vi förstår inte precis detta. Formaldehyd reagerar med 4-amino-3-hydrazino-5-merkapt-1,2,4-triazol för att bilda en lila-röd tetrazin som bestäms reflektometriskt med en RQflex® 10 Reflectometer. Så vi tycker inte att det stämmer med att 'inga analysresultat ingår'. Dessutom är reagensen som används i HPLC metoder farliga att jobba med. På den sätt är Merckoquant metoden ett bättre alternativ. Med nya begränsningar av BIT till 360 ppm ökar behovet av att kunna använda bronopol och då kan man absolut inte sänka gränsen från 25 ppm.

#### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för kommentaren och har ändrat så att gränsvärdet för Merckoquant-metoden också är på 25 ppm.*

#### **European Polymer Dispersion and Latex Association**

Version 3.10 of the Nordic Ecolabel for Indoor paints and varnishes refers to a maximum level of formaldehyde (10 ppm, or if due to the use of formaldehyde releasers 0,0025 weight percent).

The proposal in version 4.0 is to have a limit based on an emission test (EN 16516). For the paint industry this means that they will have to do an expensive test for all their final paints to proof compliance. This test will not be a standard testing method by the paint producers and the test capacities have so far been limited in availability.

By using the absolute level as mentioned in version 3.10, the paint producers can analyse the incoming raw materials and do calculations for their final paints which will be a much lower effort and far less costs. Further the proposal to use a chamber test would potentially open doors for paints and varnishes that have a higher level of formaldehyde than allowed in the still current version 3.10. As long as the emission of formaldehyde in the final paint will stay within the to be set limits, the added level can be significantly higher and the total emission of formaldehyde into the environment can be higher accordingly. People might be exposed to a higher level of formaldehyde in the first weeks after applying.

In appendix 2 the suppliers of raw materials should mention the theoretical level of formaldehyde, but to our opinion this value no longer can be used by the paint producer, because now no longer the absolute level, but the result from the emission test is binding.

#### **Beck & Jørgensen A/S**

Test i hht. EN16516:

Det bør specificeres, efter hvor lang tid produktet skal leve op til en emission på 0,06 mg/m<sup>3</sup>.

Jeg stiller spørgsmålstegn ved værdien af den specificerede test, hvis det er tilfældet, at produktet skal overholde værdien efter 28 døgn. Det tror jeg er normalt i denne testmetode (hvilket I bør kontrollere).

B&J vægmaling (direktiv 1999/13/EF, Bilag II, kat a og b) overholder normalt krav til M1 testen, hvilket også er en emissionstest. Der er kriteriet 10 µg/m<sup>3</sup> efter 28 døgn. Det er malinger der blot overholder de nuværende kriterier med et indhold af formaldehyd på op til typisk 10 ppm.

Hvis kriteriet er efter 28 døgn: Da det opstillede kriterie på 0,06 mg/m<sup>3</sup> efter 28 døgn vil være et langt mindre krav, stiller jeg spørgsmålstegn ved værdien af det opstillede kriterie. Tværtimod indfører man et overflødigt kriterie med krav til en test, der er både langsommelig (28 dage) og samtidig er en meget dyr analyse i forhold til den nuværende kriteriepunkt (tidligere 10 ppm, nu 25 ppm formaldehyd).

### **Maling & Lakindustriens Forbund Jotun A/S**

Existing requirement for indoor paints and varnishes:

“In case bronopol (CAS#: 52-51-7) or formaldehyde releasers are required for in-can preservation, the level of free formaldehyde must not exceed 25 ppm (0,0025% by weight, 25 mg/kg) in the final product”.

This is removed in the proposed new criteria. We ask that it will not be removed for interior products.

### **Danmarks Farve- og Limindustri**

Vi forstår behovet for at indføre en emissionstest af indendørs produkter, men vil gerne understrege, at det vil øge prisen for branchen betragteligt i forhold til det eksisterende krav, hvis alle formuleringer skal testes hos et eksternt laboratorium.

Det vil derfor være en fordel, hvis der kan vælges et "worst case" produkt blandt en relevant gruppe af produkter, der skal miljømærkes og teste denne.

Videre vil det være en stor fordel, hvis den samme emissionstest vil kunne understøtte både formaldehyd- og VOC-kravet.

Et alternativt krav kunne være at kræve, at man påviser overholdelse af f.eks. M1-klassificering. Det ville begrænse både omkostningerne og ressourcer. Mange virksomheder anvender M1 i andre forbindelser.

Mere konkret bør det specificeres, hvornår emissionen af formaldehyd skal være under 0,06 mg/m<sup>3</sup>. Det bør specificeres om det f.eks. er 28 dage som i M1 testen.

### **Sveriges Färg och Lim Företagare**

Vi menar att det blir fördyrande om man måste mäta både VOC och Formaldehyd. Vi har ett starkt önskemål att inomhusemissioner synkroniseras med andra miljöbedömningssystem. Framförallt med avseende på tidpunkten för mätningar. Vi menar att maxvärdet ska vara 25ppm för både Merckoquant- och HPLC-mätningar.

### **PPG**

The emission requirement is in line with Green Building schemes, and the limits for outdoor paints and varnishes are good.

### **Nordisk Miljömärknings kommentar**

*Nordic Ecolabelling thanks everyone for their comments. Nordic Ecolabel believes that using both in-can testing and emission testing requirements is the appropriate way to move forward with regards to formaldehyde in paints and varnishes. This is because these two tests complement each other and provide a more comprehensive evaluation of the product's formaldehyde emissions.*

*The in-can test measures formaldehyde content in the wet state of the product. It has been used in the previous generation of Nordic Ecolabel requirements and is still relevant as it provides a basis for determining whether the product meets regulatory standards for formaldehyde content.*

*The emission testing requirement measures the amount of formaldehyde that the product emits into the air over time, following application. It is in line with the standards set by BREEAM and the EU-Taxonomy.*

*Using both in-can testing and emission testing is important because it ensures that formaldehyde exposure is minimized at all stages of the product's lifecycle. The in-can testing helps to ensure that the product complies with formaldehyde content regulations, while the emission testing helps to ensure that the product's use does not result in excessive formaldehyde exposure.*

*To minimize costs, the Nordic Ecolabel will use a pragmatic approach to testing the emission of products. This involves using read-across for products that have a similar formulation, provided that an already formaldehyde test according to EN 16 516 has been done. This approach ensures that costs are kept to a minimum while still ensuring that the products meet the required standards for formaldehyde emissions.*

## **07 Residual monomers in polymers**

### **Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

According to extensive feedback and discussions with our suppliers, the definite reduction of monomeric content below <0,1 can hardly be guaranteed. Therefore, we suggest a demanding but realistic level of 0,3 %w/w.

### **Maling & Lakkindustriens Forbund**

We propose to lower the limit to 700 ppm instead because it is very energy and cost intensive to remove the residual monomer to a level below 700 ppm.

### **Sveriges Färg och Lim Företagare**

Vi menar att det är mycket energikrävande att ta bort restmonomerer varför man bör höja det tillåtna undantagsvärdet för vinylacetat till 700ppm.  
Tydliggör om detta gäller polymeren eller råvaran.

### **Akzo Nobel Decorative Coatings AB**

Vi har fått information att det är svårt att få resthalten under 700 ppm: VAE  
Polymers with VA content below 500 ppm are steam stripped at the end – something very energy and cost intensive. If we need to move to polymers with such low free monomer content, this will increase our costs, complexity, and dependency on very specific suppliers.

Som vi förstod, ska man inte räkna ihop olika monomer med samma klassning, men det är lite otydligt beskrivet i kriteriedokumentet.

### **Beck & Jørgensen A/S**

Vores udviklingschef har forespurgt vores bindemiddelleverandører om de har kommentarer til punktet. Se følgende svar:

- "we do not measure all products regarding any kind of residual monomer".
- There are no residual monomers > 1%, which were classified as hazardous, in the final products

Jeg mener overordnet at vores leverandører kan leve op til punktet. Dog kan kriteriepunkt O4 og indgående konserveringsmidler blive et issue, hvis man som leverandør har konserveringsmidler i sine produkter.

### **Jotun A/S**

500 ppm is OK for Vinyl acetate monomer.

### **Flügger Group A/S**

Comment from one of binder suppliers: Due to hydrolysis of vinyl acetate in mixtures with pH 8-9, the lower content of vinyl acetate is unnecessary, as the substances will not be present in the final paint.

### **PPG**

The exemption for VA is significantly lowered. 500 ppm is an acceptable level if it can be calculated on the binder as delivered.

### ***Comments from Nordic Ecolabelling***

*Nordic Ecolabelling appreciates your comments. The level of vinyl acetate is changed to 700 ppm to minimize the energy demand, and an additional sentence is added in an attempt to clarify the meaning.*

## **O8 Heavy metals**

### **Aalborg Portland A/S**

Der vil i grå cement være en højere værdi af ren barium end 100 mg/kg. Der tilsættes ikke barium, men det kan findes i såvel råmaterialer som brændsler. Barium vil ikke forekomme som rent men som fx følgende forbindelser BaCO<sub>3</sub>, BaF<sub>2</sub>, Ba(OH)<sub>2</sub>·8H<sub>2</sub>O, BaSO<sub>4</sub> og BaCl<sub>2</sub>. Forbindelserne kan dokumenteres ved opstilling af støkiometriske forhold.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för era kommentarer. Svårslösliga bariumföreningar undantas kravet om det kan dokumenteras støkiometriskt eller med löslighetsdata.*

## **O9 Titanium dioxide**

### **Upphandlingsmyndigheten**

Det är möjligt att hänvisa till en viss märkning enligt 9 kap. 12-15 §§ lag (2016:1145) om offentlig upphandling (LOU). Detta får göras om:

1. kraven för märkningen endast rör kriterier som har anknytning till det som ska anskaffas,
2. kraven för märkningen är lämpliga för att definiera egenskaperna hos den vara, tjänst eller byggtreprenad som ska anskaffas,

3. kraven för märkningen grundas på objektiva kontrollerbara och icke-diskriminerande kriterier,
4. märkningen har antagits genom ett öppet och transparent förfarande i vilket samtliga berörda kan delta,
5. märkningen är tillgänglig för alla berörda, och
6. kraven för märkningen har fastställts av ett organ som den som ansöker om märkningen inte har ett avgörande inflytande över.

Nordisk Miljömärkning kan gå igenom miljömärkningskriterierna som ingår i den aktuella märkningen för att säkerställa att de uppfyller förutsättningarna. Det kan underlätta för upphandlande myndigheter, såsom kommuner eller regioner, att använda märkning vid upphandling.

Kravet kan uppfyllas genom att tillverkaren kan visa antingen att anläggningen har förnybar elproduktion som täcker minst 20% av det totala årliga energibehovet. Alternativt så kan kravet uppfyllas med att energiledningssystem finns implementerade eller att energibesiktning genomförts i kombination med handlingsplan.

Kravet tar sikte på hela produktionen, inte bara den del som avser råvara till den Svanenmärkta färgen/lacken. Anknyningskravet i LOU, se punkt 1 i listan ovan, innebär att samtliga krav i en märkning måste ha en anknytning till den produkt eller tjänst som ska upphandlas.

Krav med valbara åtgärder gör det svårare att jämföra två olika licensinnehavare som uppfyllt kravet på olika sätt. Valfriheten ger licensinnehavaren en flexibilitet, men det kan göra det svårare för en upphandlande organisation att jämföra märkningen med andra märkningar.

### **Teknos Group Oy**

The idea to set requirements on major substances emissions in TiO<sub>2</sub> production instead of a global CO<sub>2</sub> value seems very relevant and a good step. At a quick glance, comparing criteria limit to GaBi dataset seems the difference is multifold, but it is unclear to us if calculation methods are comparable. Teknos aims to collect more supplier data in the future, but the collection process and validation takes time, and a longer transition period would be needed. With regards to the energy limit values, we would need more inputs from suppliers to assess their applicability.

### **Hagmans Nordic AB**

Det har ibland varit svårt att få tag på information om titandioxidtillverkarnas produktion enligt nuvarande kriterier. Inte för att de verkar ovilliga att dela med sig utan för att de inte riktigt förstår vad som efterfrågas eller kan få fram dessa siffror. När de nya kriterierna har arbetats fram har man kontaktat några TiO<sub>2</sub>-tillverkare och frågat om det är möjligt att få ut dessa dokument?

### **Målning**

Our primary TiO<sub>2</sub> supplier is Kronos Worldwide and according to them it will not be possible to fulfill the energy limit of 20 GJ/t using the sulphate process. A possible alternative could be to allow up to 16 GJ/t (80% of 20 GJ/t) of non-renewable energy and have a higher limit for renewable energy .

A separate submission regarding this matter will be submitted, either by Kronos Worldwide or the Titanium Dioxide Manufacturers Association.



### **Flügger Group A/S**

We have reached out to our suppliers of TiO<sub>2</sub> raw materials, as we do not have enough knowledge on the production process and energy consumption to give feedback on the adjusted requirements. Our understanding is, that they will submit comments on this matter directly to you. We would like to highlight the importance of taking the suppliers comments into account. If the requirements cannot be met, that would result in a ban on the use of TiO<sub>2</sub> in Nordic Ecolabelled paints, which translates into no Nordic Ecolabelled paints in general.

### **Akzo Nobel Decorative Coatings AB**

Tillverkningsanläggningen har egen förnybar elproduktion\* genom solcellspaneler som täcker minst 20 % av det totala årliga energibehovet\*\*

\*Baserat på genomsnittlig elförbrukning under de senaste 3 åren.

Detta krav påverkar vår TiO<sub>2</sub> leverantör. Vi har kollat med vår TiO<sub>2</sub>-tillverkare och de kommer att ge kommentar via TDMA.

TiO<sub>2</sub> ingår i nästan alla våra produkter och vi är därför oroligt vad det kommer att innebär för våra produkter om TiO<sub>2</sub> tillverkaren inte klara kraven.

### **Beck & Jørgensen A/S**

Vores udviklingschef har forespurgt vores titandioxidleverandører om de har kommentarer til punktet.

Jeg bakker overordnet op om nedenstående punkt b) og c). Dog sker min opbakning under forudsætning af at det også er realistisk at leverandørerne kan leve op til kriteriepunktet i praksis.

Da Beck & Jørgensen var i tvivl om det var realistisk, at leverandørerne kunne leve op til O9, rettede vi henvendelse til en række leverandører af titandioxid for at få besvaret følgende:

#### Punkt b)

Jeg stiller spørgsmålstejn ved om titandioxidproducenter overhovedet er i stand til dette? Er de i besiddelse af solceller? Det må forventes en vis implementeringstid, hvis producenter skal leve op til de 20%. Og så over de seneste 3 år???

#### Punkt c)

Jeg stiller spørgsmålstejn ved om titandioxidproducenter overhovedet er i stand til dette? Har de implementeret energiledelse? Sammenlignes med f.eks. ISO 14001 og ISO45001, må det forventes at det tager minimum et år at implementere sådan et ledelsessystem i en organisation

Jeg stiller spørgsmålstejn ved om der ikke findes nyere værdier end fra 2007, se kommentar 3 nederst på side 16.

På baggrund af de tilbagevende henvendelser, virker det ikke som om at det er klart om leverandørerne overhovedet er i stand til at levere titandioxid ud fra kriteriepunkt O9. På baggrund heraf bør det undersøges yderligere, om det overhovedet er muligt at levere titandioxid, der kan leve op til kriteriepunkt O9.

### **Titanium Dioxide Manufacturers Association**

The Titanium Dioxide Manufacturers Association (TDMA), a sector group of the European Chemical Industry Council (Cefic), represents the leading producers of titanium dioxide (TiO<sub>2</sub>) and are thankful for the opportunity to comment.

We appreciate and support the Nordic Swan Ecolabel desire to drive positive change in the areas of Environmental, Social and Governance (ESG). The webinar held in December helped us understand some of the rationale behind the new requirements concerning TiO<sub>2</sub>.

However, we would like to raise some important points concerning the new energy-related requirements on TiO<sub>2</sub> production included in the consultation document as we believe that Nordic Swan Ecolabel has not had the opportunity to adequately consider industry information, which is critical to making an informed decision about any final criteria.

In particular, the new proposed energy requirements related to TiO<sub>2</sub> production do not reflect a realistic measure of progress in the area of improved energy efficiency, and if implemented, could result in an immediate disqualification of over 80% of the global supply of TiO<sub>2</sub> and a corresponding loss of Nordic Swan Ecolabeling for paints and varnishes products that contain TiO<sub>2</sub>, with no corresponding benefit to consumers. Nordic Swan Ecolabel has communicated that the intention is to have achievable criteria for the industry, and we look forward to working together to determine a feasible and reasonable measure for energy.

### **General observations**

We support the Nordic Swan Ecolabel purpose of providing a recognizable and credible ecolabel that informs consumers about important direct impacts, such as harmful substances, in the products to which they are directly exposed, and we understand the Nordic Swan Ecolabel position on the addition of energy related criteria. However, we do not believe that the proposed energy requirements are the right measure to judge progress on indirect ESG issues for our industry nor do they provide an incentive to move faster.

Energy transition is a very complex journey for all chemical manufacturers due to the slow development of critically necessary energy technologies and availability of renewables, biofuels and green alternatives. It is especially challenging for the manufacture of TiO<sub>2</sub>, which is a highly complex technology that requires a variety of high energy intensive processes like endothermic reactions, drying, milling and calcination. These processes are critically necessary to achieve not only a pure substance, but also a product that has specific particle qualities for enhanced optical, dispersion and durability performance, all parameters that are valued in paint and varnish applications.

There are currently no replacement substances for TiO<sub>2</sub> in paints and varnishes that can provide the same level of overall performance. Despite the maturity of our industry, breakthrough technologies to reinvent the production process have not been forthcoming regardless of the many commercial and other benefits they could bring.

While we await development of these technologies, the TDMA members are striving to make progress with use of available renewable energy, biofuels, transition to lower emission fuels, and enhanced process efficiencies. For example, TiO<sub>2</sub> producers recently expended substantial capital to convert to use of natural gas, which allows to reduce emissions of Greenhouse Gas (GHG). However, hydrogen, the clear front-

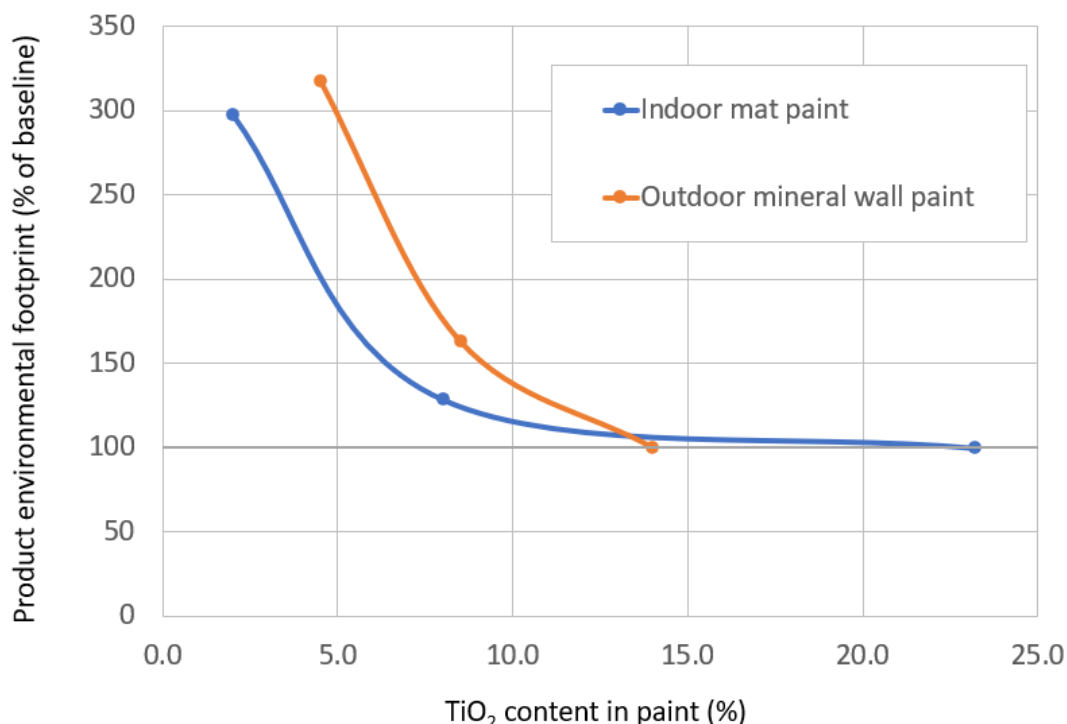
runner to replace natural gas, is years away from being produced at sufficient scale in the right locations and significant energy transition can only be accelerated once this and similar energy technologies/alternatives are broadly available.

The overall carbon footprint of paints should be considered

In 2015, in collaboration with the TDMA, the European Council of the Paint, Printing Ink, and Artist's Colours Industry (CEPE), commissioned a study from Ecomatters to evaluate the paints used to coat interior walls and ceilings, exterior walls, and interior and exterior trim and cladding over the total lifetime of a building. The results showed that high-quality paints formulated with high levels of TiO<sub>2</sub> pigment have the lowest Product Environmental Footprint (PEF) when compared to lower quality paints formulated with low TiO<sub>2</sub> content and high extender content.

Paints formulated with high TiO<sub>2</sub> pigment content have the highest opacity. This means that fewer coats of paint are needed to achieve the same coverage. Use of TiO<sub>2</sub> pigments in paints also helps to make them more durable, helping to prolong their lifetime. Using highly opaque and highly durable paints to decorate a product helps to reduce the need for redecoration during a product's lifetime, helping to reduce its overall environmental footprint.

The chart shows that paints with high TiO<sub>2</sub> content which gives high opacity and long durability have a lower total PEF versus paints with low TiO<sub>2</sub> content.



Source – CEPE PEF Screening study for decorative paint 2015

It would be unfortunate if new energy limits for TiO<sub>2</sub> would lead to a more negative overall environmental impact.

**Proposed maximum energy requirement**

We noticed that Table 6 of the consultation document proposes a limit of 20GJ/t for sulphate production (SP) and 15 GJ/t for chloride production (CP). Earlier

discussions with our industry did not address energy consumption caps and these values were included for the first time in the consultation document released just before the holidays. We do not believe adequate time has been provided or data has been collected to reach an informed decision on this important topic. As explained below, we submit that capping of energy consumption is not the right type of measure given the unique aspects of TiO<sub>2</sub>.

The EU BREF data relied upon is not current or complete

We understand the proposed consumption caps are based on the lowest end of the range of data in the 2007 EU Best Available Techniques Reference Documents (BREF) for TiO<sub>2</sub>, minus a significant reduction. The 2007 EU BREF data however represents only a subset of the TiO<sub>2</sub> production plant information as the data was obtained for plants based in the EU only, not representing any data outside of the EU. The 2007 EU BREF, by definition, provides the best available technology (highest achievements) for certain phases of TiO<sub>2</sub> production.

The BREF figures describe plants running at full capacity, which only happens for limited time periods and does not accurately represent realistic energy conditions. In addition, the 2007 EU BREF provides a wide range of energy consumption values while the proposed Nordic Swan Ecolabel proposal would require compliance with one single value for all SP and all CP production. Other, more current and complete datasets like the TDMA Life Cycle Inventory (LCI) do exist, and are based on newer data collected from 2016. Both the BREF for TiO<sub>2</sub> and the TDMA LCI are being updated at this time. For the reasons above, we believe that using the 2007 EU BREF data does not provide a credible and complete basis for the Nordic Swan Ecolabel proposed requirements and any criteria must take into account global production data, not just the EU.

The dramatic reductions proposed by Nordic Swan are unachievable

In addition to the limited nature of the EU 2007 BREF data, the proposed energy consumption maximums provided in Table 6 represent approximately a 82% decrease from the average of the range presented in the 2007 BREF for SP (36.4 GJ/t average for SP in the 2007 BREF compared to 20 GJ/t proposed by Nordic Swan) and 65% decrease for CP (24.8 GJ/t average CP in the 2007 BREF compared to 15 GJ/t proposed by Nordic Swan). Thus, at the proposed cap values, up to 80% of TiO<sub>2</sub> currently available globally would not be able to achieve these proposed requirements.

A “one-size-fits all” criteria of energy consumption is not possible

There are significant variations between sites in terms of operations and overall energy consumption (e.g., some sites have onsite power generation “CHP plants”, raw material processing facilities, waste treatment facilities, wastewater treatment or water production facilities to name a few) and no two TiO<sub>2</sub> plants are the same. The proposal for one single energy consumption cap separately for SP and CP would not fairly compare the plants and the wastewater treatment is a good example to illustrate that: some TiO<sub>2</sub> production facilities have the space, capability and local permits that allow onsite wastewater treatment while other plants utilize offsite resources that can be available where the TiO<sub>2</sub> plant is located. One single energy consumption cap would unfairly penalize the plant choosing to treat wastewater onsite as it must include the treatment plant energy consumption, while the other plant can exclude that consumption. In the end however, both facilities have a similar footprint, if not the same.

It is also important to note that intensity-based limits for energy are impacted by factors other than source and process efficiency. In years of low product demand, energy usage intensities are generally higher and absolute energy consumption is generally lower. This is particularly true as a minimum energy consumption is needed to run the plant regardless of production rate (e.g., to run effluent treatment facilities, pollution control devices, etc.). For that purpose, some jurisdictions validate a multiple-year baseline for an industry before introducing an intensity-based cap. Another variable can come in the form of production of different products with different consumptions at the same plant. TiO<sub>2</sub> produced for use in paints and varnishes can be expected to have a specific energy consumption that is higher than the average due to extra finishing needed to meet technical performance requirements in those applications. Determination of energy requirements by product or use application is not reasonably possible due to process complexity. We submit that the proposed one-size-fits-all requirements cannot be fairly or accurately applied.

#### Energy consumption is not an appropriate metric to apply to TiO<sub>2</sub> production

As demonstrated, energy consumption is not an appropriate metric for our industry. There has not been adequate time or data upon which to make an informed decision and without such a full review, the vast majority of TiO<sub>2</sub> made globally would needlessly be disqualified and unavailable to paint and varnish producers who wish to continue their tradition of Nordic Swan labeling. For these seasons, we request that the recently proposed requirements in O9 (a) and Table 6 on energy consumption are not adopted as final requirements in the upcoming Nordic Swan Ecolabel updated criteria document.

#### **Proposed onsite solar threshold or, alternatively, specific energy management certification**

##### 20% onsite solar panel generation of electricity is not achievable

The proposed requirement O9 (b) requires use of onsite solar photovoltaic panels (PV) to produce at least 20% of electricity supplied to a facility. The basis of such a narrow requirement is unclear. Based on input from TDMA members currently working to install solar panels, a significantly large installation is required to generate even small quantities of total electricity consumed. The production of TiO<sub>2</sub> requires significant energy input, much of which is provided currently through consumption of natural gas.

Limiting the use of renewables to solar panels would discourage or discontinue the use of other renewable energy sources including installation of wind turbines, steam generated via incineration of waste, use of biofuels, and other renewable energy opportunities. It should be taken into account that our core business and expertise is in manufacturing of chemicals. We are not energy producers as such, and we have to rely on supply of 'green energy' from our grid. Many existing TiO<sub>2</sub> production facilities simply do not have sufficient footprint available for such photovoltaic panels installations and rely instead on external/offsite sources of renewable power. Therefore, we believe that given the reality of TiO<sub>2</sub> production, sites should be credited for all types of on and off-site renewable energy, and not restricted to photovoltaic as this is not feasible at all TiO<sub>2</sub> production sites.

### Energy management systems

The alternative to onsite solar photovoltaic panels posed in requirement O9(c) is that a facility specifically has ISO 50001, 50002 or EN-16247-1 certifications/audits. Some TiO<sub>2</sub> production facilities do not have these specific certifications because strict local regulations or other energy programs achieving the same results make the specific certifications unnecessary. We submit that the current proposal excludes other opportunities available to implement energy management systems and does not provide a reasonable period for such implementation.

We request that the proposed requirement O9 (b) onsite solar energy and (c) energy management system certification requires further discussion in advance of adoption.

### **Conclusions**

To conclude, our industry position on the new proposed restrictions concerning energy related to TiO<sub>2</sub> production is that these are premature, do not serve to drive improvement and will only cause products that contain TiO<sub>2</sub> to be unfairly disqualified from the Nordic Swan Ecolabel. This would deprive consumers from the other important information and benefits conveyed by the ecolabels such as direct impact and exposure information.

We urge Nordic Swan Ecolabel to reconsider these restrictions and engage with the TDMA to find more appropriate ways to drive positive change, based on credible and current data with reasonable scopes and timelines. We plan to provide some specific alternatives for your consideration by March 6, 2023. In the meantime, we are available at your convenience to have these discussions and thank you for your attention.

### **Kronos Titan AS**

Energy consumption is a daily focus. In addition to electricity and natural gas, we use all available energy generated by a nearby waste incineration plant. There are also several ongoing projects which are ESG positive, including a new drying process. However, while we continue to strive for progress in the area of energy management, the new energy consumption criteria proposed by Nordic Swan related to production of TiO<sub>2</sub> threatens to disqualify many existing sources of TiO<sub>2</sub>. Also, the requirement to generate at least 20% renewable electricity via onsite installation of solar panels is not feasible as Titania AS does not have sufficient footprint onsite for such an installation and is therefore pursuing other renewable energy options.

KRONOS is an active member of the Titanium Dioxide Manufacturers Association (TDMA), which submitted the attached comments in regard to the subject public hearing. We hereby incorporate the TDMA comments by reference and we urge Nordic Swan to carefully consider the important and detailed information within the comments provide.

### **Maling & Lakkindustriens Forbund**

#### **Jotun A/S**

TiO<sub>2</sub> will be “Not classified” according to the EU General Court decision 23 November 2022 Deadline for appeal is 10 February 2023.

The questions regarding energy requirement for the production of TiO<sub>2</sub> must be directed to the manufacturers of TiO<sub>2</sub>.

### **Danmarks Farve- og Limindustri**

Vi vil gerne understrege vigtigheden af at tage titandioxid-leverandørerne i ed her. Hvis det viser sig at kravene ikke kan opfyldes, vil det resultere i, at TiO<sub>2</sub> ikke kan anvendes i svanemærkede malinger, hvilket helt grundlæggende vil betyde at maling ikke man svanemærkes.

### **Sveriges Färg och Lim Företagare**

Vi oplever redan idag att det är svårt att få fram information kring energiåtgång från Titandioxidleverantörerna. Utökad krav på dem kommer inte att underlätta. Denna fråga måste ställas till branschföreningen för tillverkare/leverantörer av titandioxid. Utan Titandioxid kan ingen färg tillverkas.

### **PPG**

We understand the energy requirements are addressed to our TiO<sub>2</sub> suppliers. TDMA (Titanium Dioxide Manufacturers Association) has provided feedback directly to Nordic Ecolabelling.

As a paint manufacturer we support gradual transfer for non-fossil energy sources, but we need a level playfield between the suppliers and between the license holders. The future criteria should not risk the availability of several sources of all needed technical qualities. Manufacturing of TiO<sub>2</sub> is heavily centralized and the paints and coatings business has experience from accidents that showed how vulnerable the supply chain of this critical raw-material is in Europe.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel thanks everyone for the extensive comments. The consultation comments have shown that an energy consumption limit is problematic, and a “one size fits all” solution is not possible for TiO<sub>2</sub>-producers since the circumstances are different between production sites. Nordic Ecolabel has also studied own LCI-data for titanium dioxide, and we have come to the conclusion that it is complicated to come up with a good and fair energy consumption limit. Furthermore, after consideration, 20% solar PV is not possible to set requirement for as that would require extensive land use and this is not possible for all production sites that have limited space. Reviewing LCI-data shows that electricity demand is not as high as other fuels, and the requirement would not have had significant impact.*

*Lastly, Nordic Ecolabel believes that an energy management system requirement for titanium dioxide production is still the best option to show that the manufacturer is working with international agreed goals to lower their energy demand and subsequently lower their carbon footprint. Therefore, the requirements for energy consumption and renewable electricity have been removed and replaced with requirement for energy management system or energy audit.*

## **O10 Powdered raw materials**

### ***Nordisk Miljömerking***

*Det kom ingen høringssvar til dette kravet.*

## **O11 Nanomaterials/-particles**

### **Akzo Nobel Decorative Coatings AB**

Undantag för kemiskt modifierad kolloidal kiseldioxid behövs fortfarande. Vi har tidigare lämnat in information om att användningen av ytbehandlad amorf kolloidal

silika är säker både ur hälso- och miljösynpunkt. Kemiskt modifierad kolloidal kiseldioxid ger produkter självrengörande egenskaper vilket kan minska behovet av fasadrengöringsmedel vilket är positivt ur miljöhänseende.

**Sveriges Färg och Lim Företagare**  
Föreslagna undantag måste vara kvar.

**Svar fra Nordisk Miljømerking**  
*Takk for at dere støtter kravforslaget.*

## O12 Prohibited substances

### **Hagmans Nordic AB**

2,2-dibrom-2-cyanoacetamid (DBNPA) används i färg för att minska behovet av andra biocider. Den används främst för att få bort bakterier som följer med råvarorna. Det räcker inte att ha den i tvättvatten, där används den som produktionshygien, men finns inget kvar för de bakterier som de som följer med råmaterialet till nästa batch. Det räcker med en halt på ca 80-100 ppm för att döda av de mikroorganismer som finns bl.a. i fyllmedel och det finns inget kvar i färgen när den är färdig. Nu när halten tillåten BIT snart kommer att minskas behövs den ännu mer.

Kan inte DBNPA användas så krävs det tillsatser av fler andra biocider, vilket vi försöker undvika. Vi vill inte behöva tillsätta små mängder av många olika biocider, dels för att våra produktionsmedarbetare behöver hantera dem, dels för ev. synergieffekt. Vissa synergieffekter kan visserligen vara bra, men andra kan vara att farorna förstärks och det vill vi undvika.

Eftersom nedbrytningstiden är så kort hade det varit bra om ett undantag görs även för användning i tillverkning av färg i alla fall tills utredningen om hormonstörande egenskaper är gjord.

### **Nordisk Miljömärknings kommentar**

*Nordisk Miljömärkning är enig och tackar för kommentarerna. Undantaget för DBNPA har utökats och gäller all användning, från råvaror till produktion.*

### **Flügger Group A/S**

The addition of a requirement for the content of SVOC in outdoor paints is hard to evaluate, as the information on SVOC-content we have from our raw materials suppliers today are limited. We do support that the limits are aligned with the EU Ecolabel criteria, as this makes it easier to work with both labels. We do not support the inclusion of all three ED-lists, as the information used to add substances to these lists are very vague.

We would like to suggest that only list I are included in the criteria, and not list II & III. The reasoning is that substances on ED-list II are only under evaluation as possible Endocrine Disruptors. This means, that many of these substances might not have any ED-properties and the level of data behind the addition of substances to this list is generally scarce. The same goes for substances on list III, where the information is based on national requirements, not EU level data. Many substances on list III are also placed on list II.



Only substances on list I have been proved to have ED-properties. We would also like to highlight that new classification groups for substances with ED-properties have been published. Thus, in the near future substances can be classified as Endocrine Disruptors. Including the classifications in the criteria is a much more reasonable approach, as the science and data behind a classification is solid and validated.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comments. SVOC has been included as it is possible for SVOC to migrate from wood façade panels into the indoor environment via mechanisms such as air filtration, diffusion, and transport on surfaces. As the new criteria has a focus point on indoor environment, SVOC-requirement for outdoor products becomes increasingly important in order to monitor the indoor air quality. Regarding ED-list inclusion, please see joint reply further below.*

### **Akzo Nobel Decorative Coatings AB**

2,2-dibrom-2-cyanoacetamid (DBNPA) som används för desinfektion av tvättvatten i leverantörskedjan och produktionen av färg undantas från kravet eftersom det inte ingår som beståndsdel eller finns med i tillverkningen av den miljömärkta produkten.

Numera används DBNPA också som in-can konserveringsmedel i vissa bindemedel vid lågt pH. Vi tycker också att det borde vara tillåten eftersom DBNPA bryts ner väldigt snabbt vid högre pH. Det innebär att DBNPA inte längre finns i slutprodukten. Nu när alla isotiazolinon-konserveringsmedel får mer strikta klassningen som allergiframkallande, kan DBNPA vara ett bra alternativ för att undviker H317-klassningen på slutprodukten.

Ett ämne som överförs till en av de tillhörande underlistor "Substances no longer on list" och inte längre visas på någon av listorna I-III, är inte längre uteslutet.

Undantaget är de ämnen på underlista II som utvärderades enligt en förordning eller ett direktiv som inte har bestämmelser för att identifiera hormonstörande ämnen (t.ex. kosmetikaförordningen, etc.). För dessa ämnen kan hormonstörande egenskaper fortfarande ha bekräftats eller misstänkts. Nordisk Miljömärkning kommer att utvärdera omständigheterna från fall till fall, baserat på den bakgrundsinformation som anges på underlista II.

Som vi förstod, innebär det i praktiken att vi måste kontakta Svanen när sådana ämnen finns i våra råvaror. Vi tycker att det är lite märkligt om Svanen skulle bedöma annorlunda än EU kommissionen, särskilt om de utgår från samma bakgrundsinformation som anges på underlista II.

Undantaget: Färgpigment som uppfyller EU:s krav på färgämnen i matvaruförpackningar enligt Resolution AP (89) punkt 2.5.

Det här undantaget är viktigt för oss, vi har halogenerade färgpigment.

### **Jotun A/S**

#### **Maling & Lakkindustriens Forbund**

We do not accept List II and III as the substances therein are not defined as EDs. Even List I is not approved by the MSs in the EU.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för era kommentarer. DBNPA-undantaget är nu utökat för att täcka all användning. Gällande hormonstörande ämnen se gemensamt svar längre ner.*

## **BASF**

Regarding the endocrine disruptors lists it might be useful to refer to the ECHA list in order to align with the evaluation of substances in the EU.

## **Danmarks Farve- og Limindustri**

### Endocrine disruptors

Vi er naturligvis enige i et fokus på hormonforstyrrende stoffer. Vi mener imidlertid kun, at man på nuværende tidspunkt kan stille krav til stoffer, der er konsensus om er hormonforstyrrende efter en officiel EU-vurdering. Det vil sige liste I i medlemsstatsinitiativet "ED lists".

Det er formentlig de samme stoffer, som må forventes at få en officiel harmoniseret klassificering, når mærkningskriterierne for hormonforstyrrende stoffer i CLP-forordningen falder på plads.

Liste II og III er lister over henholdsvis stoffer, der er under evaluering eller som af enkelte medlemsstater mistænkes for at være hormonforstyrrende. Der er med andre ord endnu ingen konsensus om stoffernes status som hormonforstyrrende. Dvs. evt. substitutioner på den baggrund kan vise sig at være forhastede og forkerte. Det ønsker vi ikke. Vores opfattelse er derfor, at liste II og III er for usikker en baggrund og derfor ikke bør medtages i kriteriedokumentet, men at man udelukkende refererer til liste I, der er konsensus om.

## **CH-Polymers**

DBNPA is used in in washing water and as a sanitizer for tanks and lines. Banning DBNPA would lead to the need of higher levels of other biocides.

## **Sveriges Färg och Lim Företagare**

Vi menar att endast konstaterade hormonstörande ämnen ska vara förbjudna i Svanen.

Vi menar att lista II inte relevant eftersom den inte innehåller ämnen som är konstaterat hormonstörande.

Vi vill ha DBNPA undantagna i råvaror. Om man inte får använda detta ämne i produkten så måste man öka andelen konserveringsmedel. Det hormonstörande ämnet finns ej längre kvar i den slutliga produkten pga. det höga pH-värdet.

## **Miljøministeriet**

Miljøstyrelsen bemærker, at i forbindelse med godkendelse af biocidaktivstoffer vurderes stoffets hormonforstyrrende egenskaber også. Det kunne overvejes at tilføje et krav om, at produkterne ikke må indeholde stoffer, der er identificeret som hormonforstyrrende under biocidreglerne, således at listen over hormonforstyrrende biocidaktivstoffer listes samme med de allerede oplyste "EU member state initiated "Endocrine Disruptor Lists" I, II and III".

## **PPG**

EU COM has made a proposal for revising CLP, EU's Classification, Labeling and Packaging Regulation in EU Green Deal's Chemical Strategy for Sustainability.

According to EU COM revised regulation is published during Q2/2023. Various 'endocrine disruptor lists' have been developed during last years, but it is not clear if these are prepared in line with the coming rules.

We propose that the Endocrine requirements are applied only when the revised CLP criteria are confirmed, and substances are classified according to these firm rules, and only such substances will be banned which are classified according to future EU rules.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks everyone for the comments. In previous version of the criteria, Nordic Ecolabelling referred to both category 1 or 2 on the EU's priority list of substances (2007 list) for assessment of endocrine disruptive substances. A reference to the 2007 list for several years to come was not desirable. Among other things, the Swedish Chemical Agency has several times raised the concern and need to remove references to the 2007 list at the Swedish Ecolabelling Board's meetings, citing that the Nordic Ecolabel will appear poorly updated when the industry and regulation is changing.*

*Nordic Ecolabel understand the concerns raised with List II and List III. However, Nordic Ecolabelling uses the precautionary principle in cases where you do not have all the facts, but you have a qualified suspicion of a danger from a substance that needs to be investigated further. Here, if there is suspicion of a substances danger would negatively affect consumers/users/nature, the substance is excluded.*

*According to edlist.org, the following requirements are set for substances that come on list II: This list contains substances that are currently under evaluation in an EU legislative process due to explicit concerns for possible endocrine disrupting properties. This could be due to a Member State or ECHA having included the compound on the CoRAP list (REACH), or due to an ongoing evaluation of endocrine disrupting properties under the Cosmetics Regulation or due to substances concluded as endocrine disruptors in the scientific committees, but before a legal adoption in the Commission is available (BPR, PPR).*

*Nordic Ecolabeling believes this level of qualified suspicion is enough to make demands with reference to the precautionary principle. We want to be in dialogue with the industry and manufacturers and find solutions if it turns out to be problems with substances from list II and list III that are used in the production of Nordic Ecolabelled paints and varnishes.*

## **O13 Emissions of Volatile and Semi-Volatile Organic Compounds in indoor paints and varnishes**

### **Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

The value for TVOC after 28d is very low, especially for water-based wood coatings. We therefore suggest a limit of TVOC < 1,0 mg/m<sup>3</sup> which also corresponds to many other high standards like the German AgBB scheme.

### **Teknos Group Oy**

Measuring (S)VOCs and free formaldehyde from the wet paint is more reliable, the EN 16516 result is very sensitive to variations in sample preparation such as application rate, drying conditions, age of the sample at the beginning of the test, etc., that are not explicitly defined in the standard. This is especially true for the industrial coatings.

VOC and SVOC definitions are different between the standards.

EN 16516: VOC=C6-C16, SVOC=C16-C22;  
ISO 11890: VOC=<C14, SVOC=C14-C22 (elution order).

BP of C14 is 253 °C and thus ISO 11890 definition matches better with the VOC and SVOC definitions in section 1. Definitions should be consistent throughout the criteria.

Please also be aware that emission testing is more expensive than wet paint testing. The cost of EN 16516 testing is roughly doubled compared to ISO 11890 (VOC) + VdL-RL03 (formaldehyde) testing.

There are already many voluntary emission classification systems in the Nordic countries and Europe, and this change would make Nordic Swan yet another overlapping, slightly different system.

In the case of changing to emission measurement-based criterion, the limit values should be consistent with the existing emission classifications such as M1. EU Taxonomy limits are not the same as M1 limits. The introduction of EU Taxonomy is still in its early stages and there were several errors in the original regulatory text which have led to interpretation issues.

We therefore suggest specifying more clearly how should test be performed, and to adjust the limits. A solution could be to group several products and choose "worst case" product (based on recipe) to be tested. And/or the possibility of demonstrating compliance with e.g., M1 classification would limit the costs and wasted resources.

### **Målning**

We have not tested our products according to the methods proposed in this criterion so currently we cannot comment on how feasible it is for us to fulfil it.

However, to me it seems that the criteria is inconsistent in terms of the requirements for formaldehyde emissions compared to VOC emissions.

From our perspective a more reasonable criterion would be

Formaldehyde 0,06 mg/m<sup>3</sup>

TVOC 1,0 mg/m<sup>3</sup>

1A and 1B cars. 0,001 mg/m<sup>3</sup>

[https://files.bregroup.com/breeam/technicalmanuals/BREEAMInt2016SchemeDocument/content/05\\_health/hea\\_02.htm#Emission criteria byproduct type](https://files.bregroup.com/breeam/technicalmanuals/BREEAMInt2016SchemeDocument/content/05_health/hea_02.htm#Emission%20criteria%20byproduct%20type)

### **Hagmans Nordic AB**

Emissionstester är dyra att utföra. Hur olika får recepten vara för att ett test ändå ska kunna gälla för flera recept? Tex så har vi olika produkter med samma bindemedel, men olika fyllmedel och förtjockare för att skapa olika glans/struktur på den torra färgfilmen, räcker det med ett test för dessa eller hur avgörs det?

### **Flügger Group A/S**

We understand the need for implementing emission-testing of indoor products, but would like to highlight that it will increase the price for the industry a great deal. When all formulations must be tested at an external company, it will be more time consuming and increase the price of the product. In the end, this will mean a higher cost for the consumer, which might result in less products with the Nordic Swan

label to be sold. We suggest that only the worst-case formulation in a series must be tested, and that only one emission-test is needed to support both the formaldehyde and TVOC requirement.

### **Akzo Nobel Decorative Coatings AB**

Gräns för TVOC ligger på <0,3 mg/m<sup>3</sup> för både vägg och snickerifärg.

Som vi förstod, gäller det koncentration i ett referensrum (med olika ytor för olika produkter).

1A och 1B cancerogena VOC CMR 1A/1B ≤ 0,001 mg/m.

Som vi förstod, är detta gräns för enskilda ämnen. Det är lite uklart i kriteriedokument.

### **Akzo Nobel Paints & Coatings Netherlands**

Propose a better alignment with the latest EU-IAQ delegated act limits:

1. TVOC level ≤ 0,5 mg/m<sup>3</sup> instead of ≤ 0,3 mg/m<sup>3</sup> to align with Category 1 of the EU-IAQ delegated act proposal.

2. Remove TSVOC limit. This is not part of the EU- IAQ delegated act.

Propose to regulate SVOC level via alignment with EU-Ecolabel Table 3 regarding SVOC limits on product level for interior products.

### **European Polymer Dispersion and Latex Association**

Similar to our comments re. O6 we want to address that the obligation using the emission test for compliance and no longer the absolute levels will cause a potential of higher absolute emission of VOC's and/or SVOC's. Here again the chamber test is considered not readily available for the paint producers and TVOC/TSVOC data given by the suppliers of raw materials no longer can be used, because a TVOC/TSVOC level does not per definition guarantee low emission data after 28 days. A higher TVOC/TSVOC than allowed in version 3.10 can still lead to a compliant paint or varnish.

### **Beck & Jørgensen A/S**

B&J vægmaling (direktiv 1999/13/EF, Bilag II, kat a og b) med Svanen/EU

Blomsten overholder i M1 testen med de nuværende krav til VOC og SVOC, hvorfor jeg finder det overflødig at indføre et kriteriepunkt med krav til en test, der er både langsommelig (28 dage) og samtidig er en meget dyr analyse i forhold til det nuværende kriteriepunkt (tidligere 10 g VOC/liter, i hht. nuværende kriterier).

Omvendt stiller jeg spørgsmålstegn ved om panelmaling med højere indhold af både SVOC og VOC kan overholde testen. Vores eksisterende malinger med EU Blomsten vil IKKE kunne overholde kriteriepunktet. Tilsvarende vil andre malinger med højt VOC/SVOC indhold i hht. tabel 10 heller ikke kunne overholde kriteriepunktet.

### **Maling & Lakkindustriens Forbund**

**Jotun A/S**

This is OK for interior products.

### **Danmarks Farve- og Limindustri**

Vi forstår behovet for at indføre en emissionstest af indendørs produkter, men vil gerne understrege, at det vil øge prisen for branchen betragteligt i forhold til det eksisterende krav, hvis alle formuleringer skal testes hos et eksternt laboratorium.

Det vil derfor være en fordel, hvis der kan vælges et "worst case" produkt blandt en relevant gruppe af produkter, der skal miljømærkes og teste denne.

Videre vil det være en stor fordel, hvis den samme emissionstest vil kunne understøtte både formaldehyd- og VOC-kravet.

Et alternativt krav kunne være at kræve, at man påviser overholdelse af f.eks. M1-klassificering. Det ville begrænse både omkostningerne og ressourcer. Mange virksomheder anvender M1 i andre forbindelser.

Mere konkret bør det specificeres, hvornår emissionen af formaldehyd skal være under 0,06 mg/m<sup>3</sup>. Det bør specificeres om det f.eks. er 28 dage som i M1 testen.

### **CH-Polymers**

VOC and SVOC limits for emissions for the final product makes it difficult for us as supplier of raw material to state possible Ecolabel compliance. The proposed testing method cannot be used to test possible emissions only from binder and overall VOC/SVOC content cannot be converted to possible emission. Low emissions in the proposed testing method does not guarantee low VOC and SVOC content in product and might even lead to higher VOC/SVOC contents than currently.

### **Sveriges Färg och Lim Företagare**

Emissionsmätningar är dyra. Vi undrar hur mycket recepten får variera på en och samma mätning. Till exempel om man ändrar mängden fyllmedel kan man då använda samma VOC-mätning?

Kan man mäta på en worst case produkt?

Vi upplever att Svanens rådgivare bedömer hur man kan hantera detta olika vid revisioner.

### **PPG**

We agree with the idea of clearly separating the criteria of interior and exterior paints as the technical / durability requirements differ.

We prefer the emission tests for interior wall paints. VOC and SVOC emission values for normal wall paints is reasonable. Additionally, we want to point it out that it is important to limit the number of required tests.

We propose that instead of emission criteria it will be possible to use measurement results from wet paint in lacquers, floor and trim paint categories of paints, and with the existing VOC limits for similar product.

In table 11: VOC limits for industrial paints, O14, there is “-“ for all products for SVOC. If it means that there is no requirement for these products, the column should be removed. If it means that SVOC is not allowed, please indicate with “0” – it is assumed that this is not the case, comments reflect “no requirement for SVOC for products in table 11.

Anti-corrosion paints have 0 g/L as limit for VOC. The phrase from the current criteria “...must not be added to the product” should be used also in the new criteria. (Note: The current English version of the criteria does not have a requirement for VOC for anti-corrosion paint (O31))

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel thanks everyone for their comments. After reviewing the requirement, we believe that both emission testing and measurement of ready-to-use have their advantages and disadvantages.*

*Indoor paints and varnishes can emit harmful substances that compromise indoor air quality and pose health risks. As a result, it is crucial to measure their emissions and ensure they comply to better protect consumers from exposure.*

*The ready-to-use measurement based on ISO 11890-2 is a simple, cost-effective, and standardized method for measuring VOC and SVOC from indoor paints and varnishes.*

*However, the ready-to-use measurement method does have some limitations. This method only measures emissions from the product itself and may not consider its behaviour or interactions when it is applied on the wall. Moreover, it may miss detecting some potentially harmful substances.*

*To address this, emission testing according to EN 16 516 is another method that can be used. This method provides a more accurate representation of how the product behaves when applied on the wall and can possibly detect a broader range of potentially harmful substances. However, this method is also more complex and expensive than the ready-to-use method.*

*At Nordic Ecolabel, our goal is to secure the indoor air climate and protect both consumers and the raw material manufacturers and formulators. This approach is in line with the EU-taxonomy and BREEAM, which also emphasize the importance of ensuring good indoor air quality.*

*By using both the ready-to-use measurement method and emission testing according to EN 16 516, we can ensure that the products that are certified with the Nordic Swan meet high quality standards regarding good indoor air climate. Moreover, requiring these methods can potentially result in health benefits for consumers and workers who are exposed to these products.*

*To minimize costs, we will use a pragmatic approach to handling emissions for base recipes that can be derived to other formulations if there are no significant changes. This way, the same emission report can be used for multiple products, reducing the testing costs for manufacturers while still ensuring that the products meet our safety standards.*

### **O14 Content of Volatile and Semi-volatile Organic Compounds in outdoor paints and varnishes and industrial paints**

#### **Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

Especially biobased coatings and paints need a higher amount of (co)solvent to achieve good film formation. Therefore, a lower VOC value is likely to exclude very sustainable products. We therefore suggest to set the limit for exterior trim varnishes (e.): 75g/L (equal to d. exterior trim paint).

#### **Flügger Group A/S**

The addition of a requirement for the content of SVOC in outdoor paints is hard to evaluate, as the information on SVOC-content we have from our raw materials suppliers today are limited. We do support that the limits are aligned with the EU Ecolabel criteria, as this makes it easier to work with both labels.



**Akzo Nobel Decorative Coatings AB**

SVOC gränsvärde för produkter borde inte vara ett problem.

**Jotun A/S**

**Maling & Lakkindustriens Forbund**

For outdoor paint products, SVOC limits are OK.

For industrial paint products the SVOC limits are OK.

**Sveriges Färg och Lim Företagare**

Vi har idag svårt att få denna information från våra råvaruleverantörer.

***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your replies. We recognize that it is difficult to obtain this information from raw material suppliers as this was also a problem in the previous criteria for generation 3/2. However, we see the importance of setting limit values for SVOC for outdoors to secure the indoor climate due to its ability of SVOC to migrate to the indoor environment via diffusion and other mechanisms. Furthermore, it is important that these values are in line with EU-Ecolabel and BREEAM.*

*All limit values for SVOC and VOC have been adjusted, and the requirement now includes both indoor and outdoor paints. The limit value has been adjusted based on licensing data which showed that the previous limit values need to be tightened.*

**O15 Volatile Aromatic Compounds**

***Nordisk Miljömärknings kommentar***

*Inga remisskommentarer har inkommit för detta krav.*

**4.3.3 Section 3, Binder requirements**

**O16 Acrylic resins (binders)**

**Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

These requirements will cause very high documentary effort if biobased / renewable material is used. However, it does not give clear values for the required or desired renewable content. We therefore suggest to revise this part completely and switch to concrete requirements that are to be proven by official supplier confirmations.

**Teknos Group Oy**

We believe that the requirement of renewable raw materials in acrylic resins will diminish the number of Swan labelled products remarkably. The price of RRM-based acrylate dispersions is at least 20-50% higher than fossil-based and the availability is currently very limited. Market is not ready for such a price increase. Mostly the bigger producers will benefit from this requirement. Minimum amount of RRM should be informed otherwise the benefit of the requirement is negligible.

**Beck & Jørgensen A/S**

Jeg mener det er et skridt i den rigtige retning at indføre kriteriepunktet. Dog bør man være opmærksom på at ”Renewable” råvarer er dyrere end konventionelle råvarer, hvilket i sidste ende vil fordyre produkterne og i større eller mindre grad vil få forbrugere til at fravælge Svanemærkede produkter til fordel for ikke Svanemærkede produkter



## **Målning**

According to discussions we have with our raw material supplier about the criteria it seems much more reasonable to use recycled materials rather than renewable raw materials. The strategy our supplier is working on gives good CO<sub>2</sub> reduction on a competitive price while using renewable raw material only gives a modest CO<sub>2</sub> reduction compared to using recycled material while the cost is much higher. We would like to propose the O16 criteria would allow for a strategy utilizing recycled material as well as renewables.

## **Organik Kimya**

We would like to emphasize that adding renewable binder parts into new criteria is a great idea to support and accelerate transition of chemical industry into more green, circular, and safe chemicals for humanity. However we also know that acrylic binder industry is not yet ready to offer broad range of renewable binders with acceptable price&performance ratio with a supply safety guarantee. Therefore it would be suitable to ask solid commitment of binder suppliers for renewable product development but not to make it obligatory at least for this new version of the criteria.

1. MMA2 Project: <https://www.mmatwo.eu/> This is an EU project to recycle PMMA back to MMA which can also be used in acrylic binders. You can check the web site.
2. <https://www.pmma-online.eu/european-green-deal/> Another web site as example.
3. There are also studies in paint industry by using recycled PET bottles to produce polyester acrylate (UV curing paints). This type of resins is not used in decorative paints, they are for industrial wood etc. However, it might be possible to use in alkyd resins that is also used in deco paints?

## **Hagmans Nordic AB**

Punkt 1. Finns det något exempel på vad ett sådant dokument ska innehålla? Vi har liknande dokument men är osäkra på om det uppfyller kraven i de nya kriterierna. Har det undersökts hur många sådana råvaror som finns på marknaden? Vi har inte fått några direkta förslag från våra leverantörer.

## **Flügger Group A/S**

The new requirements to binders are very ambitious. We understand the wish for including a higher proportion of renewable materials, however the industry is not ready for it. We have been in contact with several of our binder suppliers, and the majority are not working with inclusion of renewable materials in their production. Please see comments from our supplier further below. One concern that was raised, was the wording of the criteria for acrylic binders. We understand the requirement as follows:

The license holder must provide evidence that they are working towards implementing renewable materials in their binders. No demand for using renewable materials are implemented right now. This we can support. However, if O16, pt. 2 is read as a stand-alone, the requirement can be understood as follows:

You must use renewable materials in your acrylic binder, and provide evidence on: "Proportion of acrylic resins made from renewable raw materials used in Nordic Swan Ecolabelled paints and varnishes ". This we cannot support. We highly

recommend that you adjust the wording of requirement O16, so the text clearly highlights the requirements, without room for interpretation.

#### **Comments from our suppliers:**

The use of biobased raw materials to produce acrylic resins is not yet possible due to the lack of availability of suitable biobased raw materials in industrial scale. It is also not clear what the consequences are for binders which do not contain renewables. However, as far as we understand it, Mass Balance product types would be suitable to fulfil requirement O16.

#### **Akzo Nobel Decorative Coatings AB**

Kravet är uppdelat i tre delar, eftersom det finns olika bindemedel som kan användas för färger och lacker för inom- och utomhusbruk, där den specifika bindemedelstypen i fråga måste uppfylla kravet där det är relevant nedan.

[Hur avgör man vilka egenskaper som är mest karakteristiska? Är det slutproduktens egenskaper eller varje enskilt bindemedel? Om man har en akrylatfärg med en mindre tillsats alkyd behöver vi då uppfylla krav för alkyddelen? Från vår diskussion med Svanen har vi uppfattat att vi behöver endast uppfylla krav på akrylatdelen.](#)

Licensinnehavaren ska ha rutiner som visar hur den arbetar med strategiska mål för att öka sitt inköp och sin användning av akrylharts tillverkade av förnybara råvaror som används i Svanenmärkta färger och lacker. Målen måste vara kvantitativa och tidsbaserade, och de ska beslutas av företagets ledning. De strategiska målen måste utvärderas minst en gång per år av ledningen.

[Vi kan beskriva hur vi jobbar med detta.](#)

#### **Celanese Services Germany GmbH**

1. Today bio based acrylic emulsions could be made from fossil acrylic or methacrylic acid by esterifying with an alcohol derived from vegetable oil. Alcohols from vegetable oils could be for example from pine oil, castor oil, used cooking oil, tall oil or palm etc. The alcohol part would contain 100% renewable carbon which will lead to approx. 70% renewable carbon in the corresponding monomers.

Depending on how much of those acrylic monomers are used a content of 30 to 70% bio based carbon would be possible in an acrylic emulsion. Currently those monomers are special monomers which are produced in smaller units where the availability is limited. Also, the availability of the upstream bio-based feedstock (e.g. vegetable oils) is not at the same level as the feedstock for the fossil-based materials.

Furthermore, the price of those monomers and the corresponding emulsions is significantly higher in comparison to fossil-based products. (3-5 times). At the moment there are only view of those special emulsions available in the market which also don't cover the entire product range for paints and coatings. According to this concept and technology a new development of the emulsion and corresponding paint is needed because the biobased acrylic monomers are not chemically identical to the fossil based acrylic monomers.

Sustainable cultivation of the bio-based vegetable oils is another requirement. At present, no palm oil-based raw materials are to be used. In the case that

the demand for alternative bio-based raw materials increases significantly, this may also lead to corresponding restrictions on these. Furthermore, the competitive situation for food production is another factor that must be considered here in. Furthermore, it cannot automatically be assumed that all biogenic raw materials result in a better LCA footprint, since this also significantly depends on the manufacturing process and the energy sources used.

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3. For the time being it's too early to define sustainability requirements for acrylic resins / emulsions or final products in context with the Nordic Swan due to the fact that only a small range of special acrylic emulsions are available in the market. Furthermore it's not finally defined whether the mass balance concept could be used in the future and how it can be used for the LCA calculation (See 1+2).
4. For the time being it's too early to define sustainability requirements for acrylic resins / emulsions or final products in context with the Nordic Swan due to the fact that only a small range of special acrylic emulsions are available in the market. Furthermore, it's not finally defined whether the mass balance concept could be used in the future and how it can be used for the LCA calculation (See 1+2).

## **European Polymer Dispersion and Latex Association**

According to the proposed criteria, the goal of this requirement is to increase the use of raw materials with less climate impact. In order to achieve this goal, acrylic resins must comply with certain criteria, as described in requirement O16. Acrylic resins suppliers should fill in Appendix 4, where the option is given to state whether or not the acrylic resin contains renewable raw materials. Details on the very limited availability of suitable renewable raw materials are outlined below. The proposal therefore effectively precludes the use of acrylic binders in Nordic Ecolabel paint formulations. Clarification is required as to whether this is the intended consequence of the draft proposal.

The use of palm oil including by-products, residues, waste fractions, is banned by this requirement. On the one hand, this fact makes the increase of biobased components in acrylic resins highly demanding, since the availability at industrial scale of suitable raw materials is not high enough at this point in time, so that such monomers have to be considered to be (very) special monomers in terms of price and availability. Secondly, palm oil and/or its derivatives may currently be used in the production of many raw materials utilized in the manufacturing of acrylic resins (e.g. defoamers). In those raw materials palm oil and/or its derivatives are part of the whole product, which is not always declared to contain renewable or biobased components. The question in this case would be, how the acrylic resins supplier should evaluate those raw materials concerning requirement O16.

### **Beck & Jørgensen A/S**

Se kommentar fra konfidential:

- According to the proposed criteria, the goal of this requirement is to increase the use of raw materials with less climate impact. Among others, acrylic resins suppliers must state whether the acrylic resin contains renewable raw materials. The use of biobased raw materials to produce acrylic resins is not yet possible due to the lack of availability of suitable biobased raw materials in industrial scale. It is also not clear what the consequences are for binders which do not contain renewables. However, as far as we understand it, Mass Balance product types would be suitable to fulfill requirement O16.

Se kommentarer fra konfidential:

- O16 + O 17 demands for renewable raw materials – not sure how the secretary will handle this information and how supply chain can document this.

Se kommentarer fra konfidential:

- this part is related to acrylic resins. As I understand it is up to B&J to demonstrate that you are developing also biobased acrylic systems. Confidential offers such types with a biobased monomer content of ca. 50% (on solids).

### **Jotun A/S**

#### **Maling & Lakkindustriens Forbund**

Renewable does not equal more sustainable. We think the LCA approach is better than just stating the amount and type of renewable feedstock used. If the quality of the products drops with renewables, then we could end up in a situation that is worse for the environment. Maintenance intervals is a huge factor in the LCA.

## **BASF**

The proposed criteria aim to increase the use of raw materials with less climate impact. Among others, acrylic resin suppliers should state whether renewable raw materials have been used in the production of their products. However, it is not clear whether this is an exclusion criterion.

The use of palm oil, by-products, residues and waste is banned by this requirement. However, palm (kernel) oil and/or its derivatives are currently used to produce many raw materials, which are in turn introduced in the manufacturing of acrylic resins. In those raw materials palm (kernel) oil and/or its derivatives are part of the whole product, which is not always declared to contain renewable or biobased components. The question in this case would be, how the acrylic resins supplier should evaluate those raw materials concerning requirement O16.

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. 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.

## **Danmarks Farve- og Limindustri**

Som DFL forstår det, skal ansøger under O16 fremlægge dokumentation for, at de arbejder på at indføre akryl bindemidler baseret på fornybare råmaterialer. Dvs. der er ikke tale om et konkret krav om indhold nu og det støtter vi.

Vi forstår ønsket om en bevægelse mod en større andel af fornybare materialer, men som vi forstår det, er brugen af biobaserede råmaterialer til fremstilling af akrylharpikser er endnu ikke mulig på grund af manglende tilgængelighed af egnede biobaserede råmaterialer i industriel skala og prisen på biobaserede bindemidler er derfor væsentlig dyrere end de konventionelle.

Det står ikke klart af kriterier, hvad konsekvenserne er, hvis akrylbindemidler, ikke indeholder en fornybar andel.

## **CH-Polymers**

The “Background to the proposal” document uses the terms “resin” & “binder” interchangeably. This is confusing as resins are often considered to be solvent based and binders water based. Additionally in the document the term “acrylate resins” is used as an umbrella term to cover all binders except alkyds. The terms should be clarified and sections 2.1, 4.2 plus requirement O16 should be modified.

A proposal for modification of binder definitions can be found in a separate document. Considering the state of current technology, the criteria and definitions set out in the background document would effectively exclude the use of acrylic emulsions in Nordic Ecolabel formulations: it is difficult to envisage how this will benefit either the consumer or the environment.

The requirement on renewable raw materials could be a driver for development of more sustainable raw materials. The criteria should however consider current technologies - what is available in industrial scale and affordable. For the time being

bio monomers are not available in sufficient quantities and are significantly more expensive than conventional monomers. Further, bio monomers are frequently derived from palm oil which is banned in the proposal. Other sources of sustainable &/or renewable raw materials – for example biomass - are either unavailable in sufficient quantities & / or are derived from sources deemed to compete with the food chain and so not permitted under the current proposal.

It would be important to understand which other aspects have been taken into account when considering renewable raw materials. Has the performance of the coatings based on renewables been considered? A switch in raw material should not compromise the functionality or high level of quality. Focusing only on renewable raw materials could limit the development of other solutions. The proposal does not consider other alternatives with lower climate impact. Conventional hydrocarbon based monomers produced using renewable energy or recycled raw materials are not included. Recent technical developments can enable equivalent or improved performance in interior coatings using significantly less binder – again this is not considered. The proposal states a comprehensive approach for more sustainable solutions, but the requirement only focuses on renewable raw materials, but such raw materials do not necessarily equal low carbon footprint. Overall energy consumption, renewable energy in production, maintenance intervals or overall environmental impact are not considered.

### **Sveriges Färg och Lim Företagare**

1.3 Krav på bindemedel Vi menar att det finns ett tolkningsutrymme i vad som avses.

Menar ni att om produkten klassas som en akrylat så ska kraven för akrylhartsar uppfyllas även om den slutliga produkten innehåller alkydharts. Eller menar ni att varje ingående bindemedelstyp ska uppfylla kraven.

Vi har svårt att styra över detta krav då utvecklingen och tillgången inte har kommit så långt.

### **PPG**

Our opinion is that we should be careful in making the requirements too specific. Although the recycling, biomaterials, de-fossilization of the processes are aimed for future, it is extremely important that license holders have various options how to develop the products towards more sustainable, and that there are enough realistic alternatives for Swan labeled products available.

In our opinion all alternative route to reduce CO2 footprint of the product should be accepted equally. This could be based on biobased or recycled monomers.

For the reasons the O16 requirement to set an ambition is good. We suggest that it is not limited to acrylic binders but is a more general requirement that includes both acrylic and alkyd binders.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks everyone for their comments. The requirement has now been changed compared to the draft proposal. The requirement has been merged for both acrylic and alkyd resin binders. In the draft proposal, the license holder had to show procedures how they work with strategic goals to increase the purchase and use of resins made from renewable raw materials. The requirement has been changed to*

*instead focus on a supply chain policy and a code of conduct for responsible sourcing of renewable raw materials used in acrylic and/or alkyd resin binders.*

*The draft proposal has now been reworked, where the supply chain policy must include a policy statement committing the license holder to respect human rights and the environment within its operations and supply chain. This includes a commitment to support suppliers' compliance with the supplier code of conduct. This requirement was not present in the first version.*

*Ensuring responsible sourcing of renewable raw materials is important for paint and varnish license holders. By implementing a supply chain policy and code of conduct, they can reduce their environmental impact, improve social practices, and meet regulatory and customer expectations. This requirement is included because using renewable raw materials alone is not enough. It is essential to make sure that certified products contain sustainably and responsibly produced raw materials, which includes supply chain practices by the license holder. A supply chain policy and code of conduct outlines the expectations for suppliers, including ethical labor practices, sustainable sourcing, and responsible production methods. By documenting their policies, companies demonstrate their commitment to transparency and reporting, enabling a more sustainable and socially responsible production process.*

## **O17 Alkyd resins (binders)**

### **Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

These requirements will cause very high documentary effort if biobased / renewable material is used. However, it does not give clear values for the required or desired renewable content. We therefore suggest to revise this part completely and switch to concrete requirements that are to be proven by official supplier confirmations.

### **Kraton Chemical B.V.**

One voluntary scheme that is used by the industry to proof compliance to RED II is the ISCC EU management system. Within this scheme, individual manufacturing plants are certified as well as their process to track incoming raw material and outgoing products to ensure that the mass balance is correct. The mass of incoming renewable raw material must match the mass of outgoing products that are supplied to the Biofuels market. Additionally, as part of RED II, companies must also show evidence of the proper calculation of the Carbon Footprint of the raw material that they offer to the Bio fuels market.

Kraton operates the ISCC EU management system to show compliance to RED II. Kraton uses Crude Tall Oil, (CTO) that the ISCC classifies as a residue of the paper and pulp industry to produce Tall Oil Fatty Acids (TOFA). Following our certification, Kraton provides a so-called "ISCC Sustainability Declaration" with every TOFA shipment it makes to customers that are active in the European Bio Fuels market.

### **Nordic Swan – new requirements**

Appendix 4 explains how paint producers can declare the origin of their renewable raw materials and its compliance to RED II. It is however unclear if it is sufficient for paint producers to declare that their renewable raw material origins from ISCC Certified plants and qualify according to the RED II directive OR that paint

producers must keep an actual record of ISCC Sustainability Declarations for each shipment of renewable material that they consume.

In case Paint producers are to maintain a record and Kraton is required to provide actual ISCC Sustainability Declarations with each TOFA shipment to our paint customers, this would:

- a) result in additional administrative burden
- b) impact on our mass balance that we operate to supply into the Biofuels market
- c) lead to additional costs - as we need to compensate the ISCC for the use of their certification system

From our discussion I understand that your main objective is to exclude Fatty Acids that:

- a) are produced from Palm Oil derivatives and their waste streams
- b) are produced from Soy beans that are not certified as 'sustainably grown'

And you have chosen to refer to the RED II directive to satisfy this requirement.

It is a well-known fact that Tall Oil Fatty Acid, produced from Crude Tall Oil (a residue of the pulp and paper industry) is not in competition with Food.

Following the above, we ask you to:

- a) review / consider the practical implications of showing compliance to the RED II directives for companies that operate the ISCC EU management system.
- b) ask you to consider additional options for paint producers that use TOFA in their formulations. It may be possible to amend Appendix 4 and include an option for paint producers to declare that they use TOFA – and as such, no FA's are used that are in competition with food.

### **Flügger Group A/S**

It is written, that "To determine the share of renewable raw materials in alkyd polymers, mass balance-based traceability according to EU's Renewable Energy Directive (EU REDII) is accepted ". We would like to stress that this should also be applicable for acrylic binders. As the text is written today, it seems like it only applies to alkyd binders, which is not reasonable.

### **Danmarks Farve- og Limindustri**

Under dette krav fremgår følgende formulering: "To determine the share of renewable raw materials in alkyd polymers, mass balance-based traceability according to EU's Renewable Energy Directive (EU REDII) is accepted".

Dette også bør gælde for akrylbindemidler (O16), men så vidt vi kan se, er det ikke sådan kravet er formuleret, hvilket vi ikke forstår.

### **Jotun A/S**

#### **Maling & Lakkindustriens Forbund**

Mass balance is accepted for alkyds, and we think the same criteria should be used for acrylics.

We are OK with the criteria for alkyds. However, the general comment on LCA vs renewable is valid here as well.



## **Sveriges Färg och Lim Företagare**

Luddigt formulerat avser ni att kravet är 100-procentigt?

Ett 100-procentigt krav här är idag omöjligt att uppfylla. Här borde man jobba med en upptrappning av andelen förnybart.

## **PPG**

Suggestion: include alkylid binders in O16 and remove O17.

## ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel thanks everyone for their comments. Please see the answer at requirement O16.*

## **O18 Cement/Hydraulic binder**

### **Aalborg Portland A/S**

Af Nordic Ecolabelling Paints and Varnished version 4 fremgår af afsnit O18 om cement/Hydraulic binder at GWP angives pr. tons cement klinker. Da det er cement og ikke cementklinker, der forhandles, er GWP i miljøvaredeklarationer/EPD opgjort pr. tons cement og ikke pr. tons klinker.

Miljøvaredeklaration/EPD udarbejdes i henhold til gældende standarder EN 15804+A2 & ISO 14025 / ISO 21930 og PCR/c-PCR. Tabel 12 ønskes derfor ændret til GWP pr. tons cement. I denne forbindelse skal niveauerne tilsvarende ændres. Aalborg Portland vil gerne i dialog om niveauerne baseret på kemisk og teknisk formåen ved cementproduktion.

## ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för kommentarerna och har försökt få kontakt med remissinstansen. Kraven och gränsvärdet är satta efter Kommissionens genomförandeförordning (EU) 2021 / 447 för genomsnittsvärdet för de 10% mest effektiva anläggningarna i t koldioxidekvivalenter / t. Det befintliga kravet kommer att publiceras men Nordisk Miljömärkning tar gärna kontakt med remissinstansen för att säkerställa att gränsvärdena är representativa.*

## **4.3.4 Section 4, Quality requirements for indoor paints and varnishes**

### **Jotun A/S,**

### **Maling & Lakkindustriens Forbund**

Wood stain must be removed from table 13, since this type of product is excluded from the Criteria. ("The product group shall not comprise the following products: Product which primary function is not to form a film over the substrate, e.g. oils and waxes.")

## ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabel thanks you for the comments. Wood stains are included in the criteria of EU-44 and the same is applied for Nordic Swan paints and varnishes. Both of these criteria uses the same exclusion which was targeted for oils and waxes specifically. Nonetheless, there are wood stains that are partially film-forming, while there are wood stains that are not film-forming.*

*Additionally, the criteria has removed the exclusion of non-film forming products in order to be able to certify wood oils. While these types of products are not categorized as paints or varnishes, they can be part of a paint system as primer to improve*

*adhesion of the base paint. Furthermore, wood oils are included as stand-alone and can now be certified.*

### **Sveriges Färg och Lim Företagare**

Generellt verkar detta kapitel inte så genomarbetat av Svanen. Fallit bort EN före ISO på många ställen. Är det alltid den senaste publicerade standarden som gäller?

Vi är lite frågande till varifrån kraven kommer?

Borde inte våtrumsfärgerna vara godkända av MVK som ett kvalitetskrav? Ett krav på biociderna kan ses som teknikhämmande.

Vi tror att det i ett dokument är svårt att definiera alla kvalitetskrav på färger och lacker då mycket styrs av i vilken miljö de ska användas (exempelvis rostskyddsfärger).

Tabell 13 borde vara EN ISO 6504-1 eller 6404-3.

Nötning 7784-2

Väderpåverkan SS EN ISO 16474 eller EN 927-6 (trä).

O25 EN 927-3 (trä) eller EN 15457.

Det förekommer en del felhänvisningar och felaktigheter i kapitel 1.4 så ni måste gå igenom hela ordentligt.

Dryghet här borde det kunna hänvisas till motsvarande NCS kulör också.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för erat svar. Kravet har arbetats vidare med och skall vara representativt. Standardernas publiceringsdatum är borttaget och det är alltid själva standarden som gäller. Om det kommer en version av standarden så är det den som gäller. Vid kriterieutveckling försöker vi att inte vara regionslåsta. Skulle vi introducera ett krav om att färgerna ska vara MVK godkända kan det skapa problem i andra länder där en färg ansöks om och säljs i, där MVK saknas eller det finns en annan våtrumskontroll.*

## **O19 White pigment content**

### **Beck & Jørgensen A/S**

Hvad ligger under definitionen ”White pigment”. Hvorfor skrives ikke titandioxid?

### ***Svar fra Nordisk Miljømerking***

*Takk for kommentaren. Som beskrevet i kravteksten er «White pigments» uorganiske pigmenter med en refraktiv index høyere enn 1.8.*

## **O20 Claims of Wet Scrub Resistance**

### ***Nordisk Miljömärknings kommentar***

*Inga remisskommentarer har inkommit för kravet.*

## **O21 Spreading rate**

### ***Nordisk Miljömärknings kommentar***

*Inga remisskommentarer har inkommit för kravet.*

## O22 Resistance to water

### ***Nordisk Miljömärknings kommentar***

*Inga remisskommentarer har inkommit för kravet.*

## O23 Adhesion

### ***Nordisk Miljömärknings kommentar***

*Inga remisskommentarer har inkommit för kravet.*

## O24 Abrasion

### ***Nordisk Miljömärknings kommentar***

*Inga remisskommentarer har inkommit för kravet.*

## 4.3.5 Section 5, Quality requirements for outdoor paints and varnishes

## O25 Quality requirements for outdoor paints and varnishes

### **Akzo Nobel Decorative Coatings AB**

5. Bevaxning: Om produkten innehåller konserveringsmedel för torra ytbeläggningar som har förmåga att stå emot svampangrepp och algangrepp ska produkten klara relevant test för svamptillväxt, se nedan

Testmetoden tar ett år (utomhus exponering). Det finns ingen likvärdig test för kort tid. Hur viktigt är det att ha kvar detta krav? Vi undrar varför vi måste bevisa att de ämnen som vi tillsätter för att uppnå filmskydd verkligen har den funktion. Det finns huvudsakligen bara IPBC kvar som går att använda i Svanenmärkta färger och den har funktion som fungicid och ger filmskydd som vi redan har visat innan för våra produkter.

### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för er kommentar. Kravet är viktigt att behålla eftersom Svanenmärket ställer höga krav på produkter för att minska deras miljöpåverkan. Bevaxningstestet är en indikation på att produkten står emot röta och biologisk nedbrytning och det är därför viktigt att utföra dessa tester för att bevisa att de tillsatta ämnena i filmskyddet fungerar effektivt över tid för att uppfylla kraven för Svanenmärkningen. Även om det inte finns likvärdiga tester för kort tid är det fortfarande viktigt att utföra dessa tester för att säkerställa att produkterna håller hög kvalitet och är hållbara över tid.*

### **Jotun A/S**

#### **Maling & Lakkindustriens Forbund**

The method is meant for opaque systems and does not consider that wood varies in color and might change during the testing. Thus, not relevant for varnishes.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comment. If you are referring to colour change according to EN ISO/CIE 116 64-4 and EN ISO 116 64-6, a clarification has been added that the requirement is not applicable to varnishes and bases.*

### **Sveriges Färg och Lim Företagare**

O25 Kvalitetskrav utomhushus

1. EN 927-6 ska vara 2016 timmar
  2. Färgskillnad  $\Delta E^* > 4$  kommer vara mycket tufft för vissa färger (t.ex mörka alkydfärger och lasyrer).
- ISO 7724 är upphävd, använd EN ISO/CIE 116 64-4 och 116 64-6.

5. Beväxning. För trä gäller EN 927-3 med avläsningsmetod enligt EN 16492 och bedömning enligt ISO 4628-1 från 2003. EN ISO 4628-1 har dock uppdaterats 2016 och använder en något ändrad bedömningsskala.

Vi tycker kravet på klass 0 vid 10 gångers förstoring är för tufft. Det borde räcka med klass 2. Svanen borde förtydliga vilken klass de menar, finns en klassning för antal en för storlek och en för intensitet.

BS 3900:G6 är från 1989 finns ingen nyare standard? På samma sätt slagregnsprovning och väderpåverkan.  
SS 830117 är upphävd.

#### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för erat svar. Kvalitetskravet har nu uppdaterats enligt de rättelser och förtydligat med klasser för beväxning. Svanen anser att klass 0 vid 10 gånger förstoring är fortfarande relevant kravställning för att säkerställa effektiva färger med längre hållbarhet.*

#### 4.3.6 Section 6, Quality requirements for industrial paints and varnishes

#### O26 Quality requirements for industrial paints and varnishes for furnitures

##### **Teknos Group Oy**

Only comment is that we suggest adding ISO 1518 should be mentioned as a scratch resistance method as well

#### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comment. ISO 1518-1 has been added as a scratch resistance method.*

##### **Jotun A/S**

##### **Maling & Lakkindustriens Forbund**

All requirements for industrial products seem to be missing.

Should this be Table 17 and 18?

See point above, these requirements are only for furniture. No requirements for industrial paint products.

Comments on weathering criteria for varnishes: Ref answer O25.

#### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comments. The requirements for industrial paints are divided into subgroups. Industrial paints for exterior use will have to comply with requirements where relevant as for outdoor paints for consumer use. Industrial paints for furniture and fitments are subject to requirement according to "Möbelfakta"-criteria. For panels, UV-cured floors and anti-corrosion paints are all subject to separate requirements in the criteria which have now been clarified. If there*

*are industrial paints for other uses other than mentioned above, Nordic Ecolabelling will include these in the criteria under relevant subgroup.*

## O27 Scratch resistance for panels and similar

### **Teknos Group Oy**

Only comment is that the ASTM D2794 mentioned, is not test for scratch resistance, but an impact test method. ISO 1518 is mentioned which is ok.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comments. While ASTM D2794 is primarily used to evaluate impact resistance of coatings, the test can also evaluate scratches created by the impact. It was previously included as test requirement during consultation with license holders.*

## O28 Abrasion/wear for surfaces subject to heavy wear, e.g., UV-cured floors and sheeting

### **Teknos Group Oy**

The standard mentioned is only based on weight loss measurement, which will not be relevant in all cases - e.g., not if the coating is very thin. We'll recommend adding: EN 14354, ISO 15185 and EN 660-2 depending on specific substrate tested.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comment. The above mentioned standards have been included in the criteria document to show verification of specific coatings depending on substrate.*

## O29 Water resistance for surfaces subject to heavy wear, e.g., UV-cured floors and sheeting

### ***Nordisk Miljömärknings kommentar***

*Inga remisskommentarer har inkommit för kravet.*

## O30 Quality requirements for anti-corrosion paints for industry and infrastructure

### **Teknos Group Oy**

Regarding Table 11 (VOC). We question why other industrial product categories are allowed a content of VOC, but anticorrosion paints not, or perhaps this is our misinterpretation? It is very difficult to formulate any water borne anticorrosion products without any VOC. Suggestion: to have same limit as the other industrial coatings (75g/L).

Requirements mention only C5 and higher corrosion categories, and still majority of anticorrosion painting is aimed for other (lower) corrosion classes than C5. Our suggestion to include lower corrosion categories starting from C3 and/or emphasize that any category is acceptable if fit for purpose, which would save coating material and still be fit for purpose. An example could be construction metal for barns and warehouses, where we do have customers who are interested in swan labeled anti-corrosion paint, but the needed category is C2 or C3.

For water borne products ISO 11474 (SCAB test) is a more suitable testing method than natural salt spray.

We suggest adding ISO 11474 as alternative method to be used for water borne products. Aim should be, that the lifetime of a coated products is prolonged by the coating (sustainability aspect), now it is difficult to formulate a long-lasting coating that fulfill these criteria.

### **Danmarks Farve- og Limindustri**

Det undrer os, at der tillades et indhold af VOC i andre industrielle produktkategorier men ikke i maling til korrosionsbeskyttelse - eller er der tale om en misforståelse?

Det er meget vanskeligt at formulere maling til korrosionsbeskyttelse uden VOC og et forslag er derfor at have samme grænse som de andre industrielle malinger, dvs. 75 g/l. Det undrer os desuden, at kravene nævner kun C5 og højere korrosionskategorier. En stor del af korrosionsbeskyttende maling er rettet mod andre (lavere) korrosionsklasser end C5. Vi mener derfor at lavere korrosionskategorier startende fra C3 også bør inkluderes, da der er interesse for at kunne leverer svanemærkede malinger til formål hvor f.eks. C3 er tilstrækkeligt.

### **PPG**

Current criteria from Chemical building products are good.

### ***Nordisk Miljömärknings kommentar***

*Nordic Ecolabelling thanks you for your comments. The requirement for anti-corrosion paints have been changed since the previous version of the criteria in order to allow the use of anti-corrosion paints specific for other lower corrosion categories, e.g., industries. The new requirement has been developed with the help of Research Institute of Sweden.*

*The requirement has been made so that anti-corrosion paints with lower corrosion categories are required to have a higher durability than its intended purpose to ensure that the product is of high durability to lower the overall environmental impact. Furthermore, the limit value of VOC for anti-corrosion paints has been harmonised with industrial paints, i.e., 75 g/L.*

*For ISO 11744 (Scab Test), we aim to utilize the same testing methods as ISO 12944 while ensuring that the systems to be labelled are at least as good as those obtained through ISO 12944. However, scab testing is likely more relevant than salt spray, although qualifying a waterborne system using salt spray may be challenging. We don't want to lower the requirements for the products in the criteria. If we decide to use scab testing, we'll need to provide supporting data for the requirements after the test. These limits must be tougher than the accelerated testing in ISO 12944, but we don't currently have the necessary supporting background data.*

4.3.7 Section 7, Requirements concerning packaging, labelling, consumer information and recycling

### **O31 Metal packaging**

#### **Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

We cannot see the point in banning metal packaging for coatings < 18l. Metal can already be 100% recycled and is therefore one of the most sustainable and circular packaging materials. This is especially valid for tinplate containers. We therefore suggest to remove this limitation. However, a limitation to mixed-material packaging



could be of great impact as there will be less badly separated material in the recycling process of the packaging.

### **Teknos Group Oy**

For several reasons we recommend changing this requirement and not ban metal packaging:

According to several calculations done by the industries, the total CO2 emissions, when looking cradle to gate, are equal when you compare tinfoil and recycled plastic (PCR 50%). How Aluminium and Tinplate are Better Than Plastic Packages (desjardin.fr)

Metal cans have some distinct positive benefits compared to plastic: it is more stable and there's a less tendency of surface skinning, hence better shelf time of the paint. The quality of the recycled plastic specified in the criteria for paint cans is a fairly new invention and the producers of plastic pails, containing recycled plastic (with min. rPP PCR 50%), are not capable, nor willing, to guarantee the needed supply, hence metal cans are still the main quality used and needed.

One big issue is 20 L cans which Teknos use for professional painters (approx. 140 000 pieces per year). The available 20 L plastic pails on the market are significantly different in size than the traditional metal pails causing big issues in production, warehousing, and logistics. Therefore, the speed of changing the package material from metal to recycled plastic is significant, not only due to needed investments in the production's units. We suggest that the revised criteria would allow  $\geq 18$  L metal cans, not only for industrial paints and varnishes, but also products to professional painters.

In addition to the above, we want to point out the tinting process in Finland is still done by punching a hole in the lid. This is not an invention by Teknos, it is standard practice, and we have no option but to fulfil this demand. This demand can only be fulfilled by using a lid in metal. This process of tinting also requires a plastic plug to seal the package after the tinting process. Based on the information we receive from the suppliers, they are not now capable of providing us with plugs made from the recycled plastic having the same quality and performance. Consequently, we recommend adding these tinting plugs into the exceptions and metal lids are always acceptable.

If the restriction on metal packaging is kept, we see that a very short transition time would lead to several problems and therefore suggest that the transition period is at least three (3) years, otherwise it will be very difficult for us to keep having swan labelled products.

### **Metal Packaging Europe**

The recently published Nordic Swan Ecolabel system criteria proposal requests that the use of metal packaging for paint and varnish products (lower than 18 litres in volume) is prohibited on the basis that (quote):

- *“Metal production is associated with great climate and environmental impact as virgin metal has considerably higher CO2-emissions (up to 95% more depending on the metal and process) and their production requires considerably larger amounts of energy (up to 95% more, depending on the metal and process) than secondary metals from scrap”.*

In reaction to this, MPE highlights:

- Steel production is energy intensive, however, the steel industry uses advanced technologies and techniques to increase production yield rates, reduce its energy requirements, and facilitate the use of by-products. The European steel industry has reduced its consumption of primary energy per tonne of crude steel by 50% since 1960<sup>1</sup>.
- The steel packaging industry is exploring a range of low<sup>2</sup> and carbon neutral solutions<sup>3</sup> that can lead to a carbon neutral future under an optimum regulatory framework. With the combination of these breakthrough technologies, process efficiency and greater scrap availability, the steel packaging industry is confident of achieving a CO<sub>2</sub> emissions reduction of up to 95% by 2050<sup>4</sup>.
- Both the European steel packaging industry and the European steel industry<sup>5</sup> have clear and ambitious plans to decarbonise metals, with many projects specifically taking place in the Nordics.

Moreover, it should be noted that:

- The 200 plants producing steel in Europe are all recycling plants that utilise steel scrap as input material to manufacture new steel products. Steel scrap is a valuable resource that uses up to 70% less energy than producing steel from raw materials. Recycling 1 tonne of steel scrap saves over 2 tonnes of raw materials<sup>6</sup>.
- Steel packaging is the most recycled packaging material in Europe, reaching an average recycling rate of 85%<sup>7</sup> and even higher national percentages in Finland (86.4%) (87%) and Norway (90.1%).
  - In comparison, plastic packaging has a recycling rate in Europe of 38%<sup>8</sup>. Moreover, plastic caps and lids (including for chemicals) are the 5<sup>th</sup> most common item of rubbish washing up on European shores<sup>9</sup>.
- When paint and varnish packaging is incinerated, steel is recovered from the bottom ashes and recycled back into the steel production cycle. On the contrary, plastic packaging is lost forever.
- The CO<sub>2</sub> equivalent emissions of paint and varnish metal packaging decreased by 30% from 2000 to 2018, according to the peer reviewed MPE Life Cycle Assessment (LCA)<sup>10</sup>. This progress is a result of:
  - Improvements in raw material production over time,

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<sup>1</sup> <https://www.steelforpackaging.org/steel-for-packaging-recycling-and-resource-saving/steel-for-packaging-innovative-industry/>

<sup>2</sup> <https://www.thyssenkrupp-steel.com/en/products/bluemint/bluemint.html>

<sup>3</sup> <https://www.eurofer.eu/issues/research-innovation-and-technology/eu-research-framework/green-steel/>

<sup>4</sup> <https://www.apeal.org/news2/decarbonising-steel-doing-more-with-less/>

<sup>5</sup> <https://www.eurofer.eu/issues/climate-and-energy/maps-of-key-low-carbon-steel-projects/>

<sup>6</sup> <https://www.steelforpackaging.org/steel-for-packaging-recycling-and-resource-saving/steel-for-packaging-saving-resources/>

<sup>7</sup> <https://www.steelforpackaging.org/steel-for-packaging-recycling-and-resource-saving/steel-for-packaging-recycling-champion/>

<sup>8</sup> <https://ec.europa.eu/eurostat/databrowser/view/ten00063/default/table?lang=en>

<sup>9</sup> Anna Maria Addamo, Perrine Laroche, Georg Hanke, Top Marine Beach Litter Items in Europe, EUR 29249 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-87711-7, doi:10.2760/496717, JRC108181

<sup>10</sup> <https://metalpackagingeurope.org/article/new-life-cycle-assessment-metal-packaging-shows-significant-reduction-greenhouse-gases>



- Advances in the can manufacturing processes – including an increase in energy and resource efficiency,
- A reduction in can weight,
- An increase in steel packaging recycling rates, currently at a record high of 85.5% in Europe.

Furthermore, the Nordic Swan Ecolabel system criteria propose the substitution of metal packaging for paint and varnish products (lower than 18 litres in volume) with plastic packaging. In addition, to promote the circular economy and avoid many negative environmental impacts associated with virgin plastic, the criteria propose an increased use of recycled material. In reaction to this, MPE highlights that:

- Based on our LCA calculation, plastic packaging with 50% recycled content has a higher environmental impact than steel packaging, not only due to climate change but also to the use of fossil resources, acidification, ozone depletion, ionising radiation, freshwater eutrophication, and eco and human toxicity.
- Metal is a permanent material. Its inherent properties do not change even after repeated recycling into new products. This means that metal can be recycled endlessly and remains available for future generations.
- For this reason, metal packaging is a great fit for the Circular Economy<sup>11</sup> as demonstrated by the Material Circularity Indicator (MCI)<sup>12</sup> developed by the Ellen MacArthur Foundation. For reference, on a logarithmic scale from 0 to 1:
  - Steel packaging produced in Europe scores on average between 0.57 and 0.74.
  - Plastic packaging produced in Europe with 50% recycled content scores 0.51 if recycled at the end of life, and 0.33 when not recycled (i.e., incinerated or landfilled).

## CONCLUSIONS

MPE challenges the assertion that “*metal production is associated with great climate and environmental impact*” based on the following:

- The European steel industry has reduced its consumption of primary energy per tonne of crude steel by 50% since 1960 and is confident of achieving a CO<sub>2</sub> emissions reduction of up to 95% by 2050.
- 200 steel plants in Europe utilise steel scrap as input material to manufacture new steel products, therefore using up to 70% less energy than producing steel from raw materials.
- Steel packaging is the most recycled packaging material in Europe and, even when incinerated, is recovered from the bottom ashes.

Moreover, MPE challenges the proposal to substitute metal packaging with plastic packaging in view of promoting the circular economy and avoiding negative environmental impacts, based on the following:

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<sup>11</sup> A circular economy aims to maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste. <https://ec.europa.eu/eurostat/web/circular-economy>

<sup>12</sup> <https://ellenmacarthurfoundation.org/material-circularity-indicator>

- Over the life cycle, the CO<sub>2</sub> equivalent emissions of paint and varnish metal packaging have decreased by 30% (from 2000 to 2018). Its environmental impact is lower than plastic packaging containing 50% recycled content.
- Metal packaging is made of a permanent material, therefore is endlessly recycled and is a perfect fit for a circular economy, as demonstrated by the Material Circularity Indicator (MCI).

Based on the evidence provided above, MPE requests that the Nordic Swan Ecolabel system review the criteria proposed for paint and varnish products and remove the prohibition of using metal packaging for paint and varnish products (lower than 18 litres in volume).

### **Flügger Group A/S**

We do not have any issues with the ban on metal packaging, as long as it is still okay to use metal handles on plastic buckets.

### **Akzo Nobel Decorative Coatings AB**

Förpackningar som enbart är tillverkade av metall eller innehåller metalldelar är inte tillåtna.

Detta innebär att vi inte kan ha kvar våra nuvarande 1L metallförpackningar. Vi måste byta till plast eller ta bort denna storlek för Svanenmärkta produkter eftersom man inte får ha samma produkt i icke-godkända emballage.

Plastburkar i 1L finns, men de klarar inte skakning. Det krävs mer forskning eller andra åtgärder innan vi kan byta till plastburkar i 1L. Och i nuvarande metallförpackningar finns en hel del återvunnet material. Frågan är om de inte är en lika bra hållbar lösning som plastburkar.

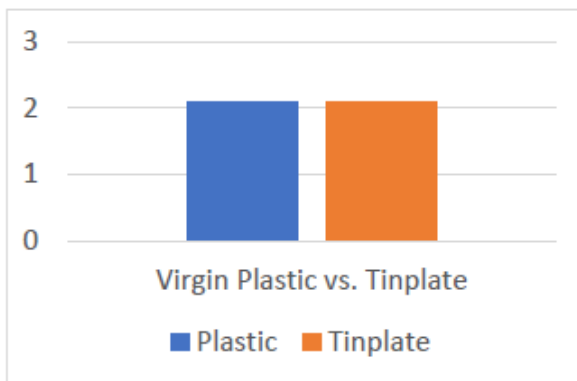
### **Emballator Group AB**

The production of tinned steel has higher CO<sub>2</sub>-emissions than recycled material, however the material has an excellent recyclability without any degradation of the material. In fact, 85% of the metal packages used in Europe are recycled, in Sweden 87%. Using a package material that in fact is recycled, goes in line with the Nordic Swan Ecolabel's own ambition to promote circular economy.

Based on the recyclability, Emballator suggest that the complete value chain should be taken into consideration when evaluating the CO<sub>2</sub>-emission for the paint pails, not only the production of the material.

Calculation based on plastic and metal pails from Emballators own production show that the CO<sub>2</sub>-emissions through the complete value chain of a paint pail is similar between plastic and tinned steel.

When comparing two Emballators paint pails, one made of virgin plastics and one made from the average tinned steel on the market, the carbon footprint is similar throughout the value chain (material production to end-of-life).



### Virgin plastic vs. average tinplate

#### Plastic

Weight: pail 0,33 kg + lid 0,080kg = 0,410 kg

Emission factor: 5,0 kg CO<sub>2</sub>/kg

**Total CO<sub>2</sub>-ekvivalents/bucket: 2,1 kg CO<sub>2</sub>**

#### Average Tinplate

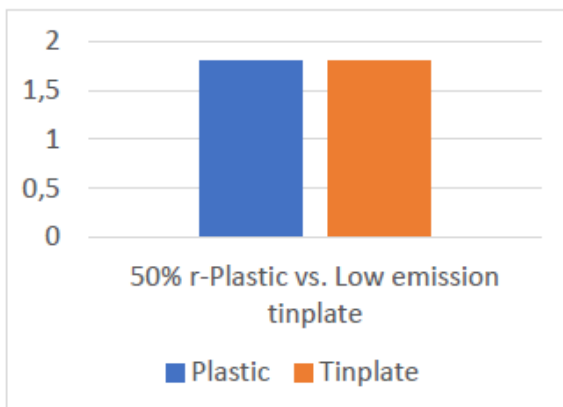
Weight: pail 0,734 kg + lid 0,235 kg = 0,969 kg

Emission factor average steel: 2,2 kg CO<sub>2</sub>/kg

**Total CO<sub>2</sub>-ekvivalents/bucket: 2,1 kg CO<sub>2</sub>**

If using 50% recycled plastics in the pail, the carbon footprint throughout the value chain is lowered by 0,3kg CO<sub>2</sub>/pail.

The CO<sub>2</sub> emissions differs a lot between different tinplate suppliers. In case of using a low emission tinplate, the carbon footprint of the tinplate pail is lowered with the same amount and still similar to the plastic pail.



### 50% recycled plastic vs. Low emission tinplate

#### 50% recycled plastic

Weight: pail 0,335 kg + lid 0,080 kg = 0,415 kg

Emission factor: bucket 4,10 kg CO<sub>2</sub>/kg, lid 5,0 kg CO<sub>2</sub>/kg

**Total CO<sub>2</sub>-ekvivalents/ bucket: 1,8 kg CO<sub>2</sub>**

#### Low emission tinplate

Weight: pail 0,734 kg + lid 0,235 kg = 0,969 kg

Emission factor low emission steel: 1,9 kg CO<sub>2</sub>/kg

**Total CO<sub>2</sub>-ekvivalents/bucket: 1,8 kg CO<sub>2</sub>**

Based on this information in the comparison above Emballator is suggesting that instead of banning metal packing for paints and varnishes, Nordic Swan Ecolabel could set requirements on the tinplate used. Suggestions for requirements could be to use low emission materials and minimize the material used.

### **Jotun A/S, Maling & Lakkindustriens Forbund**

We propose that the ban of metal packaging is removed. We need metal packaging for some special products. Ref. \*

The decision is not in line with EU's strategy on packaging and packaging waste. Most products that could use plastic packaging have already been changed from metal to plastic to save money. If the restriction of metal packaging is not removed, we see it as a better approach, not to ban metal but set demands how to produce metal packaging with lowest environmental impact.

\* This criterion conflicts with our current standard for packaging of waterborne floor varnish and waterborne alkyd floor paint from a quality perspective. Testing of plastic packaging shows that waterborne varnish dries at the edges and in the lid during the cycle of standstill and movement/ transport. During subsequent movement/transport this dried varnish fell into the beneath liquid causing multiple particles, treads and flakes of dried material – worse for every cycle of standstill and

transport. This leads to an unacceptable visual and technical quality of the varnish, causing problems during application and leaving poor visual appearance and technical properties of the dried varnish. We observe similar issues for waterborne alkyd floor paint when stored and transported in plastic packaging. Conclusion is that plastic packaging cannot be used for waterborne floor varnish and waterborne alkyd floor paint. Restrictions on metal packaging will exclude these products from being Eco-labeled in the future.

### Gjøco AS:

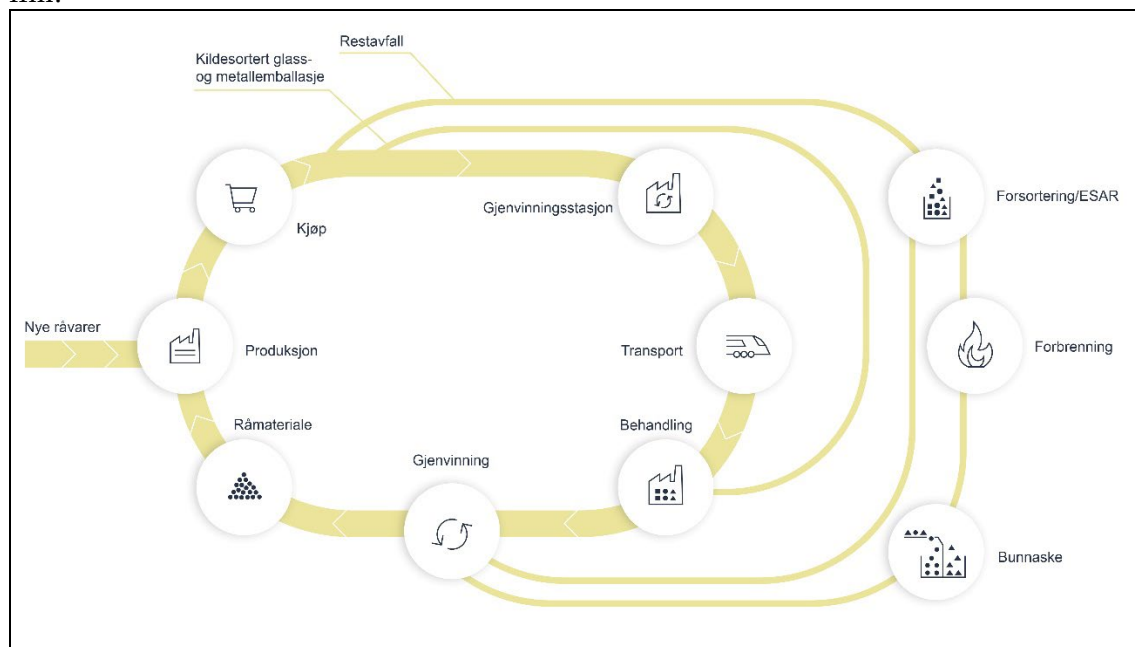
At det er kun tillatt med plastspann går helt fint, men jeg har ikke sett at også hanken må være i plast. Vi bruker i dag plastspann med metallhank. Jeg et det finnes plastspann med plasthanker også, men kan emballasje-leverandørene bekrefte at plasthanker vil tåle belastningen i 10 liters spann?

### Norsk Metallgjenvinning AS

Norsk Metallgjenvinning AS (NMG) er returselskapet for metallemballasje i Grønt Punkt systemet. Vi ivaretar det utvidede produsentansvaret på vegne av våre medlemmer, og har som visjon at all metallemballasje våre medlemmer setter på markedet skal komme tilbake til kretsløpet som resirkulerte råvarer. NMG håndterer både emballasje for mat og husholdning samt maling, lakk og lim.

Returgraden for brukt metallemballasje for maling, lakk og lim har ligget stabilt på over 90% i Norge over flere år, noe som gir svært gode muligheter for å materialgjenvinne metallet som har blitt brukt som emballasje.

NMG har godt etablerte systemer for innsamling av all metallemballasje, her under presenteres dagens prosess for innsamling av brukt emballasje for maling, lakk og lim.



Innsamling av emballasje for maling, lakk og lim foregår hovedsakelig gjennom private og kommunale gjenvinningsstasjoner. Tom emballasje til maling, lakk og lim håndteres som blandet metall, mens emballasje med produktrester håndteres som farlig avfall. Emballasje med farlig avfall sluttbehandles av godkjente behandlingsaktører, hvor restene av innholdet forbrennes og metallemballasje

fjernes og sendes til gjenvinning før eller etter forbrenning avhengig av anleggets design. Tom og tørr emballasje håndteres sammen med annet stål og metall (blandet metall) fra gjenvinningsstasjonene. Tom og tørr emballasje kan leveres kostnadsfritt til både private og offentlige gjenvinningsstasjoner.

Uavhengig av behandlingsmetoden som varierer avhengig av om metallemballasjen inneholder produktrester eller ikke, blir materialet som har blitt brukt i emballasje ivaretatt og kommer til gjenvinning på en god og hensiktsmessig måte.

Selv om de aller fleste forbrukere leverer brukt metallemballasje på riktig måte, så er det noen få som fortsatt velger å kaste sine spann i restavfall eller i kildesorteringsløsninger for mat og husholdning. Dette er en feilsortering fra konsumets side, men materialet blir ivaretatt og kommer til gjenvinning selv om konsumet ikke agerer riktig. Som det fremgår av diagrammet vil metallemballasje for maling, lakk og lim som kastes i restavfall ivaretas gjennom bunnaske, med noe tap i forbrenningsprosessen. For emballasje for farlig avfall som feilaktig kastes i kildesortering for mat og husholdning så vil emballasjen følge samme prosess som hermetikk og lignende, men med risiko for å skade det fininnstilte anlegget for glass- og metallsortering.

Selv om returgraden er svært høy jobber NMG stadig for å øke returgrad for emballasje for maling, lakk og lim gjennom gode tjenester til både privat- og proffmarked. NMG gjennomfører for tiden en pilot på lukket løp, hvor kundene kan levere tilbake brukt emballasje på utsalgssted (både plast og metall). Dette tilbudet skal gjøre det enda enklere for kunden å returnere brukt emballasje, og gir i tillegg en ren fraksjon som egner seg svært godt for gjenvinning.

Det er stort sett stål som brukes i metallemballasje for maling, lakk og lim, og dette er et materialslag som egner seg svært godt for gjenvinning. For metallemballasje i stål satt på marked i Norge regner vi med et gjennomsnittlig produksjonsutslipp på 1,9t CO<sub>2</sub> e/t for primærstålet som inngår, og med en 70% besparelse for gjenvunnet stål som tilsier en besparelse på omtrent 1,3t CO<sub>2</sub>e/t. Tilsvarende regnestykke for aluminium gir en enda høyere besparelse ved gjenvinning, siden energibehovet ved omsmelting kun er omtrent 5% av primærproduksjon. For emballasje i aluminium for det norske markedet regner vi med gjennomsnittlig produksjonsutslipp på 14,4t CO<sub>2</sub> e/t for primeraluminium, og omtrent 95% besparelse ved å bruke gjenvunnet aluminium som tilsier en besparelse på omtrent 13,5t CO<sub>2</sub> e/t for gjenvunnet aluminium.

Primærproduksjon av metall har generelt stor miljøpåvirkning, men ved at materialet blir gjenbrukt i så stor grad vil den samlede miljøbelastningen i et livsløpsperspektiv være mye mindre enn den ville vært ved kun én gang bruk av metallet. NMG har sammen med NORSUS gjennomført en LCA studie mer rettet mot mat og husholdning, men innsikten for stål er overførbar til emballasje for maling, lakk og lim. Ved å sammenligne ulike LCA metoder kommer det tydelig frem at metallens miljøpåvirkning reduseres jo mer modellene tar høyde for gjenbruk av materialet.

- Cut off har målepunkt der avfall blir ressurs, kun ett livsløp, gir beregnet størst belastning
- End-of-life inkluderer også unngått produksjon etter endt livsløp og gir beregnet mindre belastning
- Circular footprint formula inkluderer andel gjenbrukt materiale etter endt livsløp, gir beregnet minst belastning

I dette arbeidet ble også Ellen MacArthur Foundations Material Circularity Indicator (MCI) inkludert, som er en indikator som viser sirkularitet på produktnivå. Indikatoren viser et fullt lineært produkt med verdi 0 og et fullt sirkulært produkt med verdi 1, som da representerer et produkt som er produsert utelukkende av resirkulerte råvarer og som igjen er 100% resirkulerbart etter bruk.

Metallemballasje for mat og husholdning har en lavere sorteringsgrad enn metallemballasje for maling, lakk og lim, men viser fortsatt en MCI, som er en svært god indikator og syniggjør metallens styrke ved at det kan gjenbrukes så mange ganger. MCI for farlig avfall ble ikke beregnet i dette arbeidet, men siden returgrad for emballasje for maling, lakk og lim er enda høyere enn for mat og husholdning vil MCI verdi være enda høyere – noe som indikerer enda lavere belastning for hver runde i kretsløpet.

NMG vil be Svanen om å revurdere krav O31 i forslag til reviderte miljøkrav til maling og lakk. Selv om all primærproduksjon av metall er forbundet med stor klima- og miljøpåvirkning, så vil ikke emballasjen ha den samme negative påvirkningen som følge av høy returgrad og påfølgende materialgjenvinning. NMG vil oppfordre Svanen om å erstatte forbudet mot metallemballasje med å stille krav til høy grad av resirkulerte råvarer i produksjon av emballasjen, god merking for riktig sortering av emballasjen etter bruk samt oppfordre alle produsenter om å ta sitt utvidede produsentansvar aktivt gjennom et ambisiøst returselskap.

### **Miljøministeriet**

Miljøministeriet bakker opp om krav til højt indhold af genanvendt materiale i emballagen.

### **Sveriges Färg och Lim Företagare**

På förpackningar över tio liter behövs det handtag av metall oavsett om det är måleri eller industrifärg. Förtydliga att metallhandtag är undantaget.

Vi menar också att enlitersförpackningar i metall måste behållas då plastförpackningar inte håller vid brytning och efterföljande skakmaskin. För miljön är det viktigt att kunna leverera i enlitersförpackningar.

### **PPG**

The rationale behind ban on metal packaging including parts is that metal packages have 95% higher CO2 emissions. There is no source for the figure in the background documents. Our understanding is that the difference in climate impact between recycled metal packages and plastic packages is a lot smaller.

We need both kind of material (plastic and metal) in our industry. Metal lids should also be accepted, even if the can is plastic, as this is linked to the tinting procedures (incl. ergonomic aspects in the shops) in some regions. Metal packaging is recyclable as such and the recycling percentage is much higher than with similar plastic packaging.

Additionally, we are seriously worried of the possible capacity issue from our plastic suppliers if all license holders would switch everything to plastic packaging. We need a level playfield among all suppliers, and license holders need to ensure the availability of different type of packaging materials. We propose that metal packages should be allowed.

### **Comments from Nordic Ecolabelling**

*Nordic Ecolabelling appreciates all your comments.*

*The requirement for packaging has been changed after the consultation period. Nordic Ecolabel does not believe allowing one type of packaging and prohibiting another is the best choice for the environment, as each packaging material can either have good climate impact or negative climate impact. This is dependent on many variables surrounding whether the packaging is recycled or incinerated, and factors related to the consumer, user and working environment. The complexities surrounding recyclability, paint residue, consumer behavior and waste management systems necessitate a holistic approach to minimize environmental harm. By incorporating recycled materials and prioritizing recyclability, Nordic Ecolabel can aim to promote sustainable packaging practices and contribute to a circular economy.*

*Nordic Ecolabel has therefore changed the requirement to include recycled material in both plastic and metal and thus removed the prohibition of metal packaging. For plastic, 40% recycled material is required. This value has been lowered in order to facilitate demand and deliver plastic packaging with high quality recycled plastic. For metal, 25% recycled material has been set based on thresholds for technical limitations. Furthermore, metal packaging made from aluminum is prohibited as it has a much higher climate impact than plastic or tinplate.*

### **O32 Recycled material in hard plastic packaging**

#### **Verband der deutschen Lack- und Druckfarbenindustrie e. V.**

We already use plastic containers with recycled plastic content. However, the durability of the packaging for coatings and paints is very important, as a spill of paint due to failure of the packaging during transport and especially also mixing processes (color mixing on POS) would have a bad impact on sustainability. According to our knowledge, extensive testings from our QA and current technological possibilities, a post-consumer recycled plastics content of 25% is capable of delivering the needed quality of packaging for the above mentioned circumstances. We therefore suggest to lower the needed minimum percentage of post-consumer recycled plastic to 25% PCR.

#### **Målning**

We have been in talks with our supplier and the current situation is that they can provide up to 80% PCR in our 4,0 L and 10,0 L containers and lids they can however not provide us with smaller containers made with PCR, at least not at the moment. Smaller containers do also have thinner wall thicknesses and would therefore be more vulnerable towards any defects caused by the PCR material. A possible strategy to combat this would be to increase the wall thicknesses with a negative knock-on effect of higher overall plastic use in the packaging. We would like to propose that an average of 50% PCR in all package sizes should suffice to fulfil the requirements.

#### **Flügger Group A/S**

In general we support the introduction of recycled material, however we would like to highlight some issues:

1. If all Nordic Swan labelled products must be sold in buckets made of min. 50% PCR-material, this will create a huge demand on the plastic suppliers. It might not be possible to have that much material produced, and the price will most likely increase as a result of supply and demand.

2. We do not have any experience with using PCR-material in our flexible pouches and cannot guarantee that the material will be strong enough. We recommend that you reach out to the suppliers/producers of PCRmaterial and get their feedback on possible volumes and product stability/strength.

### **Akzo Nobel Decorative Coatings AB**

Vi har OK med gränsen på minst 50 viktprocent återvunnet material. Men vi ser risken att tillgång till återvunnet material kan bli svårt och det kan uppstå brist på återvunna plastburkar.

### **Akzo Nobel Paints & Coatings Netherlands**

This minimum of 50% is a realistic value.

### **Emballator Group AB**

Emballator agrees that it is important to increase the amount of recycled plastics used in packaging and the 50% postconsumer recycled material is possible to use in pails, but not in lids or handles, due to risk of brittleness.

The plastics used for pails always need to be of a high quality to avoid brittleness. Therefore only high-quality recycled plastics could be used, and the product streams need to be followed and verified.

The plastic in used paint pails for example is contaminated from the paint and could therefore in next recycle step be used for other types of recycled products with lower demands on impact resistance.

High quality postconsumer recycled plastics are rare and expensive; therefore, it is advised not to demand more than 50% post-consumer recycled plastics in packaging. Recycled plastics verified by EuCertPlast certification or Global Recycled Standard certification is very rare on the market and it might be difficult to find enough material certified according to these two standards. A suggestion is to open up to more types of third part certificates for recycled plastics.

### **Jotun A/S**

#### **Maling & Lakkindustriens Forbund**

Recycled plastic material is technical- and commercial possible to fulfill, but to include this for all Nordic Ecolabel products, we need a longer implementation period. This includes packaging manufacturers as well, who need to ensure high-quality recycled plastic in their production. EU Green Deal legislation will probably require minimum 35 % recycled plastic for this type of packaging in 2030.

### **Miljøministeriet**

Miljøministeriet bakker op om krav til højt indhold af genanvendt materiale i emballagen.

### **Danmarks Farve- og Limindustri**

Generelt støtter vi indførelsen af PCR-materiale, men der er en risiko for, at såfremt alle svanemærkede produkter skal sælges i spande af min. 50% PCR-materiale vil skabe en stor efterspørgsel, som kan betyde mangel. Desuden vil prisen højst sandsynligt stige betragteligt, som følge af efterspørgsel.



### **Sveriges Färg och Lim Företagare**

Vi ställer oss tveksamma till att tillgången på återvunnen plast av tillräckligt god kvalitet för att tillverka färgförpackningar är tillräcklig. Måste finnas utrymme för undantag så att inte kravet sätter stopp för tillverkningen.

### **PPG**

By the explanation of PCR, does it include also PIR (Post industrially recycled) plastic? We believe that this is good, both fractions should be included for the recycled share. If PIR is not included, we believe that this should be considered. Availability of packaging is crucial, as mentioned above.

### ***Comments from Nordic Ecolabelling***

*Nordic Ecolabelling appreciates all your comments.*

*The level of 50% recycled material is maintained, but the requirement is changed after the consultation period and applies only for acrylic wall and ceiling paint (both indoor and outdoor use). Furthermore, the requirement has been clarified that recycled plastic is defined in the requirement according to ISO 14021 on two categories, pre consumer/commercial and post-consumer/commercial.*

## **O33 Recycled material in flexible bags and pouches**

### **Flügger Group A/S**

In general we support the introduction of recycled material, however we would like to highlight some issues:

1. If all Nordic Swan labelled products must be sold in buckets made of min. 50% PCR-material, this will create a huge demand on the plastic suppliers. It might not be possible to have that much material produced, and the price will most likely increase as a result of supply and demand.
2. We do not have any experience with using PCR-material in our flexible pouches and cannot guarantee that the material will be strong enough. We recommend that you reach out to the suppliers/producers of PCRmaterial and get their feedback on possible volumes and product stability/strength.

### **Maling & Lakkindustriens Forbund**

#### **Jotun A/S**

This must be directed to the plastic packaging suppliers.

### **Miljøministeriet**

Miljøministeriet bakker op om krav til højt indhold af genanvendt materiale i emballagen.

### **Danmarks Farve- og Limindustri**

Generelt støtter vi indførelsen af PCR-materiale, men der er en risiko for, at såfremt alle svanemærkede produkter skal sælges i spande af min. 50% PCR-materiale vil skabe en stor efterspørgsel, som kan betyde mangel. Desuden vil prisen højst sandsynligt stige betragteligt, som følge af efterspørgsel.

Bemærk der er en fejl i dette krav. Det fremgår både 50% og 30%. Det samme fremgår af baggrundsnotatet. Så hvad er der tænkt?

## **Sveriges Färg och Lim Företagare**

Vi har ingen erfarenhet av återvunnet material till denna typ av förpackningar. Vi är därför tveksamma till att kravet införs.

### **PPG**

Flexible bags and pouches are already light weighted, which means that these packages will have a lower material demand per liter filled paint. If the requirement to produce with at least 30% PCR plastic weakens the construction with a risk of leakage, it should be considered sufficient with the light weighting of flexible bags and pouches. (A real life example is 70% less packaging material/liter).

Typo: The last documentation requirement says that 50% must be shown, but the requirement is only 30%.

### ***Comments from Nordic Ecolabelling***

*Nordic Ecolabelling appreciates all your comments. After the consultation the requirement is removed, and instead an exemption for packaging, that amounts to less than 25 grams per liter of paint, is introduced in the requirement "Packaging". When the packaging makes up a small proportion in relation to the amount of paint it contains, we think that a good environmental choice has already been made, since smaller quantities of raw materials (e.g. plastic) are used in the production. There is therefore an exception to the requirement for this type of packaging, which will apply to e.g. pouches.*

## **O34 Consumer information**

### **Flügger Group A/S**

The addition of information regarding sorting of waste/packaging could cause some issues on small packaging sizes. New CLP regulations have been proposed, where the size of the safety text needs to be bigger than today, leaving very little space for product information, consumer information and the like. If the information is still OK to have available on the TDS (which can be found on the website), we can support the adjustment. But if the information must be added to the label, we foresee issues.

### **Akzo Nobel Decorative Coatings AB**

Vi har redan brist på plats och om vi behöver lägga till ännu mer information på etikett, då blir det en utmaning att få plats med den informationen som krävs på etiketten.

### **Beck & Jørgensen A/S**

4. punkt: Det bør pointeres at det er ved sortering af affald.

### **Danmarks Farve- og Limindustri**

Tilføjelse af information vedrørende sortering af affald/emballage kan betyde pladsproblemer på særligt de små emballager. Der foreligger et forslag til ændring af CLPforordningen, hvor der er nye krav til font-størrelsen på forskellige emballagestørrelser.

Hvis CLP-forslaget gennemføres betyder det, at der er meget lidt plads til ekstra produkt- og forbrugerinformation.

Det betyder i forhold til O34, at hvis den ekstra informationen ikke skal fremgå af etiketten, kan vi støtte justeringen. Hvis derimod informationen skal fremgå af etiketten, forudser vi pladsproblemer.

### **Sveriges Färg och Lim Företagare**

Skulle en QR-kod räcka och att informationen finns på en hemsida? Kan vara svårt att få in all information på etiketten.

#### **Svar fra Nordisk Miljømerking**

*Takk for kommentarene. Etter høringen er kravet endret slik at det er mulig å bruke teknisk datablad til deler av informasjonen, hvis det ikke er plass på etiketten.*

### 4.3.8 Section 8, license maintenance

#### **O35 Customer complaints**

##### **Nordisk Miljömärknings kommentar**

*Inga remisskommentarer har inkommit för kravet.*

#### **O36 Traceability**

##### **Hagmans Nordic AB**

”Dessutom ska det kunna gå att koppla ihop produkten med den råvara som faktiskt har använts.” Vi tolkar det som att man ska registrera vilken batch av råvaran som använts. Det blir krångligt men kan kanske gå att lösa för de flesta råvarorna, men när det gäller råvaror som man får i bulk blandas ju ofta olika batcher i lagringstanken. I de fallen har vi svårt att se hur man ska kunna garantera spårbarhet. Har ni förslag på hur det skulle kunna hanteras?

##### **Flügger Group A/S**

To include a demand for a description of the following process seems unnecessary: A manufactured / sold product should be able to trace back to the occasion (time and date) and the location (specific factory) and, in relevant cases, also which machine / production line where it was produced, We suggest that the ISO 9001 certification is considered valid proof of the above.

##### **Nordisk Miljömärknings kommentar**

*Nordic Ecolabel thanks you for your comments. The requirement is similar to the previous version and is written in a way as to include companies who are not certified by ISO 9001. The specific requirements written in the above requirement is in line with ISO 9001 and therefore companies who are certified in accordance with ISO 9001 already have description, routines and documentation in place. For traceability, we believe that batches should be traced as far back as practically possible for the licensee, in accordance with ISO 9001. We also understand that there are situations where this is not practically possible, but for the documentation we want to see how far back the Nordic Swan product can practically be traced.*

### 4.3.9 Appendices

#### **Appendix 2 – Declaration from the manufacturer of the raw material**

##### **Akzo Nobel Decorative Coatings AB**

Innehåller råvaran restmonomerer i polymerer som ingår i > 1 % i produkten som klassificeras med någon av nedanstående riskfraser? Inklusive alla kombinationer av angivna exponeringsvägar och angiven specifik effekt. H350 täcker exempelvis även klassificeringen H350i.

Det är förvirrande för Råvaruleverantörer. De tolkar det som att de endast behöver redovisar restmonomer som ingår > 1% i råvaran och inte för polymerer som ingår i råvaran. Vi föreslår att dela upp det i 2 delar. Först svara om det finns mer än 1% polymer i råvaran och sedan om ja, fylla i om det finns restmonomerer som klassificeras med någon av riskfraser i tabellen.

#### ***Nordisk Miljömärknings kommentar***

*Nordisk Miljömärkning tackar för era kommentarer. Vi har försökt förtydliga kravet så att det framgår att det är restmonomerer i polymeren som ska kravställas.*

#### **Beck & Jørgensen A/S**

Hvorfor stilles ikke flere spørgsmål til f.eks. titandioxid i kriterie O9? Der er jo flere kriteriekrav til titandioxid i selve kriterierne end i appendix 2.

#### **Nordisk Miljömärknings kommentar**

Nordisk Miljömärkning tackar för era kommentarer.

## **5 Adjustments after consultation?**

Several adjustments the criteria were made after consultation. The proposed criteria were adjusted based on the consultation response and other feedback from stakeholders such as NGOs or other labelling schemes.

The most important adjustments are the following:

- Several requirements were specified and modified so that they are more workable in practice, also considering the current and future availability of data.
- The requirement for titanium dioxide has significantly been changed from the draft version. Requirements to energy consumption and renewable energy has been removed and requirement for energy management system has been kept as the main requirement.
- The requirement for raw materials has been changed to instead focus on a supply chain policy and code of conduct in order to ensure that if the product contains renewable raw materials, that they are sustainable and responsibly produced.
- The requirement for emissions has been changed from the draft version on two different points. Firstly, SVOC-emission limit value has been removed as we do not have representative data to set a limit value for the different product types of paints as SVOC has primarily not been tested but calculated from raw materials via ISO 11890-2.

While the limit value has been removed, Nordic Ecolabel would still like to collect data on SVOC-emissions as EN 16516 already include SVOC-measurement. The data will then be used for future revision to set a representative limit value based on the product type.

Secondly, indoor paints and varnishes have been included in requirement O14 Content of VOC and SVOC in paints and varnishes as a result of the removal of SVOC-emissions. The intention of the requirement was to be in line with BREEAM. As a result from the draft proposal, Nordic Swan would no longer

be in line with BREEAM. Therefore, the inclusion of added VOC and SVOC in the requirement is in line with our original direction.

- The requirement for packaging has been changed since the draft version. Firstly, metal packaging prohibition will stay as the recycled content of metal packaging is limited by technical difficulties. With that, Nordic Ecolabel is not able to influence the production of metal packaging in a more environmentally friendly direction by increasing the amount of recycled material. However, several exemptions has been added where metal packaging cannot be replaced by plastic packaging. Secondly, the plastic requirements have been merged into one requirement and have been clarified with additional exemptions where it is not technically possible to replace metal packaging for recycled plastic cans.

| Requirement in the draft consultation     | Change in the requirement after the consultation, based on consultation responses  |
|---|--|
| Product definition (what can be included) | Products which primary function is not to form a film over the substrate, e.g., oils are now within the scope of the criteria.   |
| Definitions                               | Impurity limit in raw materials reverted from 0,1% back to 1,0%.   |
| O3 Classification of ingoing substances   | Bisphenol A exemption is now clarified for the final epoxy paint.  |
| O4 Environmentally harmful substances     | Indoor wall and ceiling paints now have a separate limit value of 6%. Other indoor paints and varnishes, outdoor- and industrial paints and varnishes have a limit value of 8%.<br><br>Zinc oxide now exempted up to 2500 ppm in order to allow the use of biocide free paints.  |
| O5 Preservatives                          | Isothiazolinone limit reduced from 600 ppm to 500 ppm for indoor paints and varnishes.<br><br>Total preservatives for outdoor use increased to 5000 ppm.<br><br>DBNPA clarified to be exempted from calculation of total preservatives.<br><br>Clarification on reporting of total preservatives via HPLC-analysis now includes analysis of raw materials.<br><br>The background text of calculation of free actives for encapsulated biocides have been removed pending clarification guidance for these substances under the CLP regulation. |

|  |  |
|--|--|
| O6 Formaldehyde  | Limit value for Merckoquant method increased to 25 ppm.<br>Now includes both in-can testing and emissions for indoor paints and varnishes.   |
| O9 Titanium dioxide  | Energy consumption limit and renewably electricity optional requirement has been removed. Energy management system according to ISO 50 001 is kept as the sole requirement for energy consumption.   |
| O12 Prohibited substances  | DBNPA is exempted in all forms used in the production of paints and varnishes or used as an in-can preservative in raw materials or paints and varnishes.  |
| O13 Emissions of VOC/SVOC  | SVOC-limit value has been removed.   |
| O14 Content of VOC/SVOC  | Requirement now includes both indoor and outdoor paints and varnishes to be in line with BREEAM.<br><br>Limit for anti-corrosion paints increased to 75 g/L.   |
| O16 Acrylic resins (binders)   | Palm oils in renewable raw materials must be RSPO-certified. Supply chain policy and code of conduct updated for responsible sourcing of renewable raw materials.  |
| O17 Alkyd resins (binders)   | Supply chain policy and code of conduct updated for responsible sourcing of renewable raw materials. Polyols have been removed from the requirement. Acrylic and Alkyd requirement has been merged.  |
| O18 Cement/Hydraulic binders   | -  |
| O19 White pigment content  | Now requirement O20.   |
| O20 Claims of wet scrub resistance   | Now requirement O19.   |
| O25 Quality requirements for outdoor paints and varnishes                                | Requirement now split up into 5 separate requirements.<br><br>Wood oils are required to be tested according to EN 927-6 for 5 weeks.<br><br>Varnishes, bases, and wood oils exempted from requirement of colour change.<br><br>Wood oils are exempted from the requirement in decrease in gloss. |
| O28 Abrasion/wear for surfaces subject to heavy wear, e.g., UV-cured floors and sheeting | Following alternative methods have been added depending on substrate:<br>EN 14354, ISO 15185, and EN 660-2.  |

|  |   |
|--|---|
| <p>O30 Quality requirements for anti-corrosion paint for industry and infrastructure</p> | <p>Requirement has been changed to include coatings for other corrosivity categories, i.e., C2-C4 while requiring high durability for their respective use.</p> <p>Requirement has been changed to prohibit anti-corrosion paints based on organic polymers if used for corrosion categories C4-CX and C3-coastal areas and immersion categories Im1-Im4.</p> <p>Requirement has been added for recycled zinc in anti-corrosion paints that contain zinc.</p> |
| <p>O31 Metal packaging</p>   | <p>Requirement removed and merged into one requirement, see below.</p>  |
| <p>O32 Recycled material in hard plastic packaging</p>                                   | <p>O31, O32 and O33 merged into one requirement, "Packaging". Recycled material in plastic packaging lowered to 40% and metal packaging now requires 25% recycled material. Aluminium packaging prohibited for use. Recycled material definition has been clarified and is based on definitions in ISO 14021.</p>   |
| <p>O33 Recycled material in flexible bags and pouches</p>                                | <p>Requirement removed.</p>   |