

Revision of the EU Ecolabel criteria for **Indoor and Outdoor Paints and Varnishes**

7 May 2024

WEBEX SESSION

ETIQUETTE FOR VIRTUAL MEETING PARTICIPANTS

- ❖ Please indicate “NAME OF YOUR ORGANIZATION + YOUR FULL NAME”
- ❖ MUTE YOUR MIC AND SWITCH OFF you CAMERA (unless you have the floor)
- ❖ USE THE CHAT only to ask for the FLOOR (write “FLOOR” in the chat), and COMMENT only ORALLY

Revision of the EU Ecolabel criteria for Indoor and Outdoor Paints and Varnishes

1st AHWG Meeting, 7 May 2024

Nati Pérez Camacho - JRC B.5

Shane Donatello, Mette Rames - Viegand Maagøe

1. Opening of virtual room and welcome of participants

Agenda

Morning session: 08:45-12:45 h CEST		
No.	Item	SCHEDULE
1	Opening of virtual room and welcome of participants	08:45 – 09:00
2	Introduction, political objectives of the EU Ecolabel and process description	09:00 – 09:15
3	Background information: market analysis, LCA screening studies	09:15 – 09:45
4	Scope and definitions	9:45 – 11:00
Coffee Break – 15 min		
5	Criterion 1: White pigment content and WSR & Criterion 2: TiO ₂ production	11:15 – 12:00
6	Criterion 3: Efficiency in use & Criterion 4: VOC and SVOC content	12:00 - 12:45
Lunch Break - 1h		
Afternoon session: 13:45-16:45 h CEST		
No.	Item	SCHEDULE
7	Criterion 5: Restriction of hazardous substances and mixtures	13:45 – 15:30
Coffee Break – 15 min		
8	Other criteria proposals and/or other discussion	15:45 – 16:40
9	Conclusions, next steps and closure of the meeting	16:40 – 16:45

1. The Joint Research Centre (JRC)

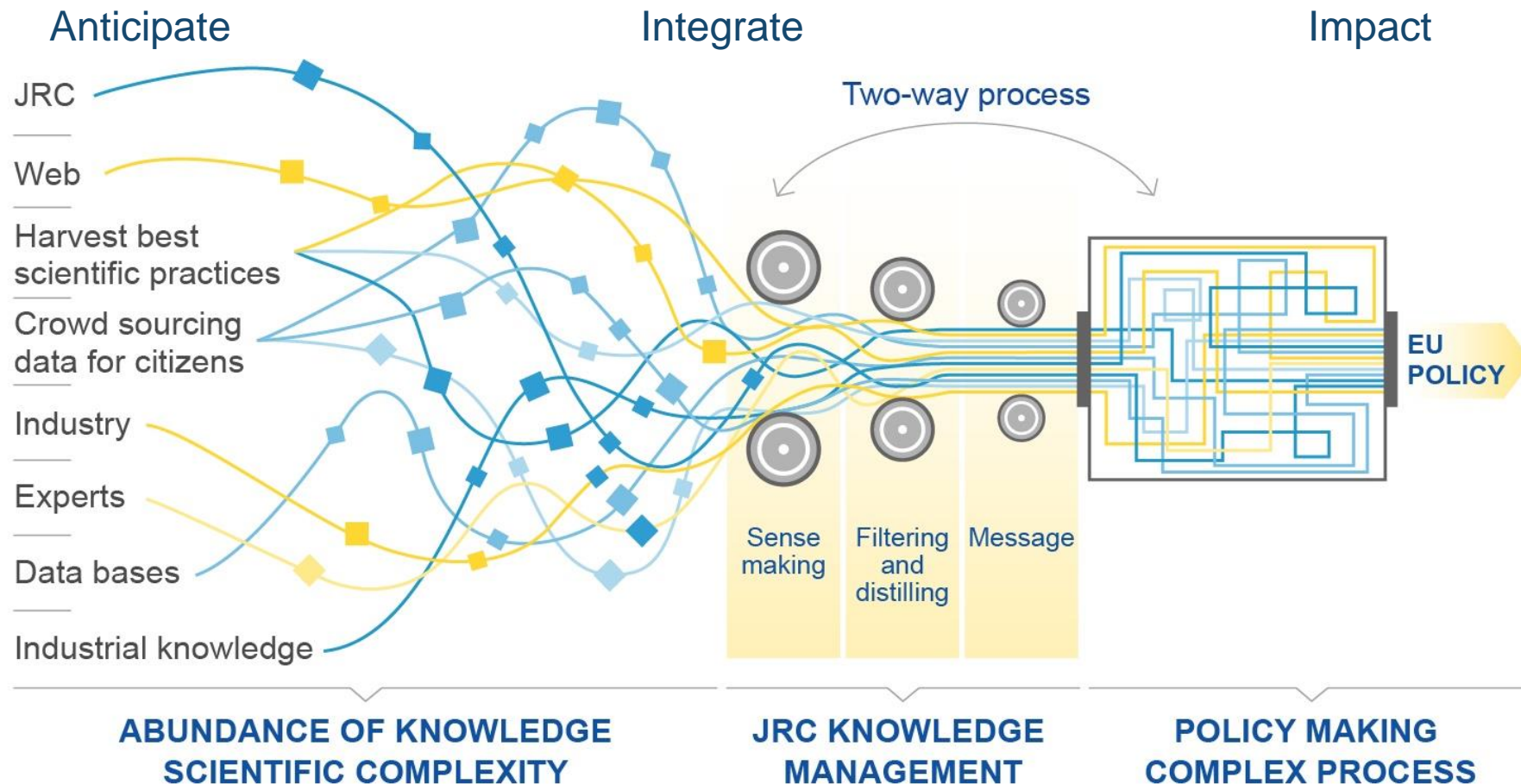


The Joint Research Centre provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society.



1. The Joint Research Centre (JRC)

Dealing with the information overload



JRC sites

Headquarters in **Brussels**
and research facilities located
in **5 EU Countries:**

- Belgium (Geel)
- Germany (Karlsruhe)
- Italy (Ispra)
- The Netherlands (Petten)
- Spain (Seville)



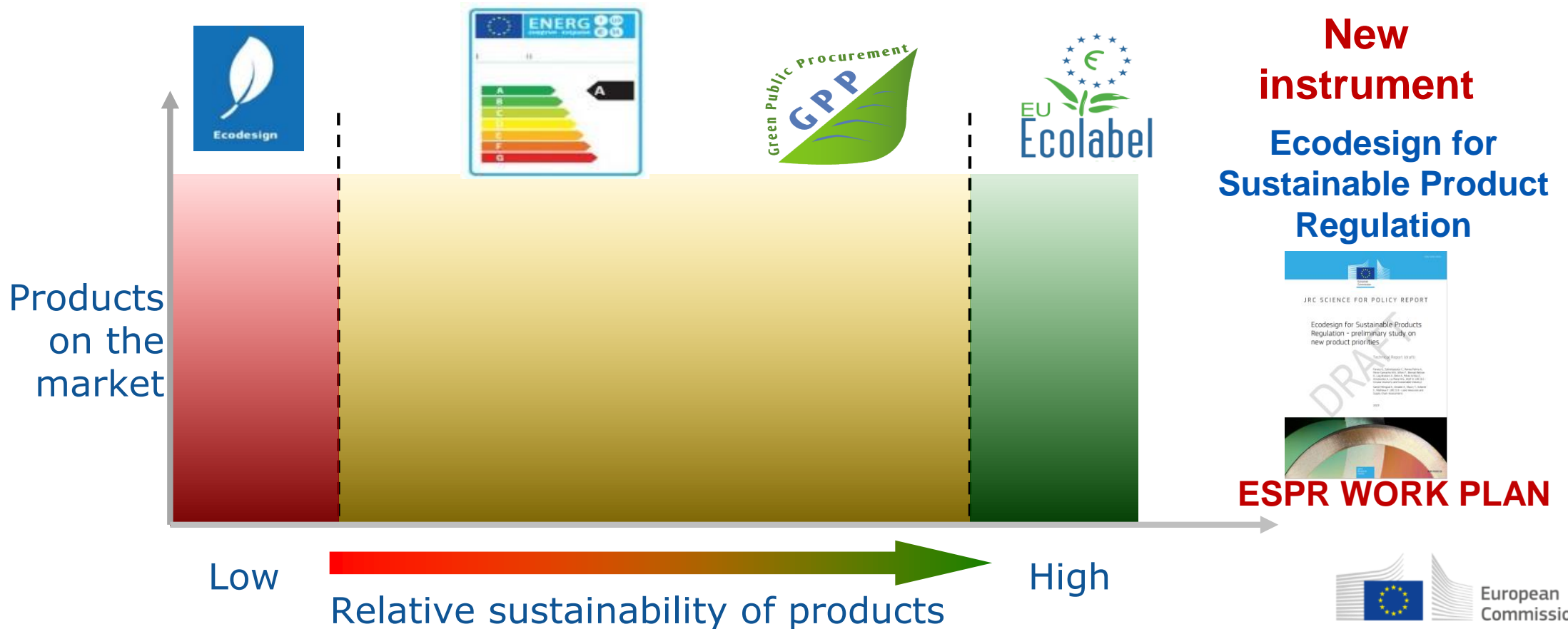
1. Circular Economy and Sustainable industry (B5)

Policy tools

Cut out least sustainable products

Incentivise choice of higher sustainability products

Encourage development of new, more sustainable products



2. Introduction, political objectives of the EU Ecolabel and process description

2. The EU Ecolabel (EU EEL)

- ❖ The **official** European Union **voluntary** label for **environmental excellence**
- ❖ **Established in 1992** - Regulation (EC) 66/2010
- ❖ Managed by the **European Commission** and the **Member States**
- ❖ The **only EU-wide ISO 14024 Type 1 Ecolabel**: reliable; multi-criteria; **life-cycle approach**; open-transparent-multi-stakeholder and science-based



Raw materials



Minimising emissions



Verified performance



Resources saving



Hazardous substances restriction



Waste reduction



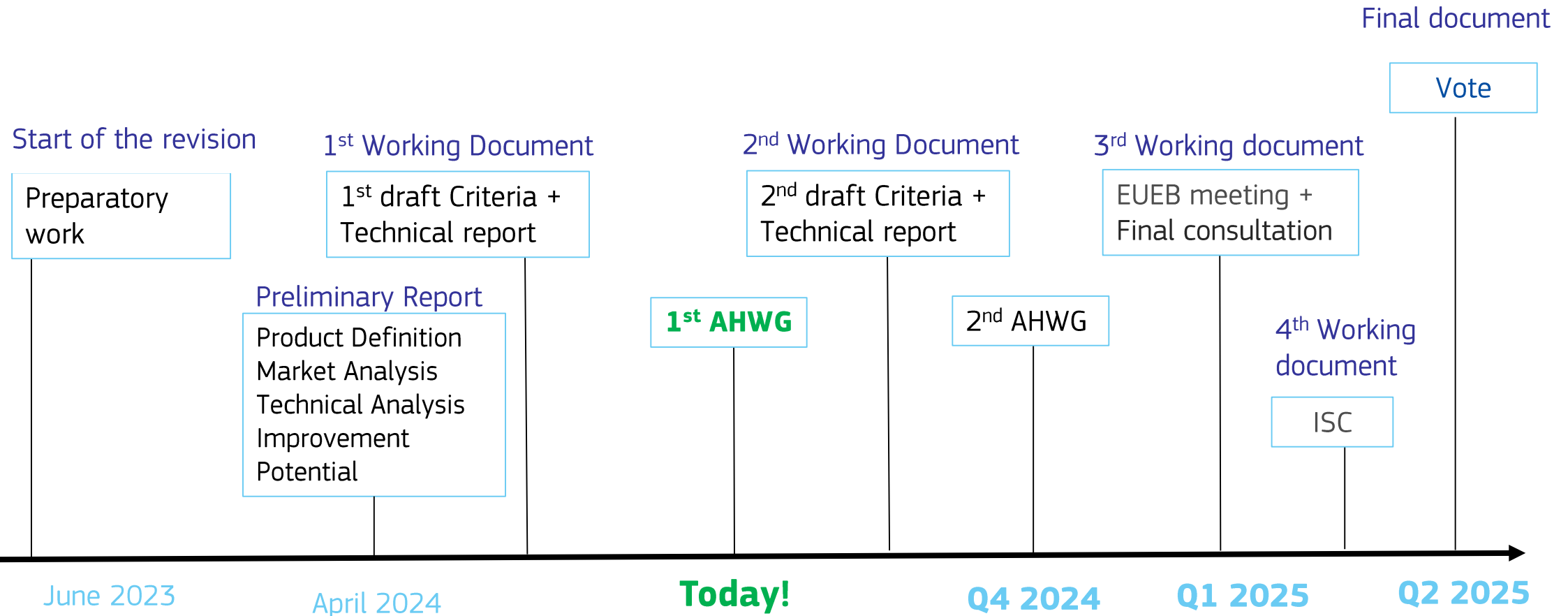
Benefits to applicants

- ❖ Certifies that product/service is **among the most environmentally-friendly in its class**
- ❖ Increases the **visibility of the product** on the market via/by benefitting from:
 - ❖ **EU Ecolabel logo**, which is recognized across Europe by millions of consumers.
 - ❖ **EU Ecolabel official catalogue** <http://ec.europa.eu/ecat/>, featuring products and the company.
 - ❖ **Marketing activities**, by the EC and the National Competent Bodies (e.g. online retailers collaboration)
- ❖ Contributes to **resource and monetary savings**, whilst improve the **image and growth of the company**
- ❖ **Facilitates** compliance and compatibility with Green Deal Legislation (e.g. GCD, ESPR)
- ❖ Easier access to Green Public Procurement (GPP)

Further information at https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home/product-groups-and-criteria_en or contacting helpdesk-eu-ecolabel@adelphi.de

Time planning (tentative)

Current criteria valid until
December 2025



2. The EU Ecolabel criteria under revision

Commission Decision establishing the EU Ecolabel criteria for indoor and outdoor paints and varnishes:

- [Indoor and outdoor paints and varnishes](#) [OJ L 164 3.6.2014, p. 45]
 - Amended 6 times already for various reasons:
 - [Decision \(EU\) 2015/886](#) – wording changes
 - [Decision \(EU\) 2016/397](#) – ADH and methanol derogations
 - [Decision \(EU\) 2018/666](#) – prolongation of validity
 - [Decision \(EU\) 2020/503](#) – extension of ZnO derogation
 - [Decision \(EU\) 2021/1871](#) – TiO₂ and TMP derogations and isothiazoline limit clarifications
 - [Decision \(EU\) 2022/1229](#) – prolongation of validity



Validity expiry date 31/12/25

3. Background information: market analysis, LCA and Non-LCA impacts

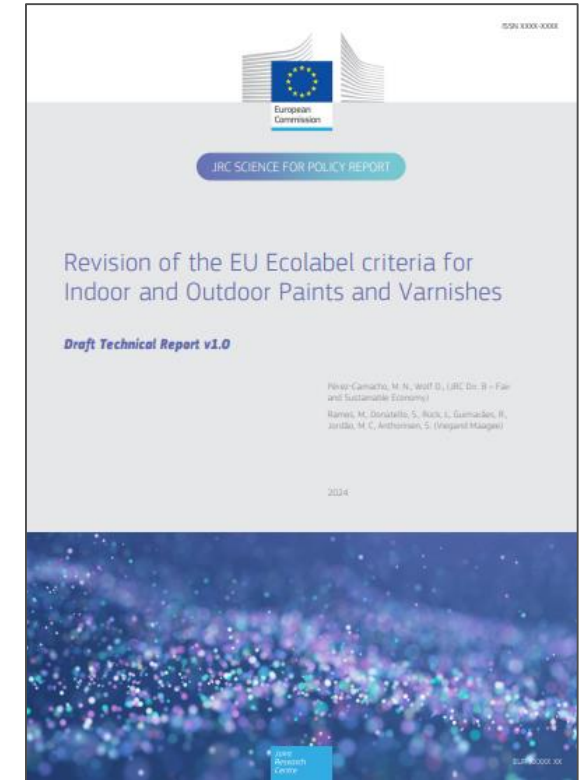
Background information

Preliminary Report (PR)

- Review of paint categories
- Legislative and policy review
- Market analysis
- Technical analysis

Technical Report (TR1)

- Summary of PR
- Proposed scope, definitions and restructuring
- Proposed criteria, supporting rationale and questions.



Documents available in BATIS:

BATIS >Home> Forum >Z_Product Policy: Paints and Varnishes>
1st Ad-Hoc Working Group (AHWG) meeting – 7 May 2024

and Product Bureau Website here:

<https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/461/documents>

Market analysis – PRODCOM categories

Code(s)	Description	New aggregated category and reason
20.30.11.50	Paints and varnishes, based on acrylic or vinyl polymers dispersed or dissolved in an aqueous medium (including enamels and lacquers).	Not aggregated, but shortened name of “Acrylic or vinyl polymer-based P&V, aqueous medium” is given. The most popular PRODCOM category amongst EU Ecolabel P&V.
20.30.11.70	Other paints, varnishes dispersed or dissolved in an aqueous medium.	Not aggregated, but shortened name of “Other P&V, aqueous medium” is given. These products are highly likely to fall within the scope of the EU Ecolabel.
20.30.12.25	Paints and varnishes, based on polyesters dispersed/dissolved in a non-aqueous medium, weight of the solvent > 50 % of the weight of the solution including enamels and lacquers.	Aggregated together and given the name “Polyester or acrylic-based P&V, organic solvent medium”. None of these categories are expected to be applicable to the EU Ecolabel, but are included for context.
20.30.12.29	Paints and varnishes, based on polyesters dispersed/dissolved in a non-aqueous medium including enamels and lacquers excluding weight of the solvent > 50 % of the weight of the solution.	
20.30.12.30	Paints and varnishes, based on acrylic or vinyl polymers dispersed/dissolved in non-aqueous medium, weight of the solvent > 50 % of the solution weight including enamels and lacquers.	
20.30.12.50	Other paints and varnishes based on acrylic or vinyl polymers	Aggregated together and given the name “Other P&V n.e.c”. Uncertain to which extent these products may be included in the scope of the EU Ecolabel, but counted anyway for context.
20.30.12.70	Paints and varnishes: solutions n.e.c.	
20.30.12.90	Other paints and varnishes based on synthetic polymers n.e.c.	

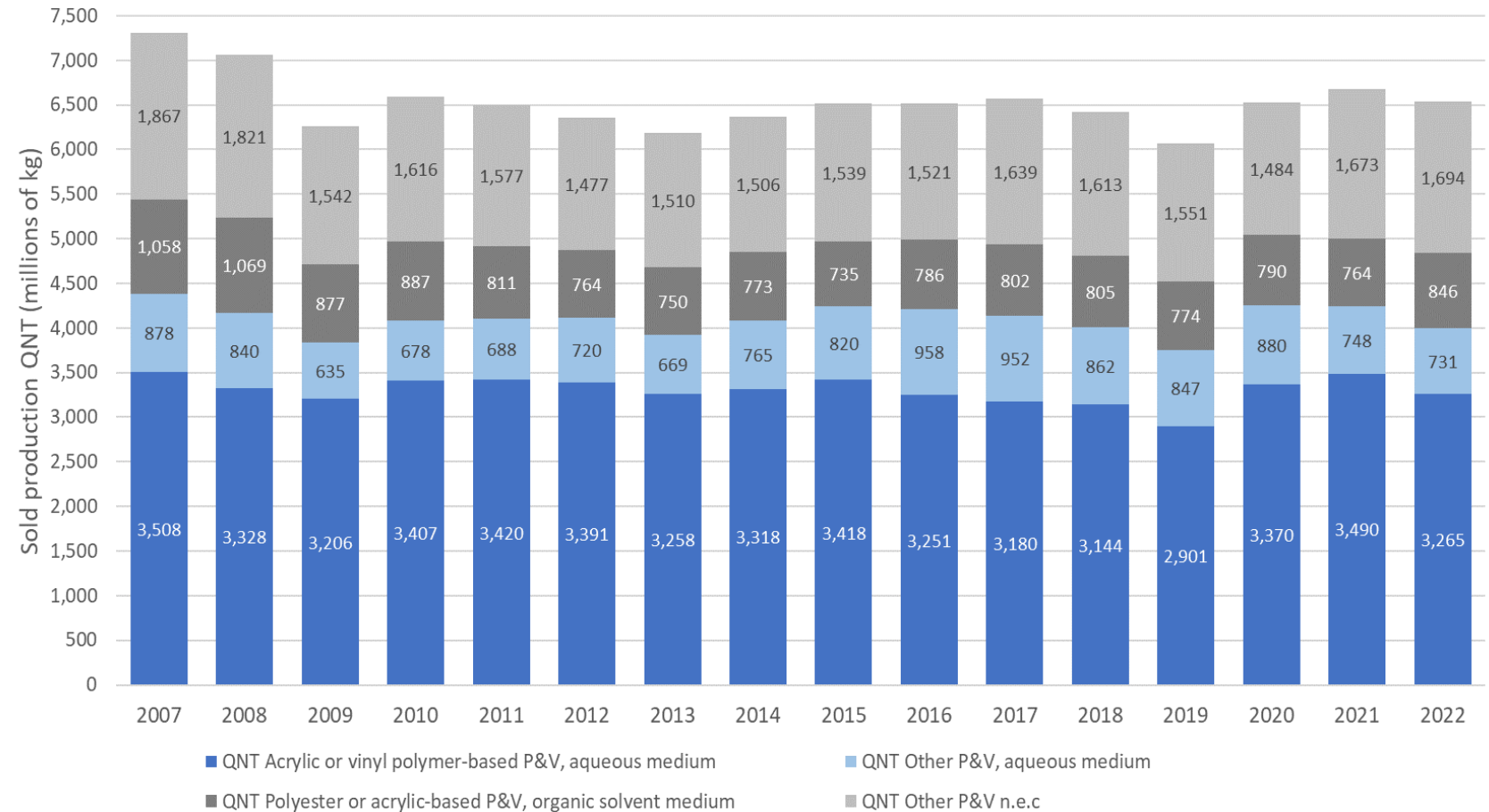
A review of the Eurostat PRODCOM database revealed that product categories in this database are defined by chemistry, whereas the EU Ecolabel scope is defined by application.

- Two relevant PRODCOM codes based on VOC content limits for EU Ecolabel paints, indicating water-based formulations.
- Three PRODCOM codes unlikely to be in scope due to high organic solvent contents (highest organic solvent content in EU Ecolabel scope is ca. 8%).
- Uncertain what exactly is included by “other” paints and varnishes where the dispersing medium is not defined either as “aqueous” or “non-aqueous”.

Source: Combination of Eurostat PRODCOM and own elaboration.

Market analysis – PRODCOM sales trends

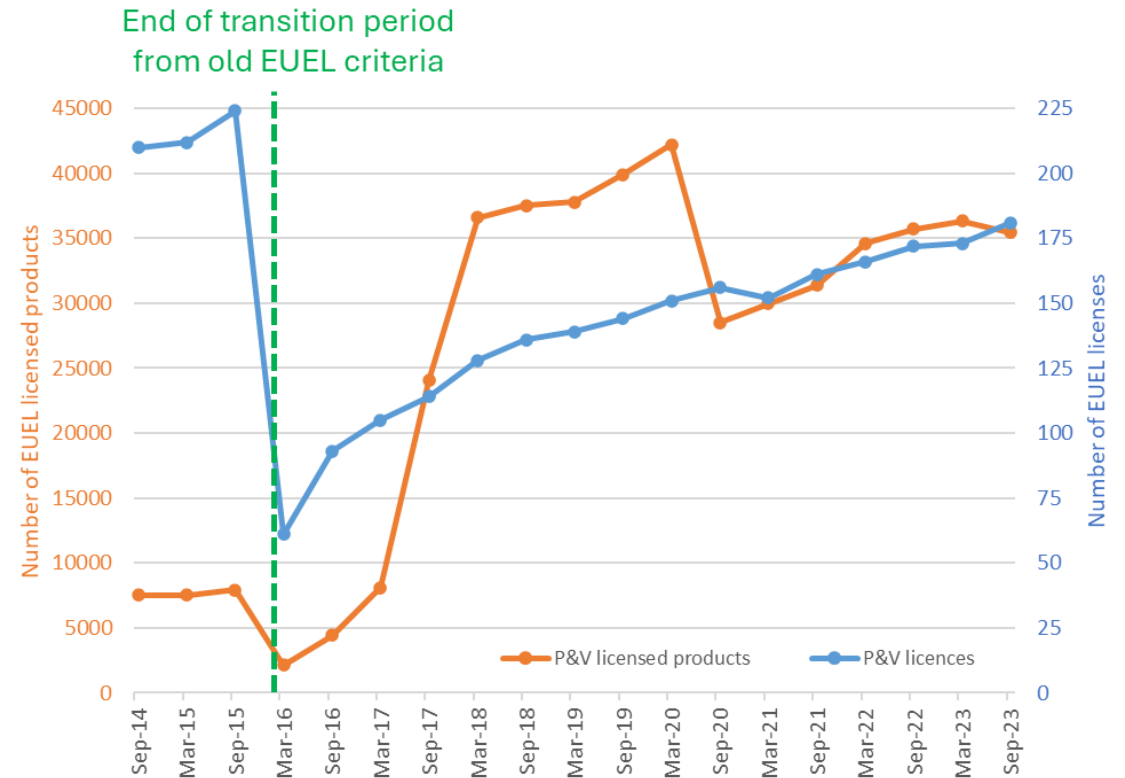
- Blue columns refer to water-based products.
- Water-based is > than organic solvent-based
- Dominated by acrylic or polyester binders.
- Trends in quantities sold in EU27 reflect a mature market, generally stable (3.7 to 4.2 million t), but not yet returning to pre-2008 crisis levels (4.4 million t).








Source: Combination of Eurostat PRODCOM and own elaboration.

Market analysis – EUEL uptake

- Trends in licenses and numbers of licensed products.
- Big drop in 2015-16 with transition to 2014 criteria. Then major growth.
- Drop in licensed products in 2020 (MIT and OIT reclassifications?). No similar drop in licenses.
- Many licensed products possible per license and even for same base formulation (different shades and different packaging formats).
- Not possible to distinguish between indoor and outdoor. Or between paints and varnishes.

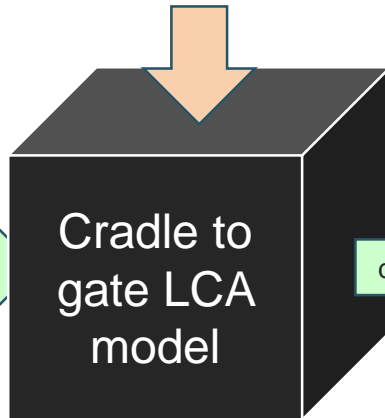


Market analysis – other ecolabel schemes

Scheme logo	Scheme name, criteria title, version and, if available, number of licenses awarded.
	Blue Angel. Low-emission and low-pollutant paints and varnishes. DE-UZ 12a, January 2019, v.9.
	Blue Angel. Low-Emission Interior Wall Paints. DE-UZ 102, January 2019, v.5.
	Austrian ecolabel. Varnishes, glazes and wood sealers. UZ-01 (German only) – 2 licenses.
	Austrian ecolabel. Wall paint. UZ 7 – 22 licenses.
	China Environmental Labelling Certification. Green Building Materials Evaluation Wall Coating.
	Nordic Swan. Chemical building products. Version 2.21, March 2014.
	Nordic Swan. Paints and varnishes. Version 4.1, September 2023.
	Umwelt Etikette Ecolabel. I. Interior wall paints. Version 4.2, October 2023. (in FR and DE only).
	Umwelt Etikette Ecolabel. II. Interior paints, wood and floor coatings. Version 2.3, October 2023.
	Umwelt Etikette Ecolabel. IV. Façade paints. Version 2.3, October 2023. (in FR and DE only).
	Umwelt Etikette Ecolabel. V. Exterior varnishes, wood and floor coatings and wood preservatives. Version 2.23, October 2023.

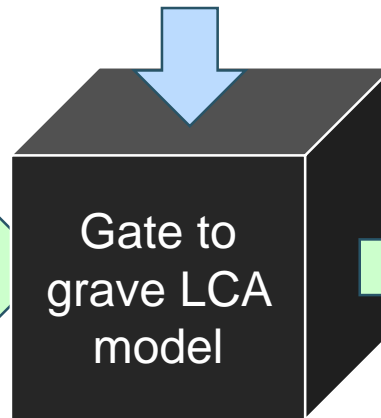
PEF studies - methodology

- Fuels in
- Heat in
- Electricity in
- Water in



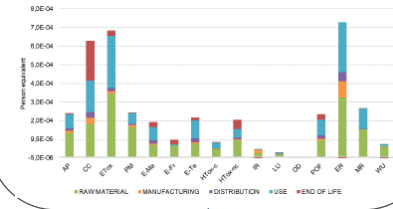
- Production losses
- Waste out
- Waste transport and fate
- Emissions to air
- Wastewater out

- Spreading rate assumptions
- Lifetime before recoating



- Losses (%) from spoilage + distribution
- Losses (%) during application.
- Waste transport and fate (for losses)
- Waste transport and fate (for End-of-Life).

Normalised results by IC* & LCS*

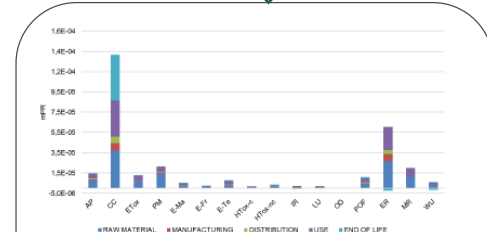


Multiply by weighting factors

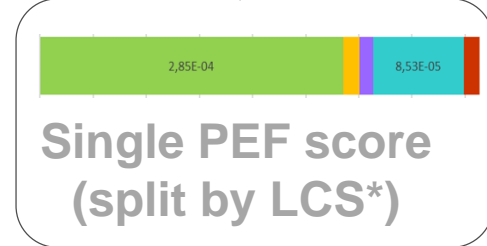
Multiply by normalization factors

Impact category	Raw material acquisition		Characterised impact			
	Manufacturing	Distribution	Use	End of Life	Total	
Acidification (pot eq t eq)	1.19E-03	6.59E-04	7.59E-04	4.17E-03	5.57E-04	1.31E-02
Climate Change (kg CO2 eq)	1.34E-02	2.48E-03	2.93E-03	1.29E-02	1.51E-02	4.71E-02
Climate Change (global warming potential eq)	1.22E-02	2.29E-03	2.73E-03	1.22E-02	1.51E-02	4.71E-02
Climate Change (global warming potential eq CO2 eq)	1.68E-03	3.09E-04	3.66E-04	1.61E-03	2.09E-03	6.46E-03
Climate Change (global warming potential eq CO2 eq)	1.01E-03	3.75E-05	2.73E-04	4.31E-03	2.69E-04	6.41E-03
Complexity - freshwater (t eq)	1.92E-03	8.76E-04	1.09E-03	1.98E-03	1.53E-03	3.89E-03
Complexity - water (t eq)	9.69E-03	4.47E-03	5.69E-03	1.05E-02	2.01E-02	4.63E-02
Complexity - energy (t eq)	1.79E-03	1.59E-04	1.53E-04	1.49E-03	5.39E-04	3.69E-03
Complexity - freshwater (t eq)	8.69E-03	6.93E-04	1.09E-03	1.19E-03	3.91E-03	1.49E-02
Complexity - energy (t eq)	1.29E-03	1.19E-03	1.09E-03	1.19E-03	2.69E-03	9.79E-03
Human toxicity - cancer (t eq)	1.69E-03	3.75E-04	1.53E-04	1.05E-03	5.47E-04	1.39E-02
Human toxicity - non-cancer (t eq)	1.19E-02	8.17E-03	8.07E-03	8.07E-03	8.17E-03	2.37E-02
Ionizing radiation (t eq)	8.47E-03	1.79E-02	3.09E-03	1.19E-02	6.99E-03	1.99E-02
Land use (t eq)	1.47E-03	1.99E-03	6.57E-03	3.99E-03	1.19E-03	1.99E-02
Ozone depletion (t eq)	3.99E-03	6.07E-03	5.79E-03	6.79E-03	4.09E-03	3.37E-02
Photochemical oxidant formation (t eq)	3.47E-03	1.99E-04	6.99E-04	1.39E-03	1.19E-03	9.79E-03
Respiratory irritation - bronchitis (t eq)	2.07E-03	1.91E-03	1.19E-03	1.19E-03	1.19E-03	4.53E-03
Respiratory irritation - asthma (t eq)	9.69E-04	1.47E-03	4.91E-04	1.01E-03	1.01E-03	1.67E-03
Water use (t eq)	6.17E-03	1.79E-02	9.69E-03	1.39E-03	2.46E-03	5.66E-02

Characterised results by IC* & LCS*



Weighted results by IC* & LCS*



*IC=Impact Category; LCS=Life Cycle Stage



LCA impact - Methodology

Goal: identify environmental hotspots and quantify environmental impacts throughout the life cycle of the following decorative paint products:

1. Indoor wall paint
2. Outdoor wall paint
3. Outdoor wood varnish

Functional unit: Protection and decoration of 1 m² of indoor/outdoor substrate for 50 years at a specified quality level.

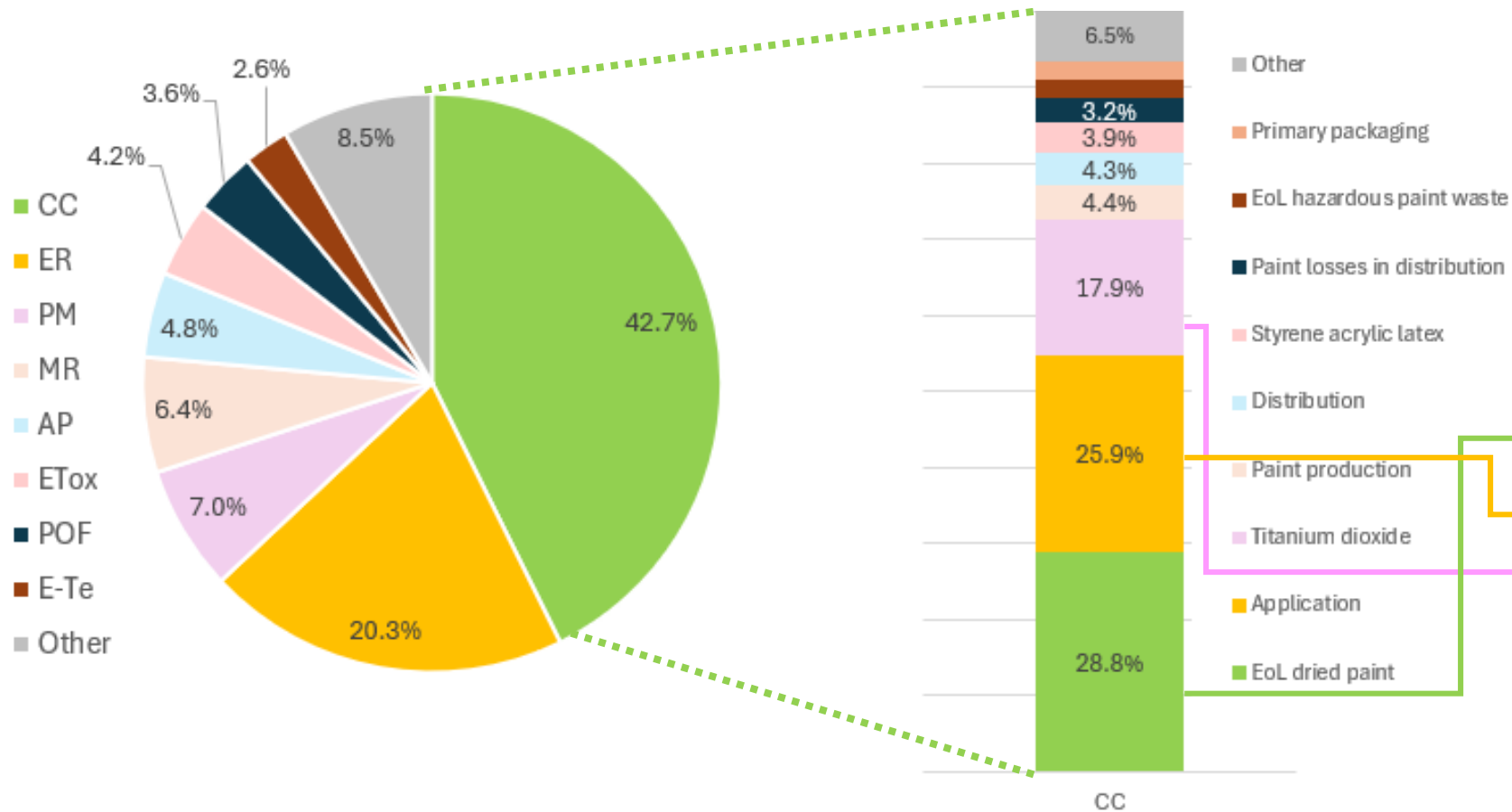
← Modelling assumptions →

Parameter	Indoor paint	Outdoor paint	Outdoor varnish
Coverage	9.5 m ² /L	7.0 m ² /L	9.5 m ² /L
Applied paint eff. factor	0.89	0.89	0.89
Paint density	1.43 kg/L	1.30 kg/L	1.36 kg/L
Maintenance multiplier	8.33	5	7.46
Reference flow (kg/FU)	1.409 kg	1.043 kg	1.200 kg

Missing formulation data: any data on formulations for indoor wood varnish, thick decorative paints, TiO₂-free paints, biocide-free paints and cement paints and any categories proposed for inclusion in EU EEL, would be appreciated.

Disclaimer: This LCA screening study represents average groups of decorative paint products in Europe and does not represent individual brands or products.

LCA impact – PEF results by process



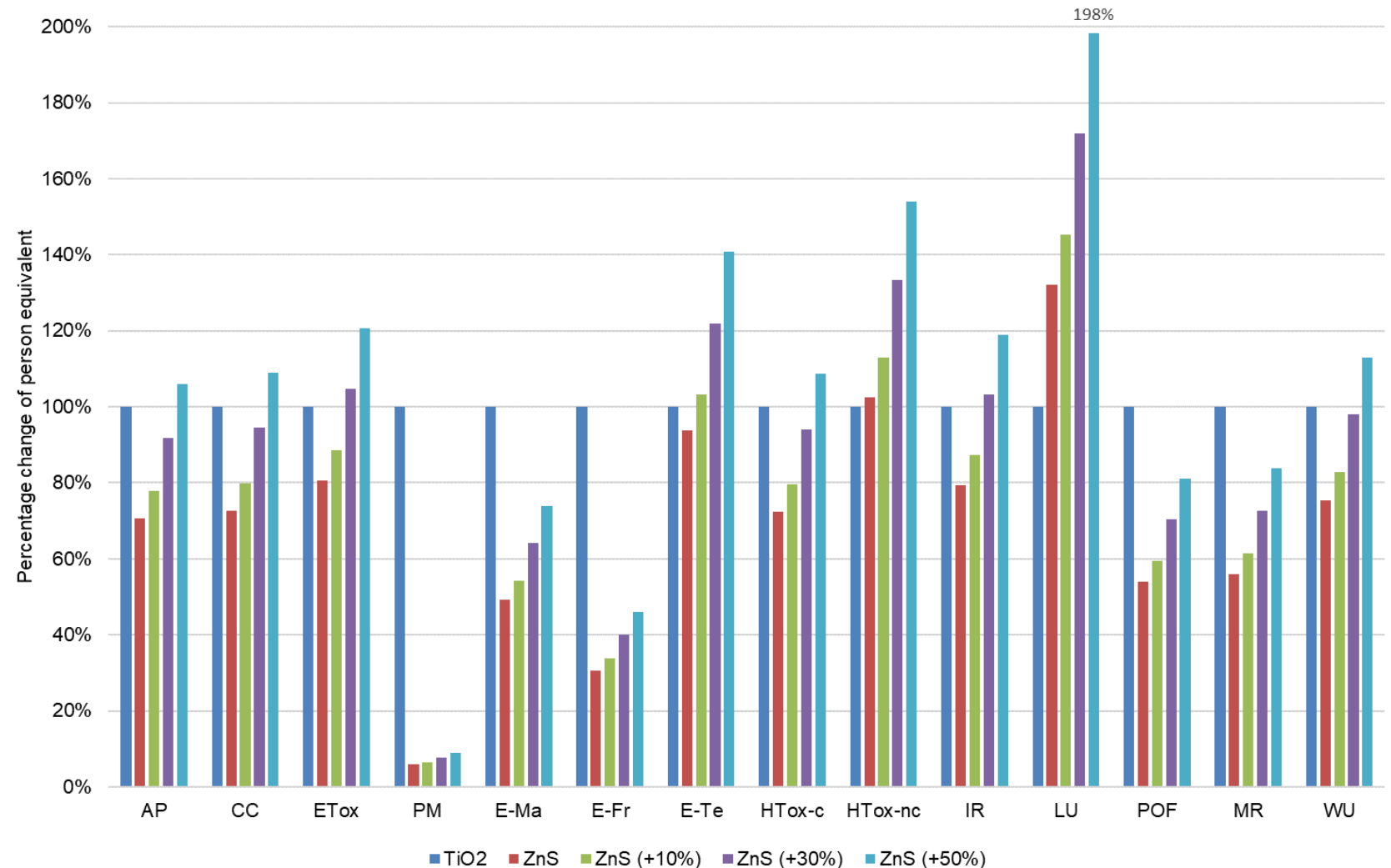
Example of indoor paint

- Climate change the biggest impact category (43%)
- Top 3 contributing processes to CC were:
 - EoL of dried paint
 - Application (incl. losses).
 - Titanium dioxide production.

Disclaimer: This LCA screening study represents average groups of decorative paint products in Europe and does not represent individual brands or products.

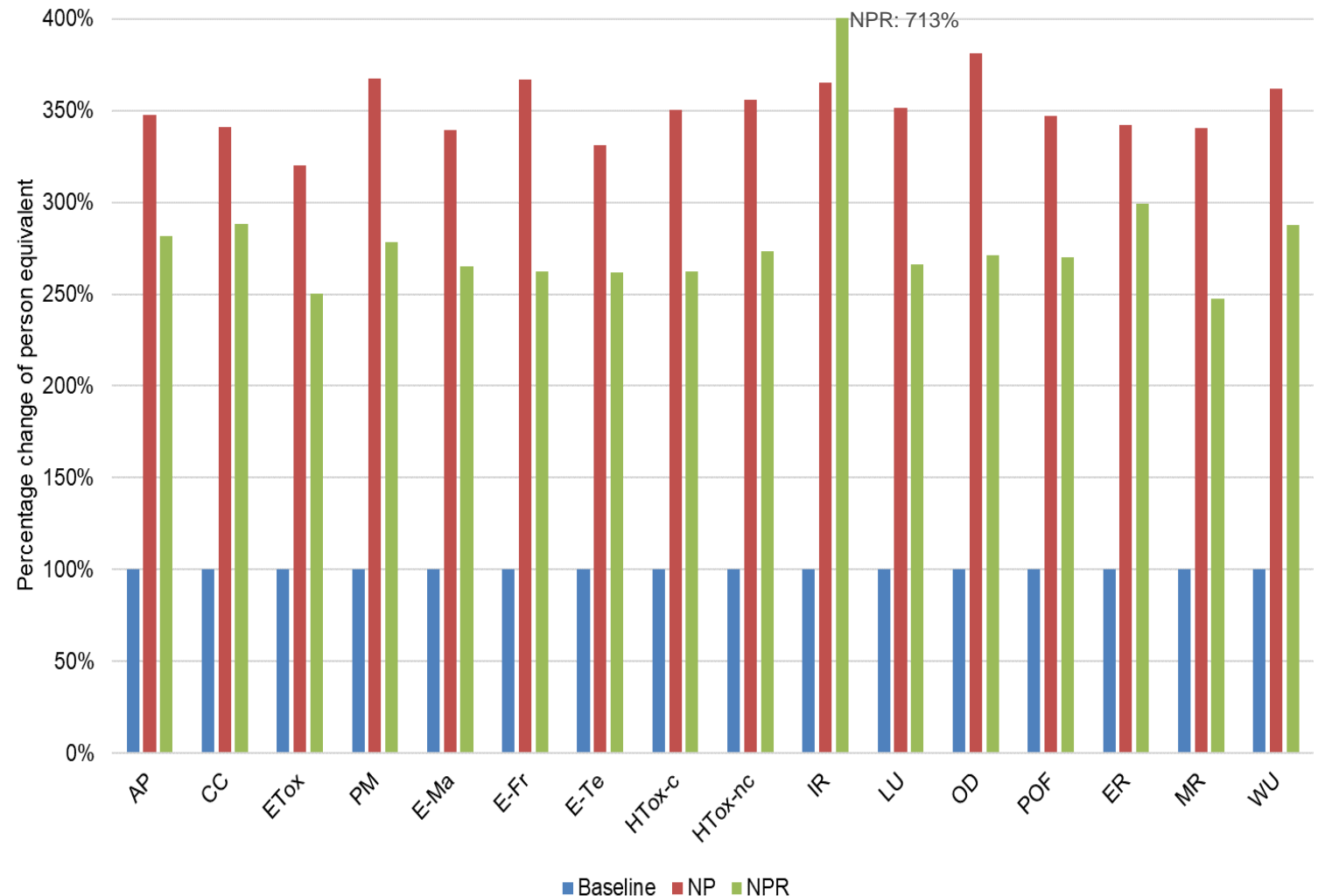
LCA impact – sensitivity to TiO2 substitute

- Titanium dioxide is widely used in paints.
- An LCA hotspot.
- How sensitive are results by replacing TiO2 with ZnS?
- In a 1:1 replacement, ZnS is better.
- When 50% extra ZnS needed, tends to be worse than TiO2 (real need could be +90%...).
- TiO2 especially bad for PM, E-Ma, E-Fr, POF and MR impacts (compared to ZnS).



LCA impact – sensitivity to biocide use

- Preservatives prevent microbial activity and are therefore **toxic** in their nature.
- A sensitivity analysis was carried out to examine the impact of producing paints with and without preservatives.
- NP = No Preservative (but increased spoilage).
- NPR = No Preservative (but refrigerated to prevent additional spoilage).
- Preservatives seem to be worthwhile from LCA perspective.



LCA impact – PEF scores

- Outdoor products tend to have higher impacts.
- Raw material production is the main hotspot in all 3 products.
- Relatively more so in outdoor products.
- Use phase highly significant in indoor paint (over a 50-year period).



non-LCA impacts - hazards

- Considered use of hazardous substances (PEF impact categories not so robust)
- CLP hazards of substances in EF datasets screened (81 substances).
- Only a few have harmonized CMR classifications.
- Several of the most common hazards are not restricted by the EU EEL (e.g. H302, H315, H318, H319, H332, H335).
- Various other hazards of concern.
- Care needed with the aquatic toxicity hazards since they are often additive and M factors involved sometimes.

All substances – 81 in total				
Classification	Carcinogenic	Toxic		Environment
Harmonised	1x H340(1%), 3x H350(3%), 4x H351(5%), 1x H360D(1%),	4x H302(5%), 2x H304(2%), 8x H315(9%), 7x H317(8%), 2x H318(2%), 8x H319(9%),	2x H331(2%), 3x H332(3%), 1x H334(1%), 2x H335(2%), 1x H336(1%),	5x H400(6%), 5x H410(6%), 1x H411(1%),
Joint entry	2x H340(2%), 2x H341(2%), 3x H350(3%), 5x H351(6%), 3x H361(3%),	7x H302(8%), 2x H304(2%), 2x H314(2%), 10x H315(12%), 13x H317(15%), 4x H318(5%), 10x H319(12%), 1x H320(1%),	2x H330(2%), 2x H331(2%), 4x H332(5%), 1x H334(1%), 4x H335(5%), 4x H336(5%), 1x H372(1%), 2x H373(2%),	6x H400(7%), 7x H410(8%), 7x H411(8%), 2x H412(2%),
Self classification	1x H340(1%), 3x H350(3%), 3x H351(3%), 1x H361(1%),	6x H302(7%), 1x H304(1%), 1x H311(1%), 2x H312(2%), 11x H315(13%), 6x H317(7%), 5x H318(6%), 13x H319(15%), 1x H330(1%),	4x H332(5%), 1x H334(1%), 8x H335(9%), 3x H336(3%), 2x H370(2%), 4x H372(5%), 4x H373(5%), 1x H379(1%),	2x H400(2%), 2x H410(2%), 6x H411(7%), 3x H412(3%), 5x H413(6%),

Questions / Comments?

4. Scope and definitions

Scope – possible extensions

from PR p.34 and TR1 p.15-20

PRODUCT CATEGORY	Inclusion in other Ecolabels and envi. schemes	Interest of stakeholders	Market relevance (EU 27)	Envi. impacts	Formulation similarity with products currently in the scope	Potential for inclusion	Notes
water-based aerosol paints	0	1	1	2	0	Medium	Separate annex
road marking paints	0	0	0	1	1	Low	Separate annex. Input from industry
powder/cement products	2	0	Unknown	2	0	Medium	Separate annex for masonry paints or adjustment of criteria
wood oils	2	2*	Unknown	?	0	Medium	Criteria on oil product and sustainable agriculture
waterproofing products	0	1	Unknown	2	1	Medium	Further research needed

Potential expansion of the scope:

- Can help increase the positive impacts of the EU Ecolabel.
- More efficient to incorporate into an existing criteria than to develop a separate set of criteria.
- But products for inclusion need to meet certain conditions (see above)

Scope – possible extensions

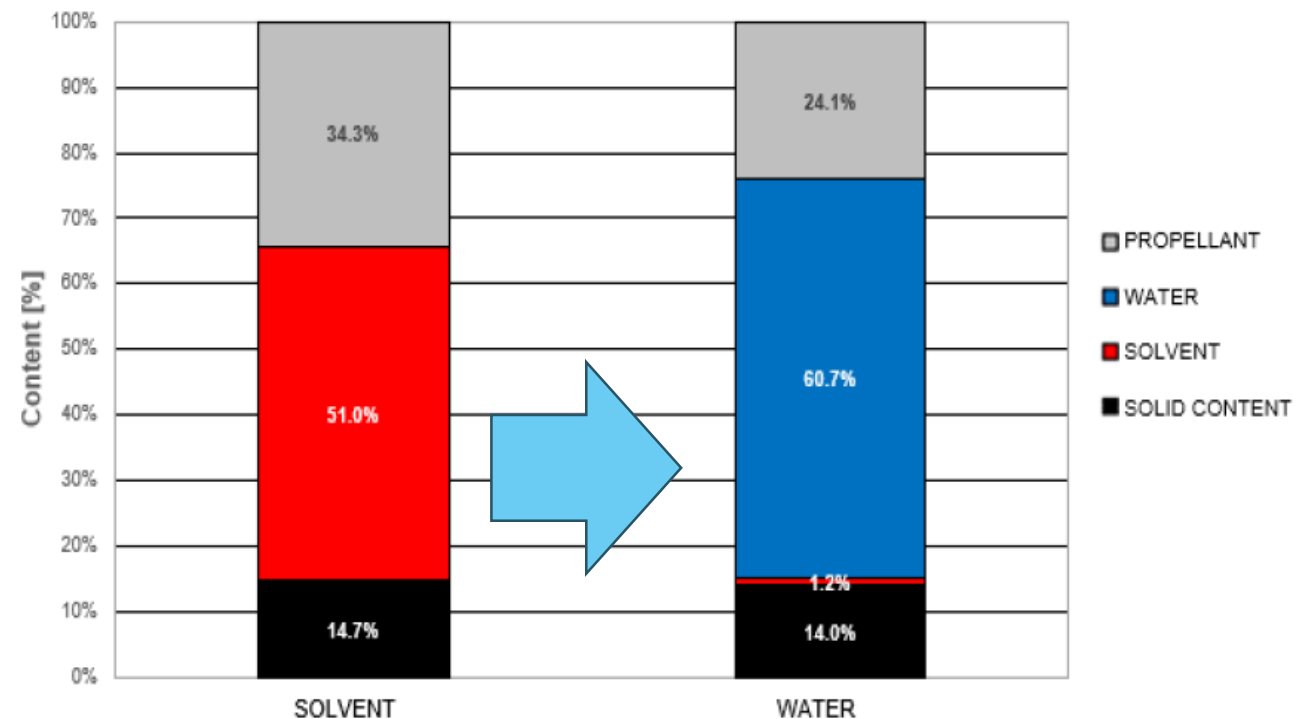
from PR p.34 and TR1 p.15-20

PRODUCT CATEGORY	Inclusion in other Ecolabels and envi. schemes	Interest of stakeholders	Market relevance (EU 27)	Envi. impacts	Formulation similarity with products currently in the scope	Potential for inclusion	Notes
water-based aerosol paints	0	1	1	2	0	Medium	Separate annex

Water-based aerosol spray paints:

- Major opportunity to drive change in this product category (to water-based).
- **Typo:** sales volumes in TR1 (page 15) are incorrect (should be **300 million cans**, not 300 thousand...).
- Classification as H351 (inhalation) due to TiO₂ is not an issue apparently.
- Some additional minor derogations needed.

Option to have propellant separate? For post-consumer recycling issues?



Scope – possible extensions

from PR p.34 and TR1 p.15-20

PRODUCT CATEGORY	Inclusion in other Ecolabels and envi. schemes	Interest of stakeholders	Market relevance (EU 27)	Envi. impacts	Formulation similarity with products currently in the scope	Potential for inclusion	Notes
road marking paints	0	0	0	1	1	Low	Separate annex. Input from industry

Potential expansion of the scope:

- Synergy with GPP → fast track means of verification.
- Already existing EU GPP criteria to start with.
- But a separate Annex would be required in EUEL criteria.
- Would require additional background research.
- Would require input from new stakeholders.

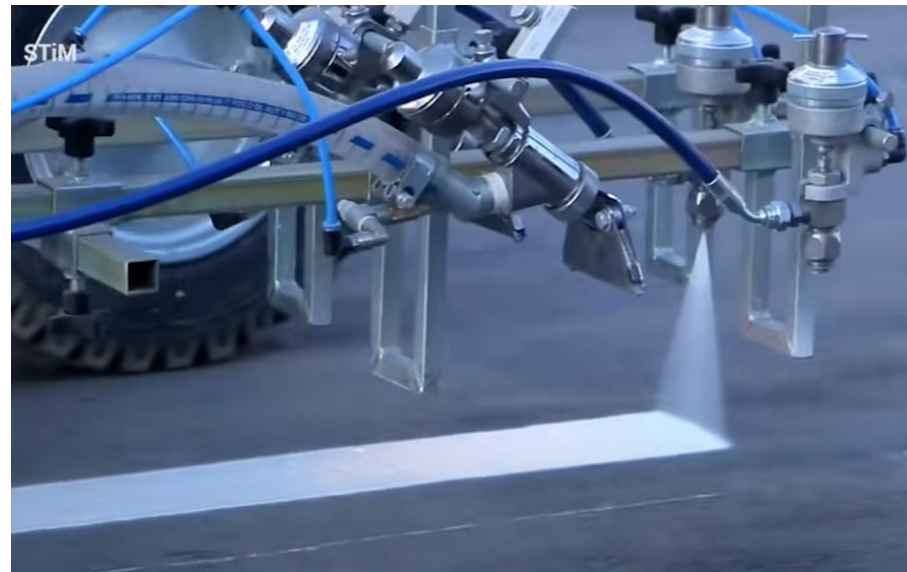


Image from YouTube by InsiderTech:
<https://www.youtube.com/watch?v=joWkGyaF-AI>



Image from GEVEKO annual report, 2010

Scope – possible extensions

from PR p.34 and TR1 p.15-20

PRODUCT CATEGORY	Inclusion in other Ecolabels and envi. schemes	Interest of stakeholders	Market relevance (EU 27)	Envi. impacts	Formulation similarity with products currently in the scope	Potential for inclusion	Notes
powder/cement products	2	0	Unknown	2	0	Medium	Separate annex for masonry paints or adjustment of criteria

Potential expansion of the scope:

- Powder cements seem to be excluded by 2014 scope text, Art. 1(2): “[...] *decorative paints in liquid or paste formulas [...]*”
- But when powder paints are explicitly excluded in Art. 1(3) and defined in Art. 2(9) as: “*protective or decorative coating formed by the application of a coating powder to a substrate and fusion to give a continuous film*”
- Lack of clarity if “just add water” paints are excluded or not. Same question extends to cement paints.
- The “just add water” paints are an interesting niche that offers a solution to delivering paints and varnishes that are free of in-can preservatives. Also less packaging and transport impacts. Less waste too, if just mixing what you need.
- These “just add water” type products could probably be incorporated into the existing criteria, as end purpose is same as existing scope.
- With cement and lime paints: *interest in criteria on binder production (energy intensive processes)?*

Scope – possible extensions

from PR p.34 and TR1 p.15-20

PRODUCT CATEGORY	Inclusion in other Ecolabels and envi. schemes	Interest of stakeholders	Market relevance (EU 27)	Envi. impacts	Formulation similarity with products currently in the scope	Potential for inclusion	Notes
wood oils	2	2*	Unknown	?	0	Medium	Criteria on oil product and sustainable agriculture

Potential expansion of the scope:

- Do not necessarily form a continuous film like paints and varnishes.
- Nordic Swan and Blue Angel make allowance for wood oils.
- Main environmental impacts associated with oil production.
- How to set appropriate criteria? How to assess and verify?
- What is experience to date with Nordic Swan and Blue Angel?



Image from: <https://craft-art.com/best-wood-oil/>

Scope – possible extensions

from PR p.34 and TR1 p.15-20

PRODUCT CATEGORY	Inclusion in other Ecolabels and envi. schemes	Interest of stakeholders	Market relevance (EU 27)	Envi. impacts	Formulation similarity with products currently in the scope	Potential for inclusion	Notes
waterproofing products	0	1	Unknown	2	1	Medium	Further research needed

Potential expansion of the scope:

- Need to clarify boundaries for this extension (water resistance is a bit of a spectrum).
- Paints and varnishes for high humidity areas and outdoors already have some waterproofing property (as reflected by criteria 3(f) and 3(g)).
- “Waterproofing” is too vague a term, needs to be defined by minimum technical performance, application(s), and perhaps by chemistry.
- Nordic Swan already allow for “*impregnating agents for tiles, stone and concrete*”.
- Blue Angel UZ-12a allows “*Ground-sealing products*” considers a separate product group in DE UZ 233 as “*building waterproofing with liquid plastics*”.
- Especially interested to hear experience to date with these ecolabels.

Scope

Existing scope (consolidated version of Decision 2014/312/EU)

1. The product group of 'indoor and outdoor paints and varnishes' shall comprise indoor and outdoor decorative paints and varnishes, woodstains and related products intended for use by consumers and professional users falling under the scope of Directive 2004/42/CE of the European Parliament and of the Council (1).

2. The product group of 'indoor and outdoor paints and varnishes' shall comprise: floor coatings and floor paints; paint products which are tinted by distributors at the request of consumer (non-professional) or professional decorators, tinting systems, decorative paints in liquid or paste formulas which may have been pre-conditioned, tinted or prepared by the manufacturer to meet consumer's needs, including wood paints, wood and decking stains, masonry coatings and metal finishes primers and undercoats of such product systems as defined in Annex I to Directive 2004/42/CE.

3. The product group shall not comprise the following products:

- (a) anti-fouling coatings;
- (b) preservation products for wood impregnation;
- (c) coatings for particular industrial and professional uses, including heavy-duty coatings;
- (d) powder coatings;
- (e) UV curable paint systems;
- (f) paints primarily intended for vehicles;
- (g) product which primary function is not to form a film over the substrate, e.g. oils and waxes;
- (h) fillers as defined by EN ISO 4618;
- (i) road-marking paints.

Proposed scope (more transparent on what is in, plus specific mention of anti-rust and just-add-water products)

1. The product group of indoor and outdoor paints and varnishes shall comprise **the following** indoor and outdoor decorative paints, ~~and~~ varnishes, woodstains and related products intended for use by consumers and professional users **via application to buildings, their trim and fittings, and associated structures**: falling under the scope of Directive 2004/42/CE OF THE European Parliament and of the Council (1):

- (a) Matt coatings for interior walls and ceilings
- (b) glossy coatings for interior walls and ceilings
- (c) coatings for exterior walls of mineral substrate
- (d) interior/exterior trim and cladding paints for wood, metal or plastic
- (e) interior/exterior trim varnishes and woodstains
- (f) minimal build woodstains
- (g) primers
- (h) binding primers
- (i) one-pack performance coatings
- (j) two-pack performance coatings
- (k) multicoloured coatings
- (l) decorative effect coatings
- (m) anti-rust paints**
- (n) floor coatings and floor paints
- (o) wood paints
- (p) wood and decking stains
- (q) Tinting pastes?**

The paint categories referred to above include base paints and different colour shades achieved by tinting, either predefined by the manufacturer or at the customised request of consumers or professional decorators to operators of tinting systems.

~~2. The product group of 'indoor and outdoor paints and varnishes' shall comprise: floor coatings and floor paints; paint products which are tinted by distributors at the request of consumer (non-professional) or professional decorators, tinting systems, decorative paints in liquid or paste formulas which may have been pre-conditioned, tinted or prepared by the manufacturer to meet consumer's needs, including wood paints, wood and decking stains, masonry coatings and metal finishes primers and undercoats of such product systems as defined in Annex I to Directive 2004/42/CE.~~

~~3.2. The product group shall not comprise the following products:~~

- ~~(a) anti-fouling coatings;~~
- ~~(b) preservation products for wood impregnation;~~
- ~~(c) coatings for particular industrial and professional uses, including heavy-duty coatings;~~
- ~~(d) powder coatings (this does not apply to cement paints or other "just add water" paints, see definition in Article 2(x));~~
- ~~(e) UV curable paint systems;~~
- ~~(f) paints primarily intended for vehicles;~~
- ~~(g) product which primary function is not to form a continuous film over the substrate, e.g. oils and waxes (subject to change if scope is expanded);~~
- ~~(h) fillers as defined by EN ISO 4618;~~
- ~~(i) road-marking paints (subject to change if scope is expanded).~~

Definitions

Existing definitions from Decision 2014/312/EU.

Existing definitions (consolidated version of Decision 2014/312/EU)

- (1) 'Paint' means a pigmented coating material, supplied in a liquid paste or powder form, which, when applied to a substrate, forms an opaque film having protective, decorative or specific technical properties and after application dries to a solid, adherent and protective coating;
- (2) 'Varnish' means a clear coating material which, when applied to a substrate forms a solid transparent film having protective, decorative or specific technical properties and after application dries to a solid, adherent and protective coating;
- (3) 'Decorative paints and varnishes' means paints and varnishes that are applied in-situ to buildings, their trim and fittings, for decorative and protective purposes;
- (4) 'Lasure' means coatings producing a transparent or semi-transparent film for decoration and protection of wood against weathering, which enables maintenance to be carried out easily;
- (5) 'Tinting system' means a method for preparing coloured paints by mixing a 'base' with coloured tints;
- (6) 'Masonry coating' means a coating that produce a decorative and protective film for use on concrete, paintable brickwork, blockwork, rendering, calcium silicate board or fibre-reinforced cement;
- (7) 'Binding primers' means coatings designed to stabilise loose substrate particles or impact hydrophobic properties;
- (8) 'UV curable paint system' means the hardening of coating materials by exposure to artificial ultra-violet radiation;
- (9) 'Powder coating' means protective or decorative coating formed by the application of a coating powder to a substrate and fusion to give a continuous film;

Existing definitions (consolidated version of Decision 2014/312/EU)

- (10) 'In-can preservatives' are active substances within the meaning of Article 3(1)(c) of Regulation (EU) No 528/2012 of the European Parliament and of the Council that are for use in product-type 6 as described in Annex V to that Regulation. They are in particular used for the preservation of manufactured products during storage by the control of microbial deterioration to ensure their shelf life and used for the preservation of tints that will be dispensed from machines;
- (11) 'Dry-film preservatives' are active substances within the meaning of Article 3(1)(c) of Regulation (EU) No 528/2012 that are for use in product-type 7 as described in Annex V to that Regulation, in particular for the preservation of films or coatings by the control of microbial deterioration or algal growth in order to protect the initial properties of the surface of materials or objects;
- (12) 'Anti-skinning substances' are additives that are added to the coating materials to prevent skinning during production or storage of the coating material;
- (13) 'Volatile organic compounds' (VOC) means any organic compounds having an initial boiling point less than or equal to 250 °C measured at a standard pressure of 101,3 kPa as defined in Directive 2004/42/EC and which, in a capillary column, are eluting up to and including n-Tetradecane (C₁₄H₃₀);
- (14) 'Semi volatile organic compounds' (SVOCs) means any organic compound having a boiling point greater than 250 °C and less than 370 °C measured at a standard pressure of 101,3 kPa and which, in a capillary column are eluting with a retention range after n- Tetradecane (C₁₄H₃₀) and up to and including n-Docosane (C₂₂H₄₆);
- (15) 'White and light coloured' paints are those with a tri-stimulus (Y- value) > 70 %;
- (16) 'Gloss paints' are those which at an angle of incidence of 60° show a reflectance of ≥ 60;
- (17) 'Mid sheen paints' (also referred to as semi-gloss, satin, semi matt) are those which at an angle of incidence of 60° or at 85° show a reflectance of < 60 and ≥ 10;
- (18) 'Matt paints' are those which at an angle of incidence of 85° show a reflectance of < 10;
- (19) 'Dead matt paints' are those which at an angle of incidence of 85° show a reflectance of < 5;
- (20) 'Transparent' and 'semi-transparent' means a film with a contrast ratio of < 98 % at 120µ wet film thickness;
- (21) 'Opaque' means a film with a contrast ratio of > 98 % at 120µ wet film thickness.

Definitions

Proposed definitions

Proposed definitions (consolidated version of Decision 2014/312/EU)

For the purposes of this Decision, the following definitions shall apply:

- (1) 'Paint' means a pigmented coating material, supplied in a liquid paste or powder form, which, when applied to a substrate, forms an opaque film having protective, decorative or specific technical properties and after application dries to a solid, adherent and protective coating;
- (2) 'Varnish' means a clear coating material which, when applied to a substrate forms a solid transparent film having protective, decorative or specific technical properties and after application dries to a solid, adherent and protective coating;
- (3) 'Decorative paints and varnishes' means paints and varnishes that are applied in-situ to buildings, their trim and fittings, for decorative and protective purposes, **specifically referring to: matt or glossy coatings for interior walls and ceilings; coatings for exterior walls of mineral substrate; interior/exterior trim and cladding paints; interior/exterior trim varnishes and woodstains; minimal build woodstains; wood and decking stains; wood paints; primers; binding primers; one-pack and two-pack performance coatings; multicoloured coatings; decorative effect coatings; floor coatings and floor paints.**
- (4) 'matt or glossy coatings for interior walls and ceilings' means coatings designed for application to indoor walls and ceilings, which deliver a dead matt, matt, semi-matt, satin, semi-gloss, or gloss **finish (and that may be based on _____ binders that deliver).**
- (5) 'coatings for exterior walls of mineral substrate' means coatings designed for application to outdoor walls of masonry, brick, or stucco **(and that may be based on _____ binders).**
- (6) 'interior/exterior trim and cladding paints for wood, metal or plastic' means coatings designed for application to trim and cladding which produce an opaque film. These coatings are designed for either a wood, metal, or plastic substrate **(and that may be based on _____ binders).**
- (7) 'interior/exterior trim varnishes and woodstains' means coatings designed for application to trim which produce a transparent or semi-transparent film for decoration and protection of wood, metal, and plastics. **(and that may be based on _____ binders).**

Proposed definitions (consolidated version of Decision 2014/312/EU)

- (8) 'minimal build woodstains' means woodstains which, in accordance with EN 927-1:1996, have a mean thickness of less than 5 µm when tested according to ISO 2808: 1997, method 5A **(and that may be based on _____ binders).**
- (9) 'primers', according to Directive 2004/42/CE, means coatings with sealing and/or blocking properties designed for use on wood or walls and ceilings **(and that may be based on _____ binders);**
- (10) 'binding primers' means coatings designed to stabilize loose substrate particles or impart hydrophobic properties and/or to protect wood against blue stain **(and that may be based on _____ binders).**
- (11) 'one-pack performance coatings', according to Directive 2004/42/CE, means performance coatings based on film-forming material, which are designed for applications requiring a special performance, **such as primer and topcoats for plastics, primer coat for ferrous substrates, primer coat for reactive metals such as zinc and aluminum, anticorrosion finishes, floor coatings, including for wood and cement floors, graffiti resistance, flame retardant, and hygiene standards in the food or drink industry or health services (and that may be based on _____ binders);**
- (12) 'two-pack performance coatings', according to Directive 2004/42/CE, means coatings with the same use as one-performance coatings, but with a second component (e.g. tertiary amines) added prior to application **(and that may be based on _____ binders);**
- (13) 'multicoloured coatings', according to Directive 2004/42/CE, means coatings designed to give a two-tone or multiple-colour effect, directly from the primary application **(and that may be based on _____ binders);**
- (14) 'decorative effect coatings', according to Directive 2004/42/CE, means coatings designed to give special aesthetic effects over specially prepared pre-painted substrates or base coats and subsequently treated with various tools during the drying period. **(and that may be based on _____ binders);**
- (15) 'floor coatings and floor paints' means coatings and paints specifically formulated to be applied to flooring, with the purpose of protecting and/or colouring the flooring substrate **(and that may be based on _____ binders);**
- (16) 'wood paints' means paints applied to wood, which change the colour of the wood **(and that may be based on _____ binders);**
- (17) 'wood and decking stains' are a type of paint with low quantities of binder that penetrate deep into the wood and change its natural colour and appearance **(and that may be based on _____ binders);**
- (18) 'Lasure' means a coating material containing small amounts of a suitable pigment and/or extender and used to form a transparent or semi-transparent film for decoration and/or protection of the substrate **(and that may be based on _____ binders);**

Definitions

Proposed definition

Proposed definitions (consolidated version of Decision 2014/312/EU)

(19) 'Tinting system' means a method for preparing coloured paints by mixing a 'base' with coloured tinting pastes; and 'tinting paste' means a highly concentrated pigment preparation;

(20) 'Masonry coating' means a coating that produce a decorative and protective film for use on concrete, paintable brickwork, blockwork, rendering, calcium silicate board or fibre-reinforced cement (and that may be based on _____ binders);

(21) 'Binding primers' means coatings designed to stabilise loose substrate particles or impact hydrophobic properties (and that may be based on _____ binders);

(22) 'UV curable paint system' means the hardening of coating materials by exposure to artificial ultra-violet radiation;

(23) 'Powder coating' means protective or decorative coating formed by the application of a coating powder to a substrate and fusion to give a continuous film;

(24) 'In-can preservatives' are active substances within the meaning of Article 3(1)(c) of Regulation (EU) No 528/2012 of the European Parliament and of the Council that are for use in product-type 6 as described in Annex V to that Regulation. They are in particular used for the preservation of manufactured products during storage by the control of microbial deterioration to ensure their shelf life and used for the preservation of tints that will be dispensed from machines;

(25) 'Dry-film preservatives' are active substances within the meaning of Article 3(1)(c) of Regulation (EU) No 528/2012 that are for use in product-type 7 as described in Annex V to that Regulation, in particular for the preservation of films or coatings by the control of microbial deterioration or algal growth in order to protect the initial properties of the surface of materials or objects;

(26) 'Anti-skinning substances' are additives that are added to the coating materials to prevent skinning during production or storage of the coating material;

(27) 'Driers', also referred to as 'siccatives', means _____

(28) 'Surfactants' means _____

(29) 'Mineral raw material' means _____

(30) 'Optical brightener' means _____

(31) 'UV stabiliser' means _____

(32) 'Binder' means _____

Proposed definitions (consolidated version of Decision 2014/312/EU)

(33) 'Volatile organic compounds' (VOC) means any organic compounds having an initial boiling point less than or equal to 250 °C measured at a standard pressure of 101,3 kPa as defined in Directive 2004/42/EC and which, in a capillary column, are eluting up to and including n-Tetradecane (C14H30);

(34) 'Semi volatile organic compounds' (SVOCs) means any organic compound having a boiling point greater than 250 °C and less than 370 °C measured at a standard pressure of 101,3 kPa and which, in a capillary column are eluting with a retention range after n- Tetradecane (C14H30) and up to and including n-Docosane (C22H46);

(35) 'White and light coloured' paints are those with a tri-stimulus (Y- value) > 70 %;

(36) 'Gloss paints' are those which at an angle of incidence of 60° show a reflectance of ≥ 60;

(37) 'Mid sheen paints' (also referred to as semi-gloss, satin, semi matt) are those which at an angle of incidence of 60° or at 85° show a reflectance of < 60 and ≥ 10;

(38) 'Matt paints' are those which at an angle of incidence of 85° show a reflectance of < 10;

(39) 'Dead matt paints' are those which at an angle of incidence of 85° show a reflectance of < 5;

(40) 'Transparent' and 'semi-transparent' means a film with a contrast ratio of < 98 % at 120µ wet film thickness;

(41) 'Opaque' means a film with a contrast ratio of > 98 % at 120µ wet film thickness.

(42) 'Anti-rust paints' means paints designed to prevent rust in metal substrates in the presence of oxygen and water, through the application of a protective coating (and that may be based on _____ binders).

(43) 'Thick decorative coating' means paints that are designed to give a three-dimensional decorative effect and a therefore characterized by a very thick coat (and that may be based on _____ binders).

(44) 'Elastomeric paint' means _____ (and that may be based on _____ binders).

(45) 'Undercoat' means _____

(46) 'Aerosol spray paints' means _____

(47) 'Road marking paints' means _____

(48) 'Cement paints' means _____

(49) 'Wood oils' means oils used for the care and protection of wood (e.g. pearling effect) without any cleaning action;

(50) 'Waxes' means _____

(51) 'Waterproofing products' means _____

(52) 'Wood preservative' means a product containing a biocide with the primary purpose of inhibiting the development of wood-destroying and/or wood-staining organisms in the wood to which it is applied.

Definitions

Main thinking behind proposed definitions:

If there is a technical term used – it should be defined.

- Technical terms → categories of products
 - Helps to clarify scope (in and out).
 - Should binder chemistry also be defined?
- Technical terms → categories of ingredients
 - Clarity needed on “additives” when trying to implement hazardous substance restrictions.
 - Clarity needed on certain performance requirements (e.g. in context of a specific standard).

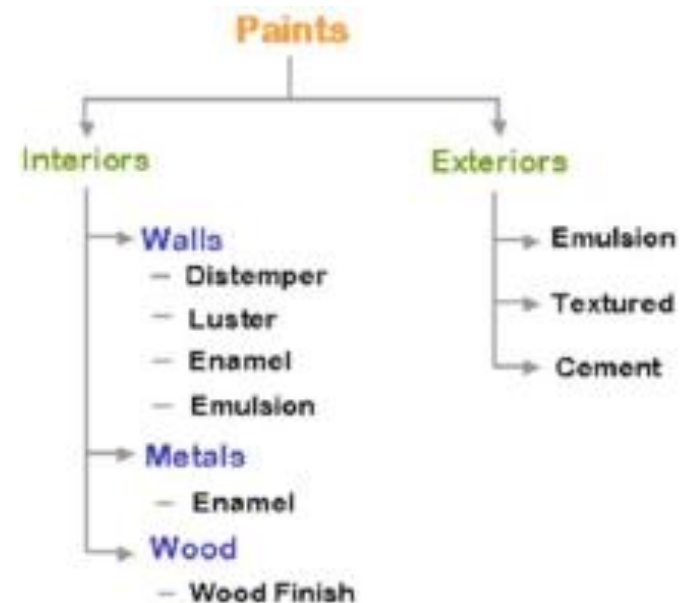
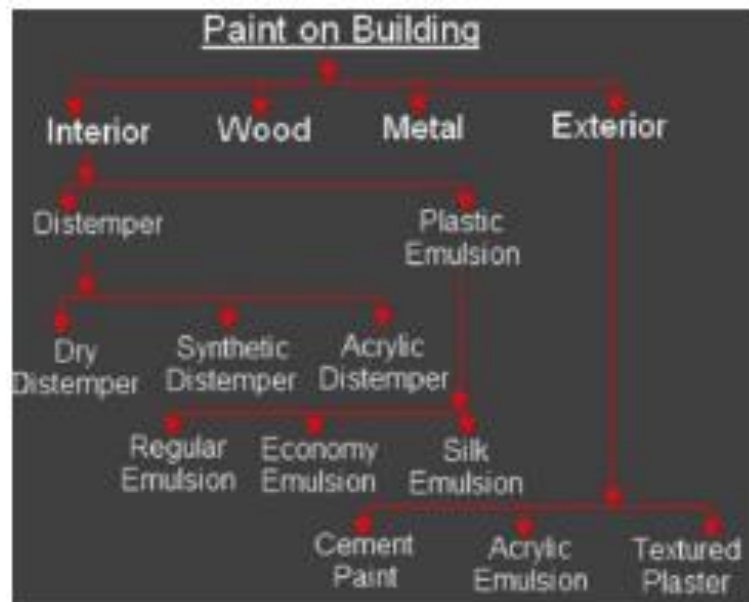
Definition preferences

- **EU legislation** (because translated into all official EU languages)
- **EN/ISO standards** (formal expert input and industry agreement)
- **Tailored definitions** “*for the purposes of this Decision*” (created on a needed basis and only if previous two options are not suitable).
- **No definition** → confusion and room for interpretation

Scope and definitions: the need for hierarchy

Hierarchy can give the necessary perspective for understanding scope (and some definitions):

- Coating industry has a lot of terms, definitions and categories → boundaries are not so clear
- Lots of questions come later about whether certain types of product are in the scope or not, because they are not directly mentioned.
- Could avoid a lot of these questions if a common hierarchy of paint and varnish product categorisation could be agreed.
- Not aware of any definitive industry categorisation structure in the EU... *any help appreciated!*

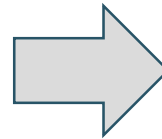


Restructuring of the criteria

Helpful to consider the extent to which existing criteria apply to:

- indoor paints,
- outdoor paints,
- indoor varnishes,
- outdoor varnishes.

	Criterion applies
	Criterion applies sometimes
	Criterion does not apply



Some clear distinctions between indoor & outdoor

Other clear distinctions between paints & varnishes

Possible changes here based on early stakeholder feedback

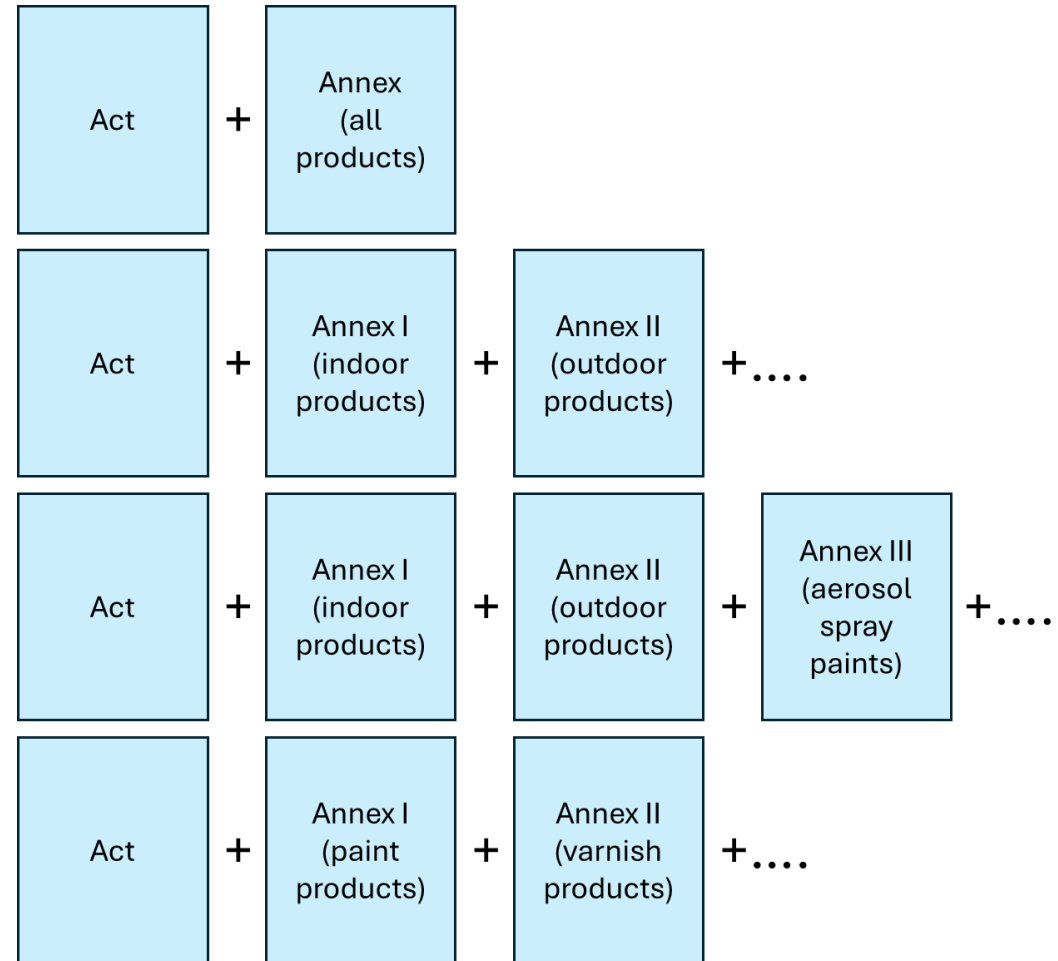
Criterion	Indoor paint	Outdoor paint	Indoor varnish	Outdoor varnish	Reasons why applies as it does
1. White pigment content	Yes	Yes	No	No	All paints have white pigments, varnishes do not.
2. Titanium dioxide production	Yes	Yes	No	No	The vast majority of paints contain TiO ₂ , varnishes do not.
3a. Efficiency in use: spreading rate	Yes	Yes	No	No	
3b. Efficiency in use: resistance to water	Some?*	Some*	Yes	Yes	*only for floor paints
3c. Efficiency in use: adhesion	Some*	Some*	Some?*	Some?*	*only to floor paints, primers and undercoats
3d. Efficiency in use: abrasion	Some?*	Some*	No	No	*only for floor paints
3e. Efficiency in use: weathering	No	Yes	No	Yes	
3f. Efficiency in use: water vapour permeability	No	Yes	No	No	
3g. Efficiency in use: liquid water permeability	No	Yes	No	No	
3h. Efficiency in use: fungal resistance	No	Yes	No	No	Not sure if also for indoor paints in high humidity environments...
3h. Efficiency in use: algal resistance	No	Yes	No	No	Not sure if also for indoor paints in high humidity environments...
3i. Efficiency in use: crack bridging	No	Some*	No	No	*only for elastomeric paints
3j. Efficiency in use: alkali resistance	No	Some*	No	No	*only for masonry paints
3k. Efficiency in use: corrosion resistance	No	Some*	No	No	*only for anti-corrosion paints in outdoor environments and on trim and cladding
4. VOC and SVOC content	Yes	Yes	Yes	Yes	
5. Restriction of hazardous substances and mixtures	Yes	Yes	Yes	Yes	
6. Consumer information	Yes	Yes	Yes	Yes	
7. Information appearing on the EU Ecolabel	Yes	Yes	Yes	Yes	
X. VOC emissions (new)	Yes	No	Yes	No	
X. Carbon footprint	Yes	Yes	Yes	Yes	

Restructuring of the criteria

Lots of different options about how to restructure the criteria to make it easier to read and more focused for individual applicants and Competent Bodies:

- No restructuring (all still in 1 Annex)
- General split to **indoor & outdoor** (2 Annexes)
- General split to **paints & varnishes** (2 Annexes)
- General split to indoor paint, outdoor paint, indoor varnish & outdoor varnish (4 Annexes)
- Any of the above, PLUS a further Annex or Annexes for other products that might come into the scope (e.g. aerosol spray paints, wood oils etc.).

TR1 from p.26



Discussion about scope

Questions to stakeholders about the scope:

Q1. Stakeholders' views on the new wording proposed for the scope are welcomed.

Q2. Would you support having a hierarchical description of the scope? If yes, would you be able to contribute to creating this hierarchy with your sectorial knowledge?

Q3. How to explain in more detail the exclusion of Article 1(3c)? (which excludes “coatings for particular industrial and professional uses, including heavy-duty coatings”).

Q4. Do you agree on having a set of criteria proposed for aerosol paints? If so, should it be as a separate Annex?

Q5. Do you agree on having a set of criteria proposed for road marking paints? If so, should it be as a separate Annex?

Q6. In your opinion, are cement paints already included in the scope? If not, or if you are not sure, would you agree on them being included in the scope? If so, which type of EU Ecolabel criteria should be applied to them, considering that an important hotspot will be cement production?

Q7. Do you agree on having a set of criteria proposed for wood oils? If yes, what type of EU Ecolabel criteria should be applied to them, considering that an important hotspot will be oil production? And should the criteria be presented as a separate Annex?

Q8. Do you agree on including waterproofing paints and varnishes in the scope? If so, how to define precisely what they are and which ones are in the scope and which ones are out?

Q9. Do you think that anti-rust paints should continue to be in the scope or is this more of an industrial type of product? Are you aware of any anti-rust paints carrying the EU Ecolabel?

Discussion about definitions

Questions to stakeholders about the definitions:

Q10. Stakeholders' views on the new wording proposed for the definitions are welcomed.

Q11. Should further definitions for terms like “spreading rate”, “blistering”, and “opaque” be inserted in the text or is this best left to the User Manual in case definitions in EN or ISO standards change?

Q12. Should other definitions be included?

Questions to stakeholders about the restructuring of the criteria:

Q13. Would you support the splitting of current criteria into more than one Annex? If so, how would you split it?

Q14. If including other products like wood oils, road marking paints or aerosol spray paints, would you support the renaming of the product group to “Indoor and outdoor decorative paints, varnishes and related products”?

Break: 15 minutes

5. Criterion 1: White pigment content
and wet scrub resistance

Criterion 2: TiO₂ production

Criterion 1: white pigment content and WSR

Main points about proposed changes:

- No actual change in intended meaning.
- Just to be clearer to read.
- Logic is that there always a limit on white pigment content (at least ones with a high refractive index)
- Because these pigments (i.e. TiO₂, ZnS, ZnO and Lithopone) have a significant environmental impact.
- Only allowed to use more of these pigments (up to a point) if it imparts a minimum WSR (i.e. level of durability) of the paint film.

What are ranges of high RI white pigments in EUEL paints?

Proposed updated criterion (complete rewrite, so not presented in track changes style)

Note: this criterion only applies to paint products.

No EU Ecolabel paint product shall claim wet scrub resistance via the use of terms like “washable” in product information or marketing material unless it meets class 1 or class 2 requirements according to the procedure defined in ISO 11998 and the classification system of EN 13300. Furthermore, EU Ecolabel paint products shall meet the relevant requirements on wet scrub resistance and white pigment content as defined in the table below.

For the purposes of this criterion, “white pigment” shall be counted as pigments with a refractive index higher than 1,8.

Limits in the table below apply to white paints and, in the case of tinted paints, apply to the white base paint only.

Table 1

Requirements for wet scrub resistance and white pigment content for paint products

Wet scrub resistance claim?	Wet scrub resistance	White pigment* content
Yes	Class 1	≤ 40 g/m ² ***
Yes	Class 2	≤ 36 g/m ² ***
No	n/a	≤ 25 g/m ² ***

The m² refers to 1m² of dry film with an opacity of at least 98%.

Assessment and verification:

The applicant shall declare the total content of white pigments with a refractive index >1,8 in the final product or base paint formulations that are subject to the EU Ecolabel license application. This information shall be provided in terms of the chemical name and CAS number of the white pigment, its declared refractive index, its concentration in g/L of paint product and the density of the paint, in g/L. The spreading rate of the paint product, in L/m² for a dry-film of at least 98% opacity according to ISO 6504-1, shall also be stated. Multiplying the white pigment concentration (in g/L) by the spreading rate (in L/m²) will produce results in g/m² that can be compared to the limits in the table above.

Except in cases where the content of white pigments is < 25,0 g/m², the applicant shall also provide results of wet scrub resistance testing according to ISO 11998 that show that the products meet the applicable class 1 or class 2 resistance requirements defined in EN 13300.

Criterion 2: TiO₂ production

Main points about proposed changes:

- Need to declare exact TiO₂ content regardless.
- New requirement on “low dust” working environment (due to inhalation risks)
- Limits on waste from chloride process are now nuanced based on purity of ore rather than name of ore → more direct relevance, open to changes in ore purities and “other” ores.
- Waste limits have not changed.
- Only allowed to use more of these pigments (up to a point) if it imparts a minimum WSR (i.e. level of durability) of the paint film.

What are ranges of specific waste production rates for supplied TiO₂ for use in EUEL paints?

Are any TiO₂ suppliers finding uses for their wastes? Thus converting them into “by-products”?

Note: this criterion only applies to paint products.

If the product contains more than 3,0 % w/w of titanium dioxide (TiO₂), the emissions and discharges of wastes from the production of any titanium dioxide pigment used shall ~~not exceed the following~~ **meet the following requirements for the respective production processes** ~~(1)~~:

For all types of TiO₂ production process:

— Procedures shall be in place to ensure a “low dust” working environment.

For the sulphate process (1):

— SO_x calculated as SO₂: 7,0 kg/tonne TiO₂ pigment

— Sulphate waste: 500 kg/tonne TiO₂ pigment

For the chloride process (1):

— **If ore with above 95% TiO₂ content** ~~natural rutile ore~~ is used, 103 kg chloride waste/tonne TiO₂ pigment

— **If ore with 90-95% TiO₂ content** ~~If synthetic rutile ore~~ is used: 179 kg chloride waste/tonne TiO₂ pigment

— **If ore below 90% TiO₂ content or above** ~~If slag ore~~ is used: 329 kg chloride waste/tonne TiO₂ pigment

If more than one type of ore is used, the values will apply in proportion to the quantity of the individual ore types used.

~~Note:~~

~~SO_x emissions only apply to the sulphate process.~~

The Waste Framework Directive 2008/98/EC of the European Parliament and of the Council (~~12~~), Article 3 shall be used for the definition of waste. If the TiO₂ producer can satisfy Article 5 (by-product production) of the Waste Framework Directive for its solid wastes, then, **the wastes shall be exempted from being counted as waste.**

Assessment and verification

The applicant shall **declare the content of TiO₂ used in each of the product formulations subject to the EU Ecolabel license application.** For any products with more than 3,0 % w/w TiO₂ content, the applicant shall also declare the supplier or suppliers of the TiO₂ used in those products.

The applicant declaration shall be supported by declarations from their TiO₂ supplier(s) (and the original TiO₂ producer(s), if different) stating the measures in place to ensure a low dust working environment, the type of TiO₂ production process used, the applicable TiO₂ content range of ore used and a statement of annual average SO_x emissions, specific sulphate waste generation or specific chloride waste generation, as appropriate. ~~submit supporting documentation showing compliance by the titanium dioxide producer manufacturing the raw material for the paint product either in the form of a declaration of non-use or a declaration supported by data indicating that the respective levels of process emissions and waste discharges of wastes are met.~~

(1) As derived from the Reference Document on Best Available Technology for the Manufacture of Large Volume Inorganic Chemicals (BREF), August 2007.

(12) Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3).

Criteria 1 and 2 – comparison of requirements

Requirement	EU Ecolabel P&V	Nordic Swan P&V (096)	Nordic Swan CBP (097)	Blue Angel indoor P (UZ 102)	Blue Angel P&V (UZ 12a)	Austrian EL wall paints (UZ17)
1. Wet scrub resistance	Same as 2014 requirement	Very similar (see criterion O18)	No requirement (maybe criterion O21)	No requirement	No requirement	Vague mention of it in fitness for use
1. White pigment content	Same as 2014 requirement	Very similar (see criterion O19)	No direct requirement	No requirement	No requirement	No requirement
2. TiO2 waste (sulphate process)	Same as 2014 requirement	Very similar (see criterion O9)	Very similar (see criterion O9)	Very similar (see criterion 3.6)	Very similar (see criterion 3.4.7)	Inadequate reference to IED 2010/75/EU
2. TiO2 was (chloride process)	Very similar to 2014 requirement	Same as 2014 requirement (see criterion O9)	Same as 2014 requirement (see criterion O9)	Very similar (see criterion 3.6)	Very similar (see criterion 3.4.7)	Inadequate reference to IED 2010/75/EU
2. ISO 50001	No requirement	In-place or pending (see criterion O9)	In-place or pending (see criterion O9)	No requirement	No requirement	No requirement
2. Low dust work envi.	Introduced now (not in 2014 criteria)	Yes (see criterion O10).	Yes (see criterion O10).	No requirement	No requirement	No requirement

Discussion about criteria 1 & 2

Questions to stakeholders about the criterion 1 on white pigment content and WSR:

Q15. Opinions about criterion 1 proposal?

Q16. Can you provide data on the content of “high refractive index white pigment” content for different types of paint product categories that have been awarded the EU Ecolabel?

Q17. How exactly is Wet Scrub Resistance claimed? Do products just claim to be “washable” as being similar to Class 2 WSR, or “highly washable” as being similar to Class 1 WSR?

Questions to stakeholders about the restructuring of the criteria:

Q18. Opinions about criterion 1 proposal?

Q19. For TiO₂ manufacturers: please explain in more detail how the process wastes are produced and why a higher waste quantity should be allowed when wastewater is disposed into the sea or estuarine water – what are the environmental benefits of this (if any)?

Q20. Can Competent Bodies or license holders or TiO₂ manufacturers provide data on the numbers of waste quantities produced in order to assess the suitability of current ambition levels?

6. Criterion 3: Efficiency in use

Criterion 4: VOC & SVOC content

Criteria 3

Existing Criterion 3. Efficiency in use

Existing criterion (consolidated version of Decision 2014/312/EU)

In order to demonstrate the efficiency in use of paints and varnishes the following tests per type of paint and/or varnish, as indicated in Table 2, shall be undertaken:

Criteria	Performance requirements for different kind of paints and varnishes							
	Indoor paint (a, b)	Outdoor paint (c)	Trim and cladding (d)	Thick decorative coating indoor and outdoor (f)	Varnish and woodstain (e, f)	One pack performance and floor covering paint (i)	Primer (g)	Undercoat ad primer (h)
► M1 3(a) Spreading rate (only for white and light coloured paints, including the white base paints used in tinting systems) — ISO 6504/1. Not applicable to varnishes, opaque, transparent, adhesion primers or any other transparent coatings. ◀	8 m ² /L	4 m ² /L (elastomeric paint) 6 m ² /L (masonry paint)	Outdoor products 6 m ² /L Indoor products 8 m ² /L	1 m ² /L	—	Outdoor products 6 m ² /L Indoor products 8 m ² /L	► M2 6 m ² /L (without having specific properties) ◀ 8 m ² /L (with opacity)	► M2 6 m ² /L (without having specific properties) ◀ 8 m ² /L (with opacity)
3(b) Resistance to water ISO 2812-3	—	—	—	—	—	—	—	—
3(c) Adhesion EN 24624	—	—	—	—	—	Score 2	1,5 MPa (masonry paint)	1,5 MPa (masonry paint)
3(d) Abrasion EN ISO 7784-2	—	—	—	—	—	70 mg weight loss	—	—
3(e) Weathering EN 11507/EN 927-6	—	1 000 h	1 000 h (outdoor)	1 000 h (outdoor)	1 000 h (outdoor)	1 000 h (outdoor)	—	—
3(f) Water vapour permeability (1) EN ISO 7783	—	Class II or better	—	Class II or better (outdoor)	—	—	—	—
3(g) Liquid water permeability (1) EN 1062-3	—	Where claims are made Class III All other products Class II or better	—	Class II or better (outdoor)	—	—	—	—
3(h) Fungal resistance (1) EN 15457	—	Class 1 or lower (masonry or wood paints)	Class 0 (outdoor wood products)	Class 1 or lower (outdoor)	—	—	—	—
3(h) Algal resistance EN 15458 (1)	—	Class 1 or lower (masonry or wood paints)	Class 0 (outdoor wood products)	Class 1 or lower (outdoor)	—	—	—	—
3(i) Crack bridging (1) EN 1062-7	—	A1 (elastomeric paint only)	—	—	—	—	—	—
3(j) Alkali resistance ISO 2812-4	—	Masonry paint	—	—	—	—	Outdoor for masonry	Outdoor for masonry
3(k) Corrosion resistance (1) EN ISO 12944-2 and 12944-6, ISO 9227, ISO 8629-2 and 4628-3	—	Anti-rust paint Blistering: ≥ size 3/ density 3 Rusting: ≥ R12	Anti-rust paint Blistering: ≥ size 3/ density 3 Rusting: ≥ R12	—	—	Anti-rust paint Blistering: ≥ size 3/ density 3 Rusting: ≥ R12	Anti-rust paint Blistering: ≥ size 3/ density 3 Rusting: ≥ R12	Anti-rust paint Blistering: ≥ size 3/ density 3 Rusting: ≥ R12

(1) Only required where marketing claims are made about the paints

3(a) Spreading rate:

Spreading rate requirement shall apply to white and light coloured paint products. For paints that are available in more colours the spreading rate shall apply to the lightest colour.

White paints and light-coloured paints (including finishes and intermediates) shall have a spreading rate (at a hiding power of 98 %) of at least 8 m² per litre of product for indoor paints and 6 m² for outdoor paints. Products marketed for both — indoor and outdoor shall have a spreading rate (at a hiding power of 98 %) of at least 8 m² per litre.

Existing criterion (consolidated version of Decision 2014/312/EU)

For tinting systems, this criterion applies only to the white base (the base containing the most TiO₂). In cases where the white base is unable to achieve this requirement, the criterion shall be met after tinting the white base to produce the standard colour RAL 9010.

For paints that are a part of a tinting system, the applicant must advise the end-user on the product packaging and POS which shade or primer/ undercoat (if possible, bearing the Community Eco-label) should be used as a basecoat before applying the darker shade.

Opaque primers and undercoats shall have a spreading rate of at least 8 m² per litre of product. Opaque primers with specific blocking/sealing, penetrating/binding properties and primers with special adhesion properties shall have a spreading rate of at least 6 m² per litre of product.

Thick decorative coatings (paints that are specially designed to give a three-dimensional decorative effect and are therefore characterised by a very thick coat) shall alternatively have a spreading rate of 1 m² per kg of product.

Opaque elastomeric paints shall have a spreading rate of at least 4 m² per litre of product.

This requirement does not apply to varnishes, lasures, transparent adhesion primers or any other transparent coatings.

Assessment and verification: the applicant shall provide a test report using the method ISO 6504/1 (Paints and varnishes — determination of hiding power — Part 1: Kubelka-Munk method for white and light-coloured paints) or 6504/3 (Part 3: determination of contrast ratio (opacity) of light-coloured paints at a fixed spreading rate), or for paints specially designed to give a three-dimensional decorative effect and characterised by a very thick coat the method NF T 30 073. For bases used to produce tinted products not evaluated according to the abovementioned requirements, the applicant shall produce evidence of how the end-user will be advised to use a primer and/or grey (or other relevant shade) of undercoat before application of the product.

3(b) Resistance to water:

— All varnishes, floor coatings and floor paints shall have resistance to water, as determined by ISO 2812-3 such that after 24 hours' exposure and 16 hours' recovery no change of gloss or of colour occurs.

Assessment and verification: the applicant shall provide a test report using the method ISO 2812-3

Criteria 3

Existing criterion (consolidated version of Decision 2014/312/EU)

3(c) Adhesion:

— Pigmented masonry primers for exterior uses shall score a pass in the EN 24624 (ISO 4624) pull-off test where the cohesive strength of the substrate is less than the adhesive strength of the paint, otherwise the adhesion of the paint must be in excess of a pass value of 1,5 MPa.

— Floor coatings, floor paints, floor undercoats, interior masonry primers, metal and wood undercoats shall score 2 or less in the EN 2409 test for adhesion.

— Transparent primers are not included in this requirement.

— The applicant shall evaluate the primer and/or finish alone or both applied together. When testing the finish alone this shall be considered the worst case scenario concerning adhesion.

Assessment and verification: the applicant shall provide a test report using the method EN ISO 2409 or EN 24624 (ISO 4624) as applicable.

3(d) Abrasion:

— Floor coatings and floor paints shall have an abrasion resistance not exceeding 70 mg weight loss after 1000 test cycles with a 1000 g load and a CS10 wheel according to EN ISO 7784-2.

Assessment and verification: the applicant shall provide a test report showing compliance with this criterion using the method EN ISO 7784-2.

3(e) Weathering (for outdoor paints and varnishes):

Masonry finish paints and wood and metal finishes including varnishes shall be exposed to artificial weathering in apparatus including fluorescent UV lamps and condensation or water spray according to ISO 44507/16474-1. They shall be exposed to test conditions for 1000 hours. Test conditions are: UVA 4 h/60 °C + humidity 4 h/50 °C.

Existing criterion (consolidated version of Decision 2014/312/EU)

Alternatively, outdoor wood finishes and wood varnishes shall be exposed to weathering for 1000 hours in the QUV accelerated weathering apparatus with cyclic exposure with UV(A) radiation and spraying according to EN 927-6.

According to ISO 11664-6~~7724-3~~, the colour change of samples exposed to weathering shall not be greater than $\Delta E^* = 4$. It is not applicable to varnishes and bases.

Decrease of gloss for gloss paints and varnishes exposed to weathering shall not be greater than 30 % of its initial value and shall be measured using ISO 2813. This requirement is not applicable to mid sheen and matt finishes (1) which have an initial gloss value less than 60 % at 60° angle of incidence.

Chalking shall be tested using method EN ISO 4628-6 on masonry finish coats and wood and metal finishes (where applicable) after the samples have been exposed to weathering. Coatings shall achieve a score of 1,5 or better (0,5 or 1,0) in this test. In the standard there are illustrated references.

The following parameters shall also be evaluated on masonry finish coats and wood and metal finishes after the samples have been exposed to weathering:

— Flaking according to ISO 4628-5; flake density 2 or less, flake size 2 or less

— Cracking according to ISO 4628-4; crack quantity 2 or less, crack size 3 or less

— Blistering according to ISO 4628-2; blister density 3 or less, blister size 3 or less.

Tests should be performed on the tinting base.

Assessment and verification: the applicant shall provide test reports using either ISO 44507/16474-1 according to the specified parameters or EN 927-6, or both. The applicant shall provide test reports using EN ISO 4628-2, 4, 5, 6 and a test report in conformance ISO 11664-6~~7724-3~~ where applicable.

3(f) Water vapour permeability:

Where claims are made that exterior masonry and concrete paints are breathable the paint shall be classified according to EN1062-1 as class II (medium vapour permeability) or better according to the test method EN ISO 7783.

Due to the large number of potential tinting colours, this criterion will be restricted to testing of the base paint.

Assessment and verification: the applicant shall provide a test report using methodology EN ISO 7783 and classification according EN1062-1.

Criteria 3

Existing criterion (consolidated version of Decision 2014/312/EU)

3(g) Liquid water permeability

Where claims are made that exterior masonry and concrete paints are water repellent or elastomeric, the coating shall be classified according to EN1062-1 as class III (low liquid permeability) according to method EN 1062-3.

Due to the large number of potential tinting colours, this criterion will be restricted to the testing of the base paint.

All other masonry paints shall be classified according to EN1062-1 as class II (medium liquid permeability) or better according to the test method EN 1062-3.

Assessment and verification: the applicant shall provide a test report using methodology EN 1062-3 and classification according EN1062-1.

3(h) Fungal and algal resistance

Where claims are made that exterior masonry finish and wood paints have anti-fungal and algal properties, and in accordance with PT7 of the Biocide Regulation (EU) No 528/2012 of the European Parliament and of the Council (1), the following requirements shall be determined using EN 15457 and EN 15458.

Masonry paints shall have a score of class 1 or lower (1 or 0) for fungal resistance, (i.e. less than 10 % fungal coverage) and a score of class 1 or lower for algal resistance.

Wood paints shall have a score of 0 for fungal resistance and 0 for algal resistance.

Due to the large number of possible tinting colours, this criterion will be restricted to the testing of the base paint.

Assessment and verification: the applicant shall provide a test report using the methodology in EN 15457 and EN 15458.

Existing criterion (consolidated version of Decision 2014/312/EU)

3(i) Crack bridging

Where claims are made that masonry (or concrete) paint has elastomeric properties, the paint shall be at least classified as A1 at 23 °C according to EN 1062.

Due to the large number of potential tinting colours, this criterion will be restricted to the testing of the base paint.

Assessment and verification: the applicant shall provide a test report using methodology DIN EN 1062-7.

3(j) Alkali resistance

Masonry paints and primers shall show no noticeable damage when the coating is spotted for 24 hours with 10 % NaOH solution according to method ISO 2812-4. The evaluation is done after 24 hours drying-recovery.

Assessment and verification: the applicant shall provide a test report using methodology ISO 2812-4.

3(k) Corrosion resistance

Simulated corrosion stresses shall be applied to a substrate for the purpose of rating according to the appropriate atmospheric corrosivity category or categories in EN ISO 12944-2 and the accompanying test procedures specified in EN ISO 12944-6. Anti-rust paints for steel substrates shall be tested after 240 h salt spray following ISO 9227. The results shall be rated using ISO 4628-2 for blistering and ISO 4628-3 for rusting. The paint shall achieve result not worse than size 3 and density 3 in blistering and not worse than Ri2 in rusting test.

Assessment and verification: the applicant shall provide testing and rating reports to confirm compliance with this criterion.

- (1) EN ISO 2813.
- (2) Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products (OJ L 167, 27/06/2012, p. 1).

Criteria 3: Efficiency in use

Criteria	Paints and Varnishes (with their subcategories identified according to the Directive 2004/42/EC)							
	Indoor paint (a,b)	Outdoor paint (c)	Trim and cladding (d)	Thick decorative coating indoor and outdoor (l)	Varnish and woodstain (e, f)	One pack performance and floor covering paint (i)	Primer (g)	Undercoat and primer (h)
3(a) Spreading rate (only for white and light coloured paints, including the white base paints used in tinting systems) – ISO 6504-1. Not applicable to varnishes, lacures, transparent adhesion primers or any other transparent coatings.	8 m ² /L	4 m ² /L (elastomeric paint) 6 m ² /L (masonry paint)	Outdoor products 6m ² /L (outdoor products) Indoor products 8m ² /L (indoor products)	1 m ² /kg ±	-	Outdoor products 6 m ² /L (outdoor products) Indoor products 8 m ² /L (indoor products)	6 m ² /L (without having specific blocking, sealing, penetrating, binding or special adhesion properties and opacity) 8 m ² /L (with opacity but no specific properties mentioned above)	
3(b) Resistance to water – ISO 2812-3	-	-	-	-	Resistant to water	Resistant to water	-	-
3(c) Adhesion – EN 24624 ISO 4624 or ISO 2409	-	-	-	-	-	Score of 2 or lower (ISO 2409)	>1,5 MPa (for masonry paint, and according to ISO 4624)	
3(d) Abrasion – EN ISO 7784-2	-	-	-	-	-	≤ 70 mg weight loss	-	-
3(e) Weathering – (cycles as per EN 16474-1 and 16474-6 or 11507/ EN 927-6 , for 1000 hours)	-	1-000 h Colour change ΔE* ≤ 4 (EN ISO 11664-6); Gloss decrease ⁽²⁾ < 30% (EN ISO 2813); Chalking ⁽³⁾ of ≤ 1.5 (EN ISO 4628-6); Flaking density ≤ 2 and flake size ≤ 2 (EN ISO 4628-5); Crack quantity ≤ 2 and crack size ≤ 3 (EN ISO 4628-4); Blister density ≤ 3 and blister size ≤ 3 (EN ISO 4628-2)					-	-
3(f) Water vapour permeability ⁽¹⁾ – EN ISO 7783	-	Class II or better	-	Class II or better (outdoor)	-	-	-	-
3(g) Liquid water permeability ⁽¹⁾ – EN 1062-3	-	Where claims are made: Class III All other products: Class II or better	-	Class II or better (outdoor)	-	-	-	-
3(h) Fungal resistance ⁽¹⁾ – EN 15457	-	Class 1 or lower (masonry or wood paints)	Class 0 (outdoor wood products)	Class 1 or lower (outdoor)	-	-	-	-
3(h) Algal resistance ⁽¹⁾ – EN 15458	-	Class 1 or lower (masonry or wood paints)	Class 0 (outdoor wood products)	Class 1 or lower (outdoor)	-	-	-	-
3(i) Crack bridging ⁽¹⁾ – EN 1062-7	-	A1 or better (elastomeric paint only)	-	-	-	-	-	-
3(j) Alkali resistance – ISO 2812-4	-	No noticeable damage (masonry paint)	-	-	-	-	No noticeable damage (outdoor masonry paint)	
3(k) Corrosion resistance ⁽¹⁾ – EN ISO 12944-2 and 12944-6, ISO 9227, ISO 4628-2 and 4628-3.	-	Anti-rust paint Blistering ≥ size 3/ density 3 Rusting ≥ Ri2		-	-	Anti-rust paint Blistering ≥ size 3/ density 3 Rusting ≥ Ri2		

(1) Only required when marketing claims are made.

(2) Gloss maintenance requirement not applicable to mid-sheen and matt-finishes which have an initial gloss value less than 60% at 60° angle of incidence

(3) Chalking assessment is applicable to masonry finish coats and wood and metal finishes (where applicable) after the samples have been exposed to weathering.

Criteria 3: Efficiency in use

Rationale for main changes:

- Minor changes have been proposed so far to replace references to two expired standards with the new standards.
- Other wording changes in table have been to try and make the table more concise and easier to understand.
- Adjacent cells with identical requirements have been merged.
- Many limits were just stated, without saying whether results had to be \leq or \geq
- More context on the relevant standards. Much more detail provided for criterion 3(e).
- The content of criterion 3 will depend to some extent on any changes to the product group scope and on any restructuring of the Annex into multiple Annexes.
- Close consultation with technical committee members on EN and ISO standards is vital to ensure references are up-to-date and upcoming standard changes are flagged for future updates or user manual inclusion

Criteria 3 – comparison of requirements

Requirement	EU Ecolabel P&V	Nordic Swan P&V (096)	Nordic Swan CBP (097)	Blue Angel indoor P (UZ 102)	Blue Angel P&V (UZ 12a)	Austrian EL wall paints (UZ17)
3a) Spreading rate	Same as amended 2014 requirement	Very similar (see criterion O20)	No requirement	Very general requirement (see criterion 3.7.1)	No direct requirement	General requirement (see criterion 3)
3b) Resistance to water	Same as 2014 requirement	Very similar (see criterion O21)	Similar (see criterion O23)	No direct requirement	No direct requirement	No direct requirement
3c) Adhesion	Very similar to 2014 requirement	Very similar (see criterion O22)	Only for fillers (see criterion O21)	Very general requirement (see criterion 3.7.1)	Very general requirement (see criterion 3.5)	Inadequate reference to IED 2010/75/EU
3d) Abrasion	Very similar to 2014 requirement	Very similar (see criterion O23)	Scratch resistance (see criterion O26)	Very general requirement (see criterion 3.7.1)	Very general requirement (see criterion 3.5)	General requirement (see criterion 3)
3e) Weathering	Basically the same as 2014 requirement	Very similar (see criterion O24)	Similar (see criterion O23)	No direct requirement	No direct requirement	No direct requirement
3f) Water vapour permeability	Same as 2014 requirement	Very similar (see criterion O25).	Similar (see criterion O23)	No direct requirement	No direct requirement	No direct requirement

Criteria 3 cont. – comparison of requirements

Requirement	EU Ecolabel P&V	Nordic Swan P&V (096)	Nordic Swan CBP (097)	Blue Angel indoor P (UZ 102)	Blue Angel P&V (UZ 12a)	Austrian EL wall paints (UZ17)
3g) Liquid water permeability	Same as 2014 requirement	Very similar (see criterion O26)	Similar (see criterion O23, and O28?)	No direct requirement	No direct requirement	Vague mention of it in fitness for use
3h) Fungal resistance	Same as 2014 requirement	Similar (see criterion O27)	Similar (see criterion O23)	No direct requirement	No direct requirement	No direct requirement
3h) Algal resistance	Same as 2014 requirement	Similar (see criterion O27)	No direct requirement	No direct requirement	No direct requirement	Inadequate reference to IED 2010/75/EU
3i) Crack bridging	Very similar to 2014 requirement	No direct requirement	No direct requirement	Very general requirement (see criterion 3.7.1)	Very general requirement (see criterion 3.5)	Inadequate reference to IED 2010/75/EU
3j) Alkali resistance	Very similar to 2014 requirement	No direct requirement	No direct requirement	No direct requirement	No direct requirement	No direct requirement
3k) Corrosion resistance	Same as 2014 requirement	Different requirements (see criterion O33)	More specific requirements (see criterion O32)	No direct requirement	No direct requirement	No direct requirement

Criteria 4: SVOC and VOC content

Main points about criterion 4:

- No actual changes proposed.
- Difficult to know suitability of ambition level until seeing data for products.
- Over 30,000 licensed products.
- Each product will be associated with a certain VOC and SVOC content.
- Excel file sent out to CBs on 23 February 2024
- Only very limited feedback received (ca. 150 data points)
- Data collection exercise ongoing...
- Approaches in other ecolabels vary a lot.
- Blue Angel and Austrian ecolabel set very low VOC contents for very specific paint categories.
- Nordic Swan is very similar to EU Ecolabel

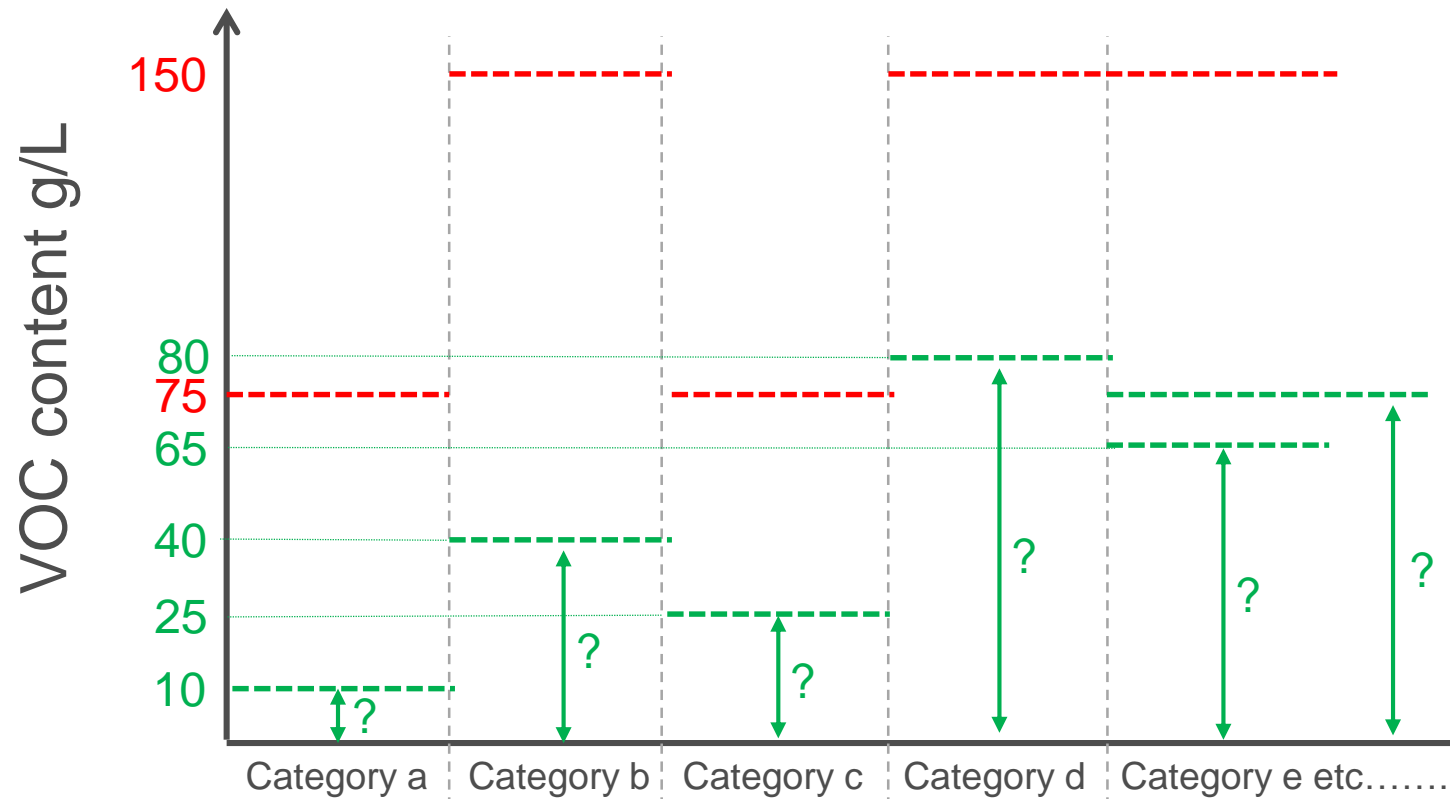
What is industry understanding of claims like “ultra low VOC” and “zero VOC”?

Existing criterion (consolidated version of Decision 2014/312/EU)		
The maximum content of Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs) shall not exceed the limits given in Table 3.		
The content of VOCs and SVOCs shall be determined for the ready to use product and shall include any recommended additions prior to application such as colourants and/or thinners.		
Products with a VOC content that is in accordance with the limits in Table 3 may display the text ‘reduced VOC content’ and the VOC content in g/l next to the Ecolabel.		
VOC and SVOC content limits		
Product description (with subcategory denotation according to Directive 2004/42/EC)	VOC limits (g/l including water)	SVOC limits (g/l including water)
a. Interior matt walls and ceilings (Gloss < 25@60°)	10	30 (1)/40 (2)
b. Interior glossy walls and ceilings (Gloss > 25@60°)	40	30 (1)/40 (2)
c. Exterior walls of mineral substrate	25	40
d. Interior/Exterior trim and cladding paints for wood and meta	80	50 (1)/60 (2)
e. Interior trim varnishes and woodstains, including opaque woodstains	65	30 (50, 60)
e. Exterior trim varnishes and woodstains, including opaque woodstains	75	60
f. Interior and Exterior minimal build woodstains	50	30 (1)/40 (2)
g. Primers	15	30 (1)/40 (2)
h. Binding primers	15	30 (1)/40 (2)
i. One-pack performance coatings	80	50 (1)/60 (2)
j. Two-pack reactive performance coatings for specific end use such as floors	80 (65)	50 (1)/60 (2)
l. Decorative effect coatings	80	50 (1)/60 (2)
Anti-rust paints	80 (75)	60 (n/a)
(1) Indoor white paints and varnishes		
(2) Indoor tinted paints / outdoor paints and varnishes		
The VOC content shall be determined either by calculation based on the ingredients and raw materials or by using the methods given in ISO 11890-2 or, alternatively for products with a VOC content of less than 1.0 g/l, the methods given in ISO 17895. The SVOC content shall be determined using the method given in ISO 11890-2. [M1] The test shall be carried out using the analytical system as identified in the Criteria User Manual. In the case of products used both indoors and outdoors the strictest SVOC limit value for indoor paints shall prevail.		
Assessment and verification: the applicant shall provide for the VOC content of the ready to use product either a test report using the methods given in ISO 11890-2 or ISO 17895 that demonstrates compliance or a declaration of compliance supported by calculations based on the paint ingredients and raw materials.		
The applicant shall provide for the SVOC content of the ready to use product either a test report using the method given in ISO 11890-2 or a declaration of compliance supported by calculations based on the paint ingredients and raw materials. The test shall be carried out with reference to the modifications to ISO 11890-2 provided in the Criteria User Manual. At the request of a Competent Body applicants may be required to validate calculations using the specified test method.		

Criteria 4: SVOC and VOC content

Data collection exercise:

- Excel file sent out to CBs on 23 February 2024



- EUEL already more ambitious than VOC Directive.
- Where do results for EUEL products lie within green limits?
- Data should ideally be presented per formulation (otherwise possible uneven weighting of results).
- For example, due to lots of shades and/or lots of packaging sizes.
- Same exercise for SVOC contents.
- Try to consider data in pairs as well (i.e. VOC and SVOC).

Criteria 4 – comparison of requirements

Req.	EU Ecolabel P&V	Nordic Swan P&V (096)	Nordic Swan CBP (097)	Blue Angel indoor P (UZ 102)	Blue Angel P&V (UZ 12a)	Austrian EL wall paints (UZ17)
VOC contents (g/L)	a) 10; b) 40; c) 25; d) 80; e) 65; e) 75; f) 50; g) 15; h) 15; i) 80; j) 80/65; l) 80; Anti-rust 80/75	Very similar (see criterion O14) a) 10; b) 40; c) 25; d) 80; e) 65; f) 50; g) 15; h) 15; i) 80; j) 65; l) 80; Industrial P&V and Anti-rust paints: 75	Similar but only for outdoor P&V (see criterion O22) c) 25; d) 75; e) 65; f) 50; f) 10; h) 10; i) 80; j) 65	700 ppm (see criterion 3.1.2)	2% (Group I) 8% (Group II) 10% (Group III)	500 ppm (see criterion 2.2)
SVOC contents (g/L)	a) 30/40; b) 30/40; c) 40; d) 50/60; e) 30/50-60; e) 60; f) 30/40; g) 30/40; h) 30/40; i) 50/60; j) 50/60; l) 50/60; Anti-rust 60	Very similar (see criterion O14) a) 30/40; b) 30/40; c) 40; d) 50/60; e) 50/60; f) 30/40; g) 30/40; h) 30/40; i) 50/60; j) 50/60; l) 50/60; No anti-rust	No direct requirement	500 ppm (see criterion 3.1.2)	0.1% (Group I) 0.2% (Group II) 0.3% (Group III)	200 ppm (see criterion 2.2)

- To convert between units of g/L, % and ppm, necessary to know specific density in g/L.

Discussion about criteria 3 & 4

Questions to stakeholders about the criterion 3 on efficiency in use:

Q22. Opinions about criterion 3 proposal?

Q23. Would you appreciate a more detailed explanation of the testing requirements and results in the User Manual (or a draft version of this in the Technical Report rationale sections)?

Q24. For alkali resistance, what ISO 4628-1 rating is considered as equivalent to “no noticeable damage” (i.e. in terms of rating the quantity and size of defects)?

Q25. Some of these requirements only apply when claims are made. How many EU Ecolabel products have claims for: “breathable”; “water repellent”, “anti-fungal”, “anti-algal” or “crack-bridging”?

Questions to stakeholders about criterion 4 on SVOC and VOC contents:

Q26. Opinions about criterion 4 proposal?

Q27. If a requirement on VOC emissions is added for indoor paints, would that negate the need for improving the total VOC and SVOC contents in criterion 4?

Q28. Do you have any experience ---If so, what are the conditions and proof that lie behind these claims?

Q29. Further discussion about the situation with the SVOC testing methodology would be welcomed.

Q30. Question to CBs mainly: Information on the existence of EU Ecolabel licenses (yes/no) for all product categories considered in this criterion would also be very much appreciated.

Lunch Break: 1 hour
Back at 13:45 h CEST

Agenda

Afternoon session: 13:45-16:45		
No.	Item	SCHEDULE
7	Criterion 5: Restriction of hazardous substances and mixtures	13:45 – 15:30
Coffee Break – 15 min		
8	Other criteria proposals and/or other discussion	15:45 – 16:40
9	Conclusions, next steps and closure of the meeting	16:40 – 16:45

7. Criterion 5

Criteria 5. Restriction of hazardous substances and mixtures

Was in need of major revision.....not practical to present track changes

2014 criteria structure:

Criterion 5a) CLP restrictions for product and ingredients.

Criterion 5a)i) Derogations for substance groups.

Criterion 5a)ii) Derogation conditions for production sites.

Criterion 5b) SVHC restrictions.

Criterion 5c) Specific hazardous substance restrictions.

Appendix:

- Total limits on preservatives
- Specific derogation conditions.

- Very difficult to read
- Not in line with general approach for Article 6(6) used today

2024 criteria proposal:

Criterion 5.1. SVHC restrictions.

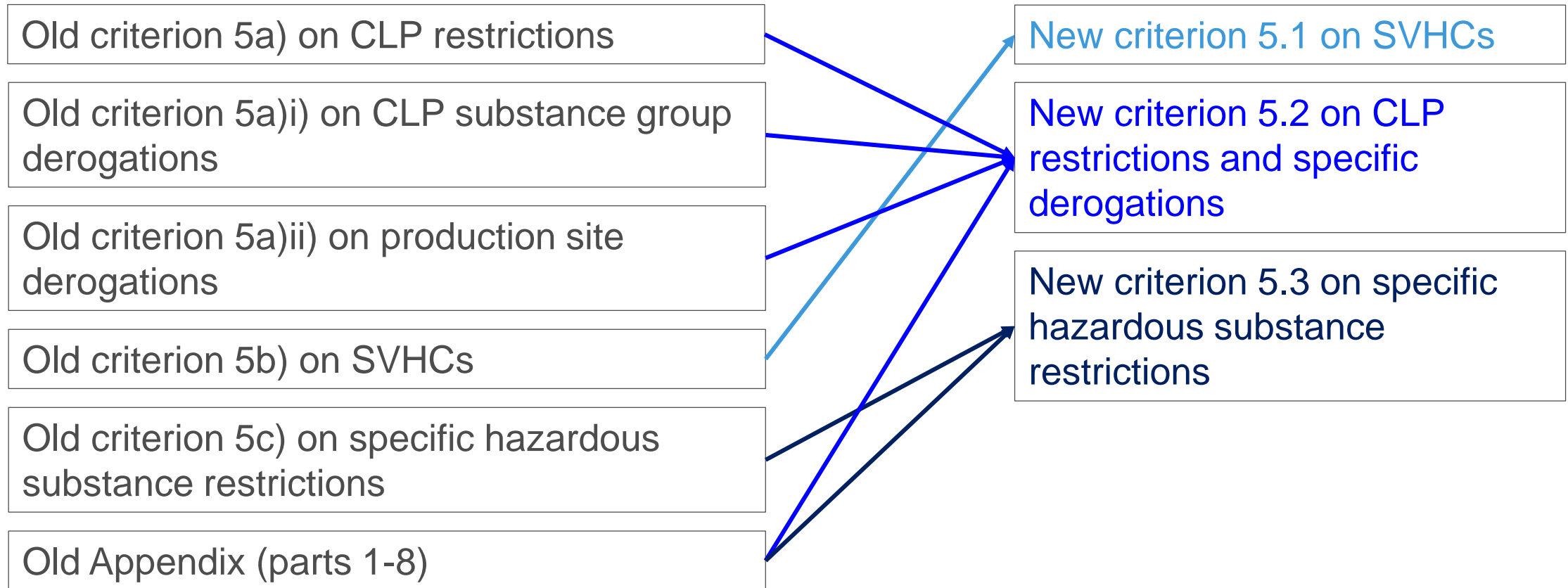
Criterion 5.2. CLP restrictions, together with derogations and derogation conditions.

Criterion 5.3. Specific hazardous substance restrictions.

- No need for a separate Appendix.
- Aligned with wording in more recent EUEL Decisions.
- Horizontal derogation condition inserted to account for additive hazards and future changes in CLP specific concentration limits.

Criteria 5. Restriction of hazardous substances and mixtures

Main structural changes to criterion 5:



Criteria 5. Restriction of hazardous substances and mixtures

from p.56 of TR1

Criterion 5.1 on SVHCs:

- Follows wording from AHP criterion on SVHCs (year 2023).
- “product formulation” → “product formulation and its primary packaging”?
- How often should licensed products be checked against updated Candidate List?
- “chemical product” → “chemical product or material”?
- “7.3.8” → “5.3”.

The final product **formulation** shall not contain any ingoing substances or mixtures that meet the criteria referred to in Article 57 of Regulation (EC) No 1907/2006 that have been identified according to the procedure described in Article 59 of that Regulation and included in the candidate list for substances of very high concern for authorisation.

Assessment and verification:

The applicant shall provide a signed declaration that the final product and any components therein do not contain any SVHCs. The declaration shall be supported by safety data sheets of all supplied chemicals and materials used to produce the final product and the components therein.

The list of substances identified as SVHCs and included in the candidate list in accordance with Article 59 of Regulation (EC) No 1907/2006 can be found here:

<https://www.echa.europa.eu/candidate-list-table>

Reference to the list shall be made **on the submission date** of the EU Ecolabel application.

For unavoidable impurities identified as SVHCs, the concentration of the impurity and an assumed retention factor of 100%, shall be used to estimate the quantity of the SVHC impurity remaining in the final product. Impurities can be present in the **chemical product** up to 0.0100% w/w, unless further restricted under criterion **7.3.8**. Substances known to be released or to degrade from ingoing substances are considered ingoing substances and not impurities.

Justifications for any deviation from a retention factor of 100% (e.g. solvent evaporation) or for chemical modification of a SVHC impurity shall be provided.

Criteria 5. Restriction of hazardous substances and mixtures

Criterion 5.2 on (new) CLP restrictions:

from p.57 of TR1

- All hazards same as those for AHP.
- EUH059 changes to H420 (now a globally recognized hazard code..).
- All the other hazards in the table on this slide are new CLP hazards.
- Will take time for new classification information to come in.
- Doubts about whether “suspected Endocrine Disruptors” should be restricted to same level as proven EDs → what are requirements for being flagged as this?

Hazardous to the ozone layer	
H420: Harms public health and the environment by destroying ozone in the upper atmosphere	
Endocrine disruptors for human health and the environment	
Category 1	Category 2
EUH380: May cause endocrine disruption in humans	EUH381: Suspected of causing endocrine disruption in humans
EUH430: May cause endocrine disruption in the environment	EUH431: Suspected of causing endocrine disruption in the environment.
Persistent, Bioaccumulative and Toxic	
PBT	vPvB
EUH440: Accumulates in the environment and living organisms including in humans	EUH441: Strongly accumulates in the environment and living organisms including in humans
Persistent, Mobile and Toxic	
PMT	vPvM
EUH450: Can cause long-lasting and diffuse contamination of water resources	EUH451: Can cause very long-lasting and diffuse contamination of water resources

Criteria 5. Restriction of hazardous substances and mixtures

Criterion 5.2 on CLP restriction derogations for preservatives:

Derogation for:	Why? / What's new?
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine	Was already derogated in 2014 criteria, but now has a joint entry classification of H301, H314, H373, H400 and H410 – the H301 and H373 hazards were not derogated before.
Sodium pyrithione	New. A substitute for the Zn-PT derogation. Harmonised classifications need specific derogations for: H311, H317, H331, H372, H400, H411 and EUH070.
Formaldehyde-releasing in-can preservatives	Heavily adapted. Groups all of these types of preservative under a common free formaldehyde content (from Old Appendix, point 7), even if some of them do not need a derogation right now (e.g. EGForm and (benzyloxy)methanol.
Isothiazoline or izothiazoline-releasing substances	Heavily adapted. Groups all of these types of preservative under a common cumulative content (0,040%, lower than before) and a new requirement to test for isothiazoline content (sometimes these substances come in via supplied “wet” materials as well).
Tinting machine preservatives	Already derogated in 2014 criteria, but needed the H372 derogation as well in order to allow for IPBC.
Dry-film preservatives	Already derogated in 2014 criteria, but needed the H331 and H372 derogations as well in order to allow for IPBC.
Preservative stabiliser: Zinc oxide	Already derogated, now only one limit needed (0,040%) since the previous limits of 0,030% and 0,050% were associated with the combined use of ZnPT, which is now prohibited.

Criteria 5. Restriction of hazardous substances and mixtures

Criterion 5.2 on CLP restriction derogations for other substances:

Derogation for:	Why? / What's new?
Neutralising agents	Same as 2014 criteria.
Optical brighteners	Same as 2014 criteria.
Titanium dioxide	Same as before (from 2021 amendment).
Trimethylolpropane	Same as before (from 2021 amendment).
UV stabilisers	Same as 2014 criteria.
Adipic acid dihydrazide	Already derogated, but now the actual hazard code is mentioned (H411) even though it is only a joint entry in ECHA C&L inventory.
Methanol	Already derogated, but now the actual hazard codes are mentioned (H301, H311, H331 and H370) as per harmonized entry in the C&L inventory.

Criteria 5. Restriction of hazardous substances and mixtures

Criterion 5.2 on CLP restriction derogations for other substances:

Derogation for:	Why? / What's new?
Driers	Same as 2014 criteria, but worded differently.
Anti-skimming agents	Same as 2014 criteria.
Anti-corrosion pigments	Same as 2014 criteria – but allowed upper limits do not make sense.
Verdigris prevention	Same as 2014 criteria.
Surfactants	Similar to 2014 criteria, but limit is fixed at 1.0% (no 3.0% limit for “all other colours” (i.e. non-white and non-light colours). Clarity needed on how surfactant “formulations” are supplied to paint producers, since H411, H412 and H413 classifications seem to apply to the “formulation” rather than surfactant substances.
Silicon resin	Same as 2014 criteria.
Mineral raw materials	Based on the CLP part of the 2014 criteria on these materials. The heavy metal restriction part is presented in criterion 5.3.

Criteria 5. Restriction of hazardous substances and mixtures

Criterion 5.2 on horizontal CLP restriction:

from p.60 of TR1

Reasons for this text are multiple:

- Several CLP hazards are additive, meaning that you can comply with limits for individual substances, but the mixture ends up being classified.
- Insertion of stricter specific concentration limits for hazards for specific substances creates a need to amend derogations, but not necessary to amend for that reason if this text is in place.
- Need to clearly explain that there is an existing allowance for the mixture to be classified, only for H412 or H413 and only if due to dry film preservatives needed for outdoor products.

***Horizontal derogation condition:**
none of the derogations above, either individually or in combination, shall be permitted if they result in the final product being classified with any of the hazards defined in Table X, with the notable exception of H412 and H413 for outdoor products due to the presence of dry film preservatives.

Criteria 5. Restriction of hazardous substances and mixtures

Criterion 5.2 on CLP hazards: general info.

Information available to applicant:

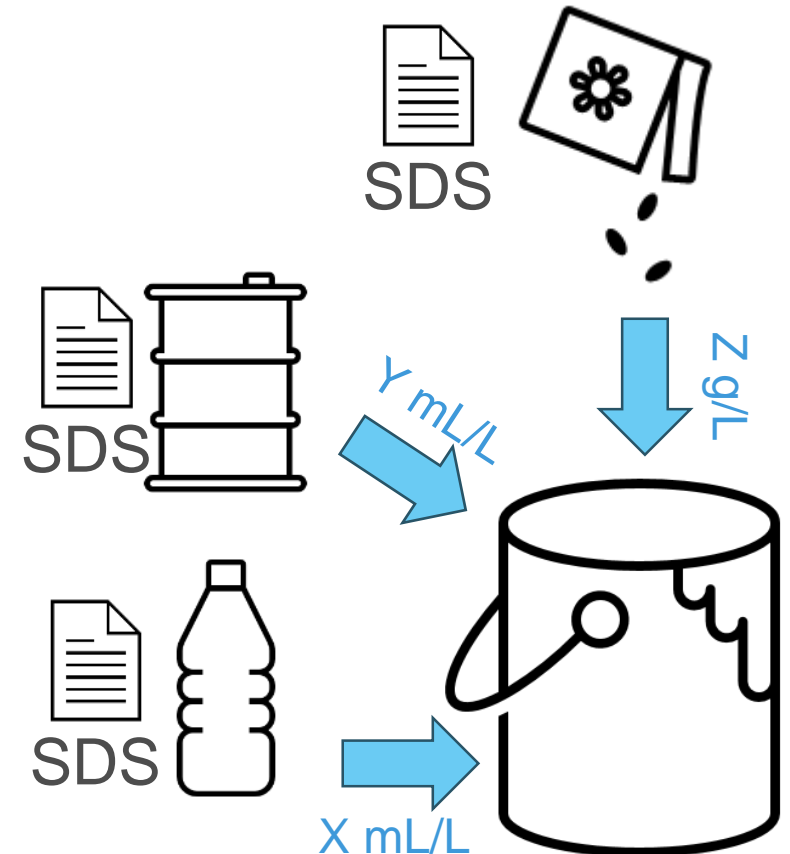
- Product X: main ingredients (%) → SDS
- Product Y: main ingredients (%) → SDS
- Product Z: main ingredients (%) → SDS

But SDS only provides information on ingredients above critical concentrations.

SDS does not provide exact concentrations, just ranges. Also need densities of any liquid chemicals used.

More detailed information also needed in order to calculate compliance with CLP rules for paint or varnish product.

What is current practice on sharing of this information between suppliers, paint/varnish manufacturers and EUEL Competent Bodies?



Criteria 5. Restriction of hazardous substances and mixtures

Criterion 5.3 on specific substance restrictions:

Built directly upon existing criteria, coming from the 2014 Appendix.

- APEO ban comes from section 4(b) of the Appendix → **declaration of non-use**.
- PFAS ban comes from section 4(c) but extended beyond “surfactants” and also to polyfluorinated substances → **declaration of non-use**.
- Phthalate restrictions come from section 6(b) but extended beyond “plasticisers” → **limit of 0,010% applied to account for impurities**. **Analytical method to be defined?**
- Heavy metal restrictions come from 2(a), 5(b) and 5(f) of the Appendix → **limit of 0,010% applied to account for impurities**.
- Typo in A+V text: “[...] phthalate compounds shall be *>considered as<* their absence in concentrations [...]”
- Typo in A+V text: “[...] declaration ~~for~~ *from* their supplier(s). [...]”

Discussion

Discussion points and questions about criterion 5:

Q29. General opinions about the proposals for criteria 5.1 (SVHC), 5.2 (CLP) and 5.3 (specific substances)?

Q30. Which of the derogations in the current criteria have been most commonly used? How is this flagged in an EU Ecolabel license files? Some seem unrealistic, like the anti-corrosion pigments with up to 8.0% H410 ingredients.

Q31. Any issues with declarations in suitable detail from the supply chain about ingredients?

Q32. Do you have any derogation requests to flag for discussion? (see Annex I of TR1 for the type of information required).

- SVHC restrictions extended to primary packaging?
- Frequency of SVHC compliance checks? License holders with suppliers? Competent Bodies with license holders?
- Should “suspected” Endocrine Disruptors be treated equally as “proven” Endocrine Disruptors?
- Ban of selected phthalates or just all phthalates? Either way, analytical method needed to demonstrate compliance?

Break: 15 minutes

8. Other criteria proposals and/or other discussion

New criterion – VOC emissions

from p. 65 of TR1

Why proposed?

- Flagged in Commission Statement.
- Direct links to health and allergy impacts with indoor products.
- Blue Angel and Nordic Swan have requirements already.
- Several national VOC emission labels (FI, FR and BE).
- Considerable advancement in harmonization of VOC concentrations “of interest” (EU LCI initiative).
- Requirement under Construction Products Regulation?

Proposed updated criterion on VOC emissions

Note: only applicable to indoor paints and varnishes

Emissions of VOCs and SVOCs shall not exceed the limits defined in the table below.

Parameter	3-day test results	28-day test results
TVOC*	< 3000 µg/m ³	< 300 µg/m ³
TSVOC*		< 100 µg/m ³
R value**		≤ 1.0
Formaldehyde		< 20 µg/m ³
Sum of any other Carcinogenic 1A or 1B VOCs apart from formaldehyde	< 10 µg/m ³	< 1 µg/m ³

* TVOC and TSVOC are as defined in EN 16402 and including quantification of any non-target compounds

** R value, as defined in EN 16402

Assessment and verification:

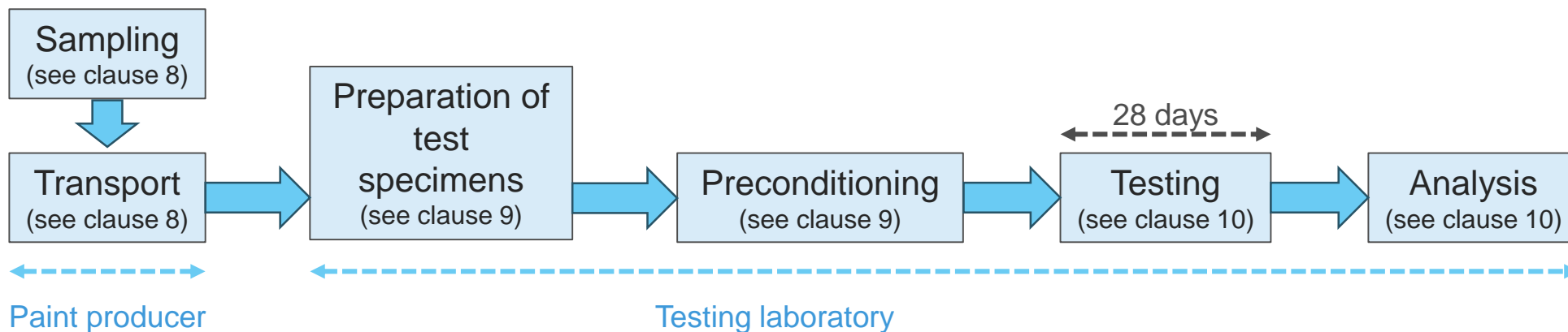
The applicant shall submit a copy of an EN 16402 test report for each of the products being covered by the EU Ecolabel license application. In cases of products with identical formulations but different packaging volumes or types, one test report shall suffice. In cases of products based on the same formulation but with multiple different shades, a test report for the worst-case formulation shall be suffice, so long as it is clearly explained why that particular product formulation represents the worst-case.

For the calculation of the R value, reference should be made to the latest set of agreed EU LCI values available at the time of testing. These values can be consulted here on the European Commission website: https://single-market-economy.ec.europa.eu/sectors/construction/eu-lci-subgroup/eu-lci-values_en

New criterion – VOC emissions

Principles of test:

- Paint producer is responsible for taking a representative sample.
- Paint producer is responsible for sending sample in appropriate manner. Both parties should keep records to ensure chain of custody is maintained.
- Testing laboratory is responsible for preparing test specimens, but they will be following instructions provided by producer on a technical data sheet. Likewise with preconditioning.
- Chamber loaded at defined rate. Air continually blown through chamber at set rate.
- Air sampled after 3 days, and again after 28 days.



New criterion – Carbon footprint

from p.67 of TR1

Why proposed? Since 2014:

- PEFCR for paints and associated developments in relevant EF datasets
- Commission Recommendation (EU) 2021/2279 for general PEF method for varnish products.
- Upcoming requirements for carbon footprinting of construction products in recast CPR.
- Upcoming requirements for carbon footprinting of buildings in recast Energy Performance of Buildings Directive (EPBD).

All options on the table – final criterion would be more specific.

Proposed updated criterion on carbon footprinting of paint and varnish products

The life cycle carbon footprint of the paint or varnish products shall be assessed according to one of the following methods, with preference being given in the order of the list below.

- A cradle-to-grave analysis using the latest Environmental Footprint datasets and according to relevant Product Environmental Footprint Category Rules (PEFCR) that are valid at the date of the application for the EU Ecolabel license.
- A cradle-to-grave analysis using the latest Environmental Footprint datasets and according to general Product Environmental Footprint methodology set out in Commission Recommendation (EU) 2021/2279.
- A cradle-to-grave analysis reporting on modules A to C of the EN 15804 method and using any combination of specific and generic data for ingredients and reference flows.
- A cradle-to-gate analysis using module A of the EN 15804 method and using any combination of specific and generic data for ingredients and reference flows.

Except in the case where the PEFCR is followed the carbon footprint shall be reported using a functional unit of per m² per year.

Any datasets and calculation rules used shall be those in force at the date of the application for the EU Ecolabel.

Assessment and verification:

The applicant shall provide the Competent Body with a full formulation of the paint or varnish product(s) and the associated carbon footprints of each ingredient. Reference flows for fuel, electricity, water, wastewater, normal waste and hazardous waste shall also be provided. Transport assumptions (distance and mode) shall be explained for each ingredient coming to the factory as well as an average distribution scenario for sold products. Assumed losses due to spoilage, spillage and misapplication shall be communicated as will an assumed spreading rate in m²/L, which should be the same as communicated on any packaging, if mentioned there.

The assumed lifetime before reapplication shall be estimated and explained in terms of the results of durability testing of the paint or varnish product(s).

New criterion – Carbon footprint

Lack of clarity on how to do carbon footprinting.

Methodological issues to consider are:

- What information is needed exactly?
 - Will depend on LCA model used.
 - Which depends on scope of assessment (i.e. life cycle stages covered).
- A cradle-to-gate approach is simple, but fails to reward more durable products.
- A cradle-to-grave approach is better, but assumptions for lifetime will be imperfect.

Practical issues to consider are:

- Access to datasets and LCA software → costs for applicant and issue for Competent Body.
- Who does the assessment? And who verifies the assessment?
- Initially not proposed to set any benchmarks → just to report.
- Just reporting avoids initial issues with importance of choosing between generic and specific data and updating analyses as generic datasets or supplier EPDs evolve.

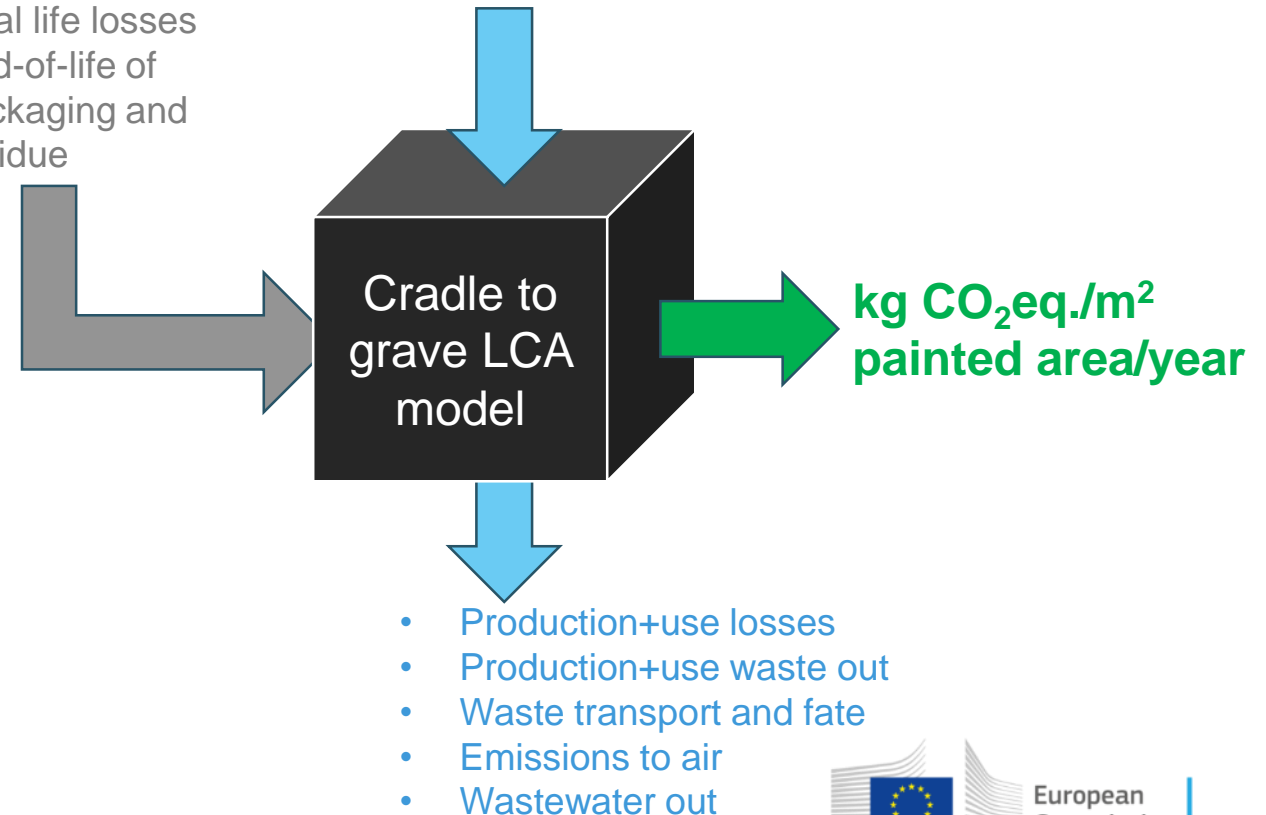
New criterion – Carbon footprint

Ideal situation

- Industry-supported LCA model (black box).
- Generic data available for all main ingredients (but hidden within model for confidentiality reasons).
- Realistic inputs required from users.
- Clear rules on assumptions for durability, transport and End-of-Life.
- Data can be entered online.
- Black-box model generates output.
- Competent Bodies simply confirm that inputs are correct and any test reports to justify durability assumptions and spreading rates are provided (verification could be detailed in EU EL criteria or in UM).

- Durability test
- Assumptions to convert to useful lifetime
- Spreading rate test and real assumptions
- Real life losses
- End-of-life of packaging and residue

- Ingredients in
- Materials in.
- Ingredient material transport to factory
- Fuels in
- Electricity in
- Water in



Discussion

Questions about existing criteria 6 and 7:

No changes proposed yet, but any opinions/comments on what should be included in consumer information and standard phrases appearing with EU Ecolabel are welcome at this point.

Questions about proposed new criterion on VOC emissions:

Q36. Opinions about the proposal for VOC emissions?

Q37. How much does emission testing cost according to EN 16402?

Q38. Is there sufficient testing capacity for these types of test?

Questions about proposed new criterion on carbon footprinting of paints and varnishes:

Q39. Opinions about the proposal for whole life carbon criteria?

Q40. What is the interest of CEPE or other associations in having a freely available online calculator for producers?

Q41. Are you interested in forming and participating in a sub-group on this matter?

9. Conclusions, next steps and closure of the meeting

Conclusions, next steps and closure of the meeting

FEEDBACK:

- ❖ Comments to **TR1 – via BATIS, by 22 May 2024**
 - ❖ [BATIS](#): BATIS >Home> Forum >Z_Product Policy: Paints and Varnishes> 1st Ad-Hoc Working Group (AHWG) meeting – 7 May 2024
 - ❖ Further input is welcome
- ❖ Should you have any questions, please contact: JRC-B5-PAINTS@ec.europa.eu
- ❖ Slides will be made available in the Product Bureau [website](#) and BATIS tomorrow 8 May
- ❖ Minutes will be made available in the Product Bureau website and BATIS in about 2 weeks

NEXT STEPS:

- ❖ Working sub-groups: e.g. (i) product category hierarchy & definitions; (ii) on EUEL license quantitative data assessment; (iii) on carbon footprinting; (iv) on technical performance tests – efficiency in use) (tbc)
- ❖ 2nd AHWG (+ 2nd draft criteria version) – expected Q4 2024 (tbc)

Thank you!

Contact: JRC-B5-PAINTS@ec.europa.eu



© European Union 2023

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.



EU Science Hub

[Joint-research-centre.ec.europa.eu](https://joint-research-centre.ec.europa.eu)