EN

ANNEX II

EU Ecolabel criteria for awarding the EU Ecolabel to performance coatings and related products

The EU Ecolabel criteria target the best performance coatings and related products on the market, in terms of environmental performance. The criteria focus on the main environmental impacts associated with the life cycle of these products and promote circular economy aspects.

Assessment and verification requirements

For the EU Ecolabel to be awarded to a specific product, the product shall comply with each requirement. The applicant shall provide a written confirmation stating that all the criteria are fulfilled.

Specific assessment and verification requirements are indicated within each criterion.

Where the applicant is required to provide declarations, documentation, analyses, test reports, or other evidence to show compliance with the criteria, these may originate from the applicant and/or their supplier(s) as appropriate.

Competent bodies shall preferentially recognise attestations that are issued by bodies accredited in accordance with the relevant harmonised standard for testing and calibration laboratories, and verifications by bodies that are accredited in accordance with the relevant harmonised standard for bodies certifying products, processes, and services.

Where appropriate, test methods other than those indicated for each criterion may be used if the competent body assessing the application accepts their equivalence.

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications or site inspections to check compliance with these criteria.

Changes in suppliers and production sites pertaining to products to which the EU Ecolabel has been awarded shall be notified to competent bodies, together with supporting information to enable verification of continued compliance with the criteria.

As pre-requisite, the product shall meet all respective legal requirements of the country or countries in which the product is intended to be placed on the market. The applicant shall declare the product's compliance with this requirement.

The following information shall be provided together with the application for the EU Ecolabel:

(a) A list of all individual paint and varnish products covered by the EU Ecolabel application, grouped into product families and indicating any relevant product characteristics that affect which specific requirements from the EU Ecolabel criteria would apply. A family of products will all have the same base formulation and product category, but may differ in terms of shade and/or packaging format.

(b) A description of the product formulation(s), with a % composition of the ingredients used and the specific function of each ingredient (the composition information may be subject to a non-disclosure agreement between the applicant and the competent body or, in some cases, directly between the supplier and the competent body).

(c) Safety data sheets for the ingredients used in the paint and varnish formulations.

(d) Any other information associated with the production of ingredients and materials that is necessary for demonstrating compliance with the EU Ecolabel criteria shall be provided by the suppliers or producers of those ingredients and materials.

(e) A description of the packaging format(s) used, the volume(s) of product held and the packaging material(s) used for each of the paint and varnish products covered by the EU Ecolabel application.

Criterion 1. Efficiency in use requirements

In order to demonstrate the efficiency in use of performance coatings and related products, the following tests per type of product, as indicated in Table X and detailed in the criterion text later, shall be undertaken.

Table X. Performance requirements for different kinds of performance coatings and related products

Criteria	Floor covering paints (i,j)	Floor covering varnishes (i,j)	Anti-corrosion products (i,j)	Primers (within i) and j) systems)	Binding primers (within i) and j) systems)	Waterproofing coatings (i, j)
1(a) Spreading rate	Yes	No	If opaque	If opaque	If opaque	If opaque, report
1(b) White pigment content	Yes	No	If opaque	No	No	If opaque, report
1(c) Resistance to water	Yes	Yes	Yes	No	No	Yes + ETA
1(d) Adhesion	If opaque	If opaque	If opaque	If opaque	If opaque	If opaque
1(e) Abrasion	Yes	Yes	If for metal flooring	No	No	If for trafficked floors
1(f) Weathering	If outdoors	If outdoors	If outdoors	No	No	If outdoors
1(g) Corrosion resistance	If claimed	No	Yes	If claimed	If claimed	If claimed
1(h) Ecotoxicity	No	No	Yes	No	No	Yes

1(a) Spreading rate

Note 1: This requirement does not apply to transparent or semi-transparent coatings.

Note 2. For tinting systems, this criterion applies only to the tinting base containing the most TiO2. In cases where this tinting base is unable to achieve this requirement, the criterion shall be met after tinting the base to produce the standard colour RAL 9010.

Note 3. This requirement applies to all white paints. For families of paint products available only in preset shades, the spreading rate shall apply to the lightest colour.

Spreading rates shall be calculated while ensuring a hiding power of at least 98 % according to ISO 6504-1, ISO 6504-3 or an equivalent method that can be validated against ISO 6504-1. The following minimum spreading rate limits apply:

- Indoor performance coatings shall have a spreading rate of at least 8 m2 per litre of product.
- Outdoor performance coatings shall have a spreading rate of at least 6 m2 per litre of product.
- Performance coatings marketed for both indoor and outdoor application shall meet the higher spreading rate requirement of at least 8 m2 per litre.
- Any opaque primers used in performance coating systems shall have a spreading rate of at least 8 m2 per litre of product. A lower spreading rate of 6 m2 per litre of product applies to opaque primers with specific blocking, sealing, penetrating, binding or special adhesion properties.

Assessment and verification:

The applicant shall provide a declaration of compliance with the relevant spreading rate limits or a justification of non-applicability of the spreading rate requirement for each of the products covered by the EU Ecolabel license. The declaration shall be supported by test results according to ISO 6504-1, ISO 6504-3 or an equivalent method that can be validated against ISO 6504-1. It shall be clearly indicated which spreading rate results correspond to which families of products covered by the EU Ecolabel license application.

<u>1(b) White pigment content</u>

Note: This criterion only applies to paint products and white pigment content shall be calculated with the same products for which spreading rate is measured as per the note in criterion 1(a). For the purposes of this criterion, the term "white pigment", shall be considered to refer only to pigments with a refractive index higher than 1.8.

The white pigment content shall not exceed:

- 36 g/m2 for performance coatings marketed for indoor use only.
- 38 g/m2 for performance coatings marketed for outdoor use only.
- 36 g/m2 for performance coatings marketed for both indoor and outdoor use. Any EU Ecolabel paint products that claim wet scrub resistance must meet the requirements for class 1 or class 2 according to the procedure defined in ISO 11998 and the classification system of EN 13300 and comply with the respective upper limits for white pigment content.

Assessment and verification:

The applicant shall provide a declaration of compliance with the relevant requirement or a justification of the non-applicability of the requirements for each of the products covered by the EU Ecolabel application. In cases of relevant products, the applicant shall declare the total content of white pigments with a refractive index >1,8 in the final product, relevant tinting base

or white 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.

1(c) Resistance to water

Note: This requirement applies to all performance coatings. In coating systems with a primer or undercoat(s), either the full coating system or just the finishing layer may be tested.

All performance coatings shall have resistance to water, as determined by ISO 2812-3, such that after 24 hours of exposure and 16 hours of recovery, no change of gloss is observed in transparent or semi-transparent coatings and no change of gloss or of colour occurs in any opaque coatings.

No change of gloss or colour in exposed samples shall be considered as a visual rating of 0 when measured for quantity of defects and a visual rating of 0 when measured for size of defects according to the classification system of EN ISO 4628-1.

Additionally for waterproofing coatings, compliance with any relevant European Technical Approval Guideline (ETAG) stipulations shall also be demonstrated.

Assessment and verification:

The applicant shall provide a declaration of compliance with the requirement or a justification of the non-applicability of the requirement for each of the products covered by the EU Ecolabel license application.

For any applicable products included in their license application, the applicant declaration shall be supported by copies of ISO 2812-3 test report(s) that cover the licensed product or family of products, including reported results for change of colour and change of gloss according to EN ISO 4628-1 and ISO 2813.

For waterproofing coatings, the applicant shall additionally provide a European Technical Approval (ETA) certificate that has been issued by an approved Technical Assessment Body (e.g. a certificate according to ETAG 005 when the product is a liquid applied roof waterproofing kit). In cases where there is no relevant ETAG to follow, the applicant shall declare this and provide a technical description of the product, including compliance with any relevant EN, ISO or national standards and a description of the intended uses of the product and how it should be used correctly.

1(d) Adhesion

Note: This criterion applies to opaque primers or undercoats for performance coatings. The adhesion test may be conducted on any opaque primer or undercoat alone, or on the primer/undercoat and finishing coat together, so long as the combination is opaque. In cases of multiple shades in a family of products, only the white base paint or opaque tinting base(s) need to be tested.

Primers for exterior masonry uses shall score a pass in the ISO 4624 pull-off test where the cohesive strength of the substrate is less than the adhesive strength of the primer coating, otherwise the adhesion of the primer coating must be in excess of a pass value of 1,5 MPa.

Floor primers or floor undercoats shall score 2 or less in the EN ISO 2409 test for adhesion.

Assessment and verification:

The applicant shall provide a declaration of compliance with the relevant requirement or a justification of the non-applicability of the requirements for each of the products covered by the EU Ecolabel application. For any opaque masonry primer, binding primer or undercoat products included in their license application, the applicant shall provide copies of EN ISO 2409 or ISO 4624 test reports, as applicable.

1(e) Abrasion

Note: This criterion applies to floor coatings. In cases of multiple shades in a family of floor covering paints, only the white base paint or tinting base(s) need to be tested.

A weight loss of ≤ 70 mg shall be observed when floor coatings are exposed to 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 declaration of compliance with the requirement for floor coating products included in their license application. The declaration shall be supported by copies of EN ISO 7784-2 test reports.

1(f) Weathering

Note: This criterion applies to outdoor performance coatings. In the case of paints, only the white base paint or tinting base(s) need to be tested.

All outdoor performance coatings shall be exposed to artificial weathering in apparatus including fluorescent UV lamps and condensation or water spray according to ISO 16474-3. They shall be exposed to test conditions for 1000 hours with cycling conditions of: UVA 4 h/60 °C + humidity 4 h/50 °C.

Alternatively, outdoor performance coatings for wooden substrates may 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.

After weathering, the exposed films shall comply with the requirements specified in the table below.

Table X. Overview of weathering requirements for performance and related products

Property	**Requirement (after weathering)**	**Scope of products covered/not covered**
Colour change according to ISO 11664-4	Colour change, $\Delta E \leq 4$	Not applicable to primers or intermediate coats in performance coating systems nor to transparent or semi-transparent performance coating systems
Decrease of gloss according to ISO 2813	≤ 30% decrease compared to initial value	Not applicable to performance coatings with initial gloss value of <60% at 60° angle of incidence
Chalking according to EN ISO 4628-6	A score of 1,5 or better (0,5 or 1,0) ≤ 2	Only applicable to finishing coats or the full performance coating system used on outdoor masonry, wood and metal substrates.
Flaking according to EN ISO 4628-5	Flake density: ≤ 2 Flake size: ≤ 2	

Cracking according to EN ISO 4628-4	Crack quantity: ≤ 2 Crack size: ≤ 3	
Blistering according to EN ISO 4628-2	Blister density: ≤ 3 Blister size: ≤ 3	

Assessment and verification:

The applicant shall provide a declaration of compliance with the relevant requirement or a justification of the non-applicability of the requirements for each of the products covered by the EU Ecolabel application. For any outdoor performance coatings included in their license application, the applicant shall provide copies of test reports that detail the weathering test method used (being in compliance with ISO 16474-3 or EN 927-6) and provide results of changes in properties after weathering, as applicable.

1(g) Corrosion resistance

Note: This criterion only applies to anti-corrosion performance coatings and related products.

Anti-corrosion primers or coating systems shall be exposed to simulated corrosion stresses on the metallic substrates and use environments (e.g. C2, C3, C4 or C5 as per EN 12944-6) for which their use is recommended. Corrosion stresses applied in testing shall correspond to the "high" level for each category, which is as follows:

Table X. Requirements for corrosion resistance testing for anti-corrosion primers and performance coating systems

Corrosivity category	**Test regime 1**		**Test regime 2**
	ISO 6270-1 (water condensation, hours)	**ISO 9227 (neutral salt spray, hours)**	**Annex B (cyclic ageing test, hours)**
C2 (high)	120	-	-
C3 (high)	240	480	-
C4 (high)	480	720	-
C5 (high)	720	1440	1680

After exposure, the coated surfaces shall be examined and be found to comply with the following requirements:

- A rating of 3 or better (i.e. 0, 1 or 2) for size of blisters according to EN ISO 4628-2.
- A rating of 3 or better (i.e. 0, 1 or 2) for quantity of blisters according to EN ISO 4628-2.
- A rating of Ri2 or better (i.e. Ri0 or Ri1) for degree of rusting according to EN ISO 4628-3.

Assessment and verification:

The applicant shall provide a declaration of compliance with the relevant requirement or a justification of the non-applicability of the requirements for each of the products covered by the EU Ecolabel application. Any declaration of compliance shall be supported by copies of test reports according to EN 12944-6, EN ISO 4628-2 and EN ISO 4628-3.

1(h) Ecotoxicity

Note, this criterion only applies to anti-corrosion or waterproofing performance coating systems that are marketed for use in outdoor environments. In the case of a family of products,

only the worst-case product needs to be tested. The worst-case product should be chosen based on the total estimated quantity of H400 and H410/H411/H412 classified ingredients present.

Ecotoxicity shall be measured by the testing the ecotoxicity of eluate obtained contact of water with two glass plates that have been coated with the complete coating system, including any primer coats, undercoats, intermediate coats and finishing coat. The test procedure is:

- Prepare two glass plates with roughened surfaces and apply the coating to the plates in accordance with manufacturer instructions. Each plate shall present a coated surface area of between 250 and 500 cm3. Make sure that the primer layer does not protrude from beyond the finished layer.

- In parallel, prepare a blind test where the roughened glass plates are not coated at all but are treated and then tested in an identical way exact for the coating procedure.

- Allow the coating to cure and be pre-conditioned for a period of 72 hours at a temperature of 19 to 25°C and a relative humidity of 40 to 60 %.

- Elute the coated glass plates (and blind control samples) in accordance with CEN/TS 16637-2 for 24 hours (if the primer does not stick to the surface or the coating becomes detached from the surface during the leaching test, the manufacturer and the testing institution should agree on another environmentally safe surface instead of glass plates with a roughened surface).

- The ratio of water volume to coated surface area of the test specimen shall be between 25 and 30 L/m2. A suitable vessel shall be used that the water level can always remain at least 20mm above the upper surface of the test specimen.

- Measure the pH, conductivity and, optionally, dissolved organic carbon prior to starting the ecotoxicity tests, which are defined in the table below together with their pass requirements.

Table X. Ecotoxicity testing and requirements

Test species	Test standard	Endpoint	Requirement
Luminescent bacteria (Vibrio fischeri)	EN ISO 11348-1	Light	$G_L \leq 8$
Algae (Raphidocelis subcapitata /Desmodesmus subspicatus)	EN ISO 8692	Growth	$G_A \leq 4$
umu test	EN 13829	Genotoxicity	$G_{EU} \leq 1,5$

Assessment and verification:

The applicant shall provide a declaration of compliance with the relevant requirement or a justification of the non-applicability of the requirements for each of the products covered by the EU Ecolabel application. Any declaration of compliance shall be supported by copies of test reports according to EN ISO 11348-1, EN ISO 8692 and EN 13289.

Criterion 2. Content of Volatile and Semi-volatile Organic Compounds (VOCs, SVOCs)

The maximum content of Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs) shall not exceed the limits given in Table X.

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 X may display the text ‘reduced VOC content’ and the VOC content in g/l next to the EU Ecolabel.

Table X: VOC and SVOC content limit

VOC and SVOC content limits		
Product description (with subcategory denotation according to Directive 2004/42/EC)	**VOC limits (g/l of ready to use product)**	**SVOC limits (g/l of ready to use product)**
i. One-pack performance coating products mentioned in Article 2(1), including waterproofing coatings but excluding anti-corrosion coatings	65	45 (1) / 55 (2)
j. Multi-pack reactive performance coating products mentioned in Article 2(1), including waterproofing coatings but excluding anti-corrosion coatings	65	45
(part of i or j) Anti-corrosion coating products and primers	65	50

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. In the case of products used both indoors and outdoors the strictest SVOC limit value for indoor paints and varnishes shall prevail.

Assessment and verification:

The applicant shall provide a declaration of compliance supported by calculations of VOC and SVOC contents based on the ingredients and raw materials used in the ready to use product. Alternatively, the VOC and SVOC contents of the ready to use product shall be communicated via a representative test report or reports using the methods given in ISO 11890-2 or ISO 17895 and results shall demonstrate compliance with the relevant limits.

Criterion 3. Restriction of hazardous substances and mixtures

Note: These criteria apply to the final product and any components therein and, unless specified otherwise, applies equally to all paint and varnish products included in the scope.

3.1. Restrictions on Substances of Very High Concern (SVHCs)

The final product formulation shall not contain any ingoing substances 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 supplied ingredients therein do not contain any SVHCs as ingoing substances. The declaration shall be supported by safety data sheets of all supplied ingredients used to produce the final product and declarations from the chemical suppliers.

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 impurities identified as SVHCs in ingredients, 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 that are SVHCs cannot be present in the paint or varnish product above 0,0100% w/w or in any ingredient in concentrations exceeding 0,100% w/w. Any deviation from a retention factor of 100% for an SVHC impurity (e.g. solvent evaporation) or chemical modification) must be supported by adequate justifications.

3.2. General restrictions based on classifications according to specific hazard classifications defined in Regulation (EC) No 1272/2008.

(a) Final product

The final product shall not be classified as being carcinogenic, mutagenic, toxic for reproduction, acutely toxic, an aspiration hazard, a specific target organ toxicant, a respiratory or skin sensitiser, or hazardous to the aquatic environment, hazardous to the ozone layer, an endocrine disruptor, persistent, bioaccumulative and toxic (PBT) or persistent, mobile and toxic (PMT) in accordance with Regulation (EC) No 1272/2008 and specifically in terms of the hazard statement codes stated in Table X. The only exception permitted to this rule shall be the H412 and H413 classification, and only if due to levels of dry film preservatives in the case of outdoor paints or varnishes.

(b) Ingoing substances

Unless derogated in Table Y, the final product formulation shall not contain any ingoing substances in concentrations at or above 0,010 % weight by weight of the final product formulation that are classified, in accordance with Regulation (EC) No 1272/2008, with any of the hazard classes, categories and associated hazard statement codes stated in Table X.

Table X. Restricted hazard classes, categories and associated hazard statement codes

Carcinogenic, mutagenic or toxic for reproduction	
Categories 1A and 1B	**Category 2**
H340: May cause genetic defects	H341: Suspected of causing genetic defects
H350: May cause cancer	H351: Suspected of causing cancer
H350i: May cause cancer by inhalation	
H360: May damage fertility or the unborn child	H361: Suspected of damaging fertility or the unborn child

H360F: May damage fertility	H361f: Suspected of damaging fertility
H360D: May damage the unborn child	H361d: Suspected of damaging the unborn child
H360FD: May damage fertility. May damage the unborn child	H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child
H360Fd: May damage fertility. Suspected of damaging the unborn child.	H362: May cause harm to breast fed children
H360Df: May damage the unborn child. Suspected of damaging fertility.	
Acute toxicity	
Categories 1 and 2	**Category 3**
H300: Fatal if swallowed	H301: Toxic if swallowed
H310: Fatal in contact with skin	H311: Toxic in contact with skin
H330: Fatal if inhaled	H331: Toxic if inhaled
	EUH070: Toxic by eye contact
Aspiration hazard	
Category 1	
H304: May be fatal if swallowed and enters airways	
Specific target organ toxicity	
Category 1	**Category 2**
H370: Causes damage to organs	H371: May cause damage to organs
H372: Causes damage to organs through prolonged or repeated exposure	H373: May cause damage to organs through prolonged or repeated exposure
Respiratory and skin sensitization	
Category 1, 1A and 1B	
H317: May cause an allergic skin reaction	
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled	
Hazardous to the aquatic environment	
Categories 1 and 2	**Categories 3 and 4**
H400: Very toxic to aquatic life	H412: Harmful to aquatic life with long-lasting effects
H410: Very toxic to aquatic life with long-lasting effects	H413: May cause long-lasting effects to aquatic life
H411: Toxic to aquatic life with long-lasting effects	
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

The hazard statement codes generally refer to substances. However, if information on substances cannot be obtained, the classification rules for mixtures shall apply.

The use of substances or mixtures that are chemically modified during the production process, so that any relevant hazard for which the substance or mixture has been classified under Regulation (EC) No 1272/2008 no longer applies, shall be exempted from the above requirement.

This criterion shall not apply to ingoing substances covered by points (a) and (b) of Article 2(7) of Regulation (EC) No 1907/2006, which set out criteria for exempting substances within Annexes IV and V to that Regulation from the registration, downstream user and evaluation requirements.

Table Y. Derogations to restrictions on ingoing substances that are classified with one or more of the restricted hazards listed in Table X and are present in concentrations greater than 0,010% (weight by weight) of the final product formulation.

Substance type, substance name and CAS number	Derogated hazard code(s)	Derogation conditions
Preservatives and preservative stabilisers		
***Note on preservatives**: all preservatives added to ingredients must be declared by suppliers and all preservatives added directly to the final product must be declared by the paint or varnish producer. The only types of preservatives permitted in ingredients and the final product shall be those that are compliant with Regulation (EU) No 528/2012. For final products originating in the Union, it is reminded that it is not sufficient that the active substances contained in the preservative product are approved under Regulation (EU) No 528/2012 for product type 6 (PT6) (in-can preservative) or for product type 7 (PT7) (dry-film preservative), but the preservative product must be authorised under Regulation (EU) No 528/2012 for PT6 or PT7 or made available on the market according to the transitional measures set out in Article 89(2) of that Regulation. The combined total limits for PT6 and PT7 preservatives shall apply to these following product categories:* *- For indoor products: up to 0,080 % weight by weight of PT6 in the final product.* *- For colour tints used in tinting systems: up to 0,20 % weight by weight of PT6 in the colour tint.*		

- For indoor products marketed for use in high humidity areas: up to 0,080 % weight by weight of PT6 and up to 0,10 % weight by weight of PT7 in the final product.

- For outdoor products: up to 0,080 % weight by weight of PT6 and up to 0,50 % weight by weight of PT7 in the final product.

All references to concentrations/limits/levels of preservatives in the section 'Preservatives and preservative stabilisers', shall be understood as referring to the preservative active substances contained in the final product.

Any preservatives which cannot be present in the final product at concentrations exceeding 0,010 %, due to specific concentration limits (SCLs) lower than 0,010 % that would classify the final product with a restricted CLP hazard, are not mentioned in the derogation table below because they cannot be used in concentrations exceeding 0,010 % in the first place and thus do not need a derogation. This does not imply that they cannot be used as ingoing substances in EU Ecolabel products at any level. If not explicitly excluded in criterion 3.3, such preservatives may be used so long as it is at levels below any SCLs that would trigger a restricted CLP classification of the final product.

In-can preservatives (PT6) in colour tints or final product:	H301, H311, H317, H330, H331, H372, H373, H400, H410, H411, H412, H413	*See horizontal derogation condition at foot of table The sum total of all PT6 in-can preservatives (those derogated for use above 0,010% and those that are non-derogated but allowed in levels < 0,010%) must be within the relevant limits defined in the note above. When preservatives that are formaldehyde donors are used, the relevant limits for free formaldehyde in the final product set out in criterion 3.3(h) must be respected. Specific concentration limits (% weight by weight in the final product) shall apply for the derogated substances listed below: - Bronopol (CAS No 52-51-7): up to 0,030 %. - DBNPA (CAS No 10222-01-2): up to 0,030 % - Sodium pyrithione (CAS No 3811-73-2): up to 0,030 %. - BIT (CAS No 2634-33-5): up to 0,036 %. - Combined total isothiazolines and isothiazoline releasers (those derogated for use above 0,010% and those that are non-derogated but allowed in levels < 0,010%): up to 0,040 % in final products for indoor applications. - Diamine (CAS No 2372-82-9): up to 0,050 %.

Dry-film preservatives (PT7):	H311, H317, H330, H331, H372, H373 H400, H410, H411, H412 and H413	*See horizontal derogation condition at foot of table Only applies to outdoor products and indoor products for use in high humidity areas. The sum total of all PT7 dry film preservatives (those derogated for use above 0,010% and those that are non-derogated but allowed in levels < 0,010%) must be within the relevant limits defined in the note above. Higher concentrations may be permitted in the case of slow release, encapsulated forms of dry film preservatives, but only in cases where the formulation can be tested to demonstrate that the specific formulation of the final product, or read-across formulations, would not be classified with any of the hazards listed in Table X. Any dry-film preservatives classified as H400 or H410 must be non-bioaccumulative, demonstrated by having an octanol-water coefficient (Log K_{ow}) of ≤ 3.2 or a bioconcentration factor (BCF) of ≤ 100.
Preservative stabiliser: Zinc oxide (CAS No 1314-13-2)	H400, H410	*See horizontal derogation condition at foot of table Permitted to be used as a preservative stabiliser, in concentrations up to 0,040 % weight by weight of the final product, when used to stabilise colour tints, in-can or dry film preservative combinations that require 1,2-Benzisothiazol-3(2H)-one (BIT) or sodium pyrithione.
Drying and anti-skinning agents		
Anti-skinning agents	H317, H412, H413	*See horizontal derogation condition at foot of table The sum total anti-skinning agent content shall not exceed 0,40 % weight by weight in the final product.
Driers (siccatives)	H301, H317, H373, H400†, H410†, H411, H412, H413	*See horizontal derogation condition at foot of table The sum total drier content shall not exceed 0,10 % weight by weight in the final product formulation. † The derogation for H400 and H410 only applies to cobalt-based drier compounds and such compounds can only be used up to 0,050 % weight by weight in the final product formulation
Pigments and pigment additives		

Titanium dioxide (in a powder form containing 1% or more of particles with aerodynamic diameter ≤ 10µm)	H351 (inhalation)	*See horizontal derogation condition at foot of table The applicant shall demonstrate that they have systems in place to minimise worker exposure to dry TiO2 powder in the workplace (e.g. closed dosing systems, ventilated dosing and mixing areas and personal protective equipment).
Trimethylolpropane	H361fd	*See horizontal derogation condition at foot of table Only when used as an additive in supplied pigments and only up to a maximum concentration of 0,50 % weight by weight of the supplied pigment.
Binders and polymer dispersions		
Binders and crosslinking agents: Adipic acid dihydrazide (CAS No 1071-93-8)	H317, H411	*See horizontal derogation condition at foot of table Only allowed up to 1,0 % weight by weight in the binder or polymer dispersion ingredient and when used as an adhesion promoter or as a crosslinking agent.
Unreacted monomers (in binders)	H301, H304, H311, H317, H331, H334, H372, H400, H410, H411, H412	*See horizontal derogation condition at foot of table The sum total concentration of unreacted monomers needing this derogation shall not exceed 0,050 % weight by weight in the final product.
Other, miscellaneous		
Methanol (CAS No 67-56-1)	H301, H311, H331, H370	*See horizontal derogation condition at foot of table Only permitted as a residual reaction product of other substances in the product formulation. Allowable residual concentration increases as a function of binder content in the following manner: - Binder content of 10-20%: allowable residual methanol is 0,020 % weight by weight in the final product. - Binder content of 20-40%: allowable residual methanol is 0,030 % weight by weight in the final product. - Binder content of >40%: allowable residual methanol is 0,050 % weight by weight in the final product.
Mineral raw materials, including fillers, anti-sagging	H372, H373	*See horizontal derogation condition at foot of table

agents and matting agents		Only applies to mineral raw materials and leucophyllite minerals that naturally contain crystalline silica. Only permitted in contents up to 1.0% weight by weight for H372 materials or up to 10% for H373 materials. In cases where the material is supplied in dry powder form, the applicant shall demonstrate that they have systems in place to minimise worker exposure to dry powder in the workplace (e.g. closed dosing systems, ventilated dosing and mixing areas and personal protective equipment).
Neutralising agents	H301, H311, H331, H400, H410, H411, H412, H413	*See horizontal derogation condition at foot of table Only allowed up to 1,0 % weight by weight in varnish products, and up to 0,50 % in all other products.
Optical brighteners	H413	*See horizontal derogation condition at foot of table Only allowed up to 0,10 % weight by weight of the final product.
Silicon resin	H412, H413	*See horizontal derogation condition at foot of table Only allowed up to concentrations of 2,0 % weight by weight in the final product.
Solvents	H304	*See horizontal derogation condition at foot of table Only allowed up to concentrations of 1,0 % weight by weight in the final product.
Surfactants	H411, H412, H413	*See horizontal derogation condition at foot of table Only allowed up to 1,0 % weight by weight in transparent, semi-transparent, white or light-coloured products or up to 3,0 % weight by weight in all other colours of products.
UV stabilisers	H317, H411, H412, H413	*See horizontal derogation condition at foot of table Only applicable to outdoor products and only up to a maximum concentration of 0,60 % weight by weight to the final product formulation.

***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.

Assessment and verification:

The applicant shall provide a signed declaration of compliance with sub-criterion 3.2, including compliance with any relevant derogation conditions, supported by declarations from suppliers and any other relevant documentation.

A list of all ingoing substances with one or more of the restricted CLP hazards calculated to be present in the final product formulation in concentrations greater than 0,010 % weight by weight shall be presented, together with their CAS numbers, CLP classification status (i.e. harmonised, joint entry or self-entries only) the relevant function of the ingoing substance (e.g. in-can preservative, drier, anti-corrosion pigment, neutralising agents, surfactants, UV stabiliser etc.). Calculations shall be based on:

— a list of all ingredients, chemicals or raw materials used to make the final product formulation;

— the screening of ingredients, chemicals or raw materials for those ingoing substances with any of the EU Ecolabel-restricted CLP hazards;

— the concentrations of any screened ingoing substances with EU Ecolabel-restricted CLP hazards in the ingredients, chemicals or raw materials used, in the format supplied;

— the weight of each of the ingredients, chemicals or raw materials added to make a known weight of final product formulation.

Any screened ingoing substances shall be assumed by default to be 100 % retained in the final product. Justifications for any deviation from a retention factor of 100 % during processing (e.g. solvent evaporation) or for chemical modification of a screened ingoing substance shall be provided. Substances known to be released or to degrade from ingoing substances are considered ingoing substances and not impurities.

For any screened ingoing substances remaining in the final product formulation in concentrations greater than 0,010 % weight by weight, but which are exempted from sub-criterion 3.2 (see Annexes IV and V to Regulation (EC) No 1907/2006) a declaration to this effect by the applicant shall suffice for those substances.

Since multiple products or potential products (e.g. customised shades from a tinting system) using the same ingredients, chemicals or raw materials may be covered by one EU Ecolabel license, a worst-case calculation may be acceptable for each screened ingoing substance within a common family of products covered by the same license.

Regarding information requested from suppliers that may be commercially sensitive, evidence from suppliers can also be provided directly to competent bodies without necessarily providing certain details to the applicant.

3.3. Specific hazardous substance restrictions for ingoing substances.

The substances indicated below shall not be included as ingoing substances in the final product or as ingoing substances to the ingredients used to make the final product:

(a) Substances listed in Annexes I or II to Regulation (EU) 2019/1021 on persistent organic pollutants,

(b) Mercury and mercury compounds as defined in Article 2 of Regulation (EU) 2017/852 on Mercury,

(c) Substances listed in Annexes I or II to Regulation (EC) No 1005/2009 on ozone layer depleting substances,

(d) Substances listed in Annex XVII to Regulation (EC) No 1907/2006, unless in full compliance with the relevant conditions specified in that Annex and only if also explicitly permitted for use in criterion 3.2 of this Decision and compliant with associated derogation conditions,

(e) Preservatives or driers classified as carcinogenic, mutagenic or toxic for reproduction.

(f) Substances classified as category 1 or category 2 endocrine disruption for human health or the environment in accordance with CLP Regulation (EC) 1272/2008, substances included in the candidate list referred to in Article 59(1) of REACH Regulation (EC) 1907/2006 as having endocrine-disrupting properties for human health or the environment, substances identified as having endocrine-disrupting properties in accordance with Regulation (EU) No 528/2012 or Regulation (EC) No 1107/2009, except for DBNPA (CAS No 10222-01-2) when used as an in-can preservative,

(g) Akylphenols, alkylphenol ethoxylates (APEOs) and their derivatives, as referred to in entry 43 to Annex XIV or entry 46 to Annex XVII of the Regulation (EC) 1907/2006,

(h) Perfluorinated and polyfluorinated compounds (PFAS), as defined in Article 4(41),

(i) Phthalates, as defined in Article 4(42), that are classified with any of the hazards listed in Article 57 to Regulation (EC) 1907/2006,

(j) Organotin compounds, as defined in Article 4(39), that are classified with any of the hazards listed in Article 57 to Regulation (EC) 1907/2006,

(k) Fragrance substances which are prohibited or restricted in cosmetic products and listed in Annexes II or III to Regulation (EC) No 1223/2009, or that are classified with H317 or H334 hazards,

(l) Bisphenols that have been identified by ECHA in their 2021 Assessment of Regulatory Needs report on Bisphenols for further EU regulatory risk management that are known or potential endocrine disruptors for the environment or for human health, or that can be identified as toxic for reproduction,

(m) Pigments used shall not be based on Cadmium, Lead, Chromium (VI), Mercury, Arsenic, Selenium, Antimony or Cobalt. Impurities from any pigments used shall not be present in the final product formulation in quantities exceeding 0,010 % weight by weight (per metal): Cadmium, Lead, Chromium (VI), Mercury, Arsenic, Selenium, Antimony and Cobalt. The only exceptions to pigment use and the 0,010 % limit for impurities shall be:

- Cobalt: due to the use of Cobalt aluminate blue spinel and Cobalt chromite blue-green spinel pigments,
- Antimony: due to the use of pigments based on Antimony Nickel within an insoluble TiO2 lattice,

(n) Free formaldehyde shall not be intentionally added to the final product. The final product shall be tested in order to determine its free formaldehyde content. Worst-case samples for testing shall be selected for each family of products based on which product is predicted to have the highest theoretical amount of formaldehyde content. Under the conditions defined below, the following sum total limits of free formaldehyde shall be permitted:

- Up to 0,0010 % weight by weight permitted when bronopol or preservatives that are formaldehyde donors are required as an in-can preservative to protect a specific type of paint or varnish,
- Up to 0,010 % weight by weight permitted when polymer dispersions (binders) provide, through residual levels of formaldehyde, the function of formaldehyde donors instead of in-can preservatives,
- Up to 0,010 % when both conditions listed above apply in the same product.

Assessment and verification:

(a to l) The applicant shall declare the non-use of relevant persistent organic pollutants, mercury, mercury compounds, ozone layer depleting substances, Annex XVII substances, CMR preservatives, CMR driers, endocrine disruptors (except DBNPA), alkylphenols and APEOs, PFAS, phthalates, organotin compounds, fragrances and bisphenols fragrances as ingoing substances in their formulation, supported by declarations from their suppliers about the non-use of the same hazardous substance groups as ingoing substances in the ingredients supplied and that are used in formulations covered by the EU Ecolabel license application procedure.

(m) In the case of the heavy metal restrictions from pigments, the pigment supplier shall provide a declaration stating that neither the pigment itself nor any ingoing substances that may be incorporated into the pigment product are based on the listed heavy metals. The pigment supplier shall also provide a test report of the heavy metal impurity levels of representative samples of the pigment supplied. The applicant shall then use these results, together with the % of pigment(s) used in the final product, to calculate the concentration of heavy metals from pigments remaining in the final product. In the case of exempted pigments, the pigment supplier shall declare which pigment(s) have the exemption (i.e. cobalt aluminate blue spinel, cobalt chromite blue-green spinel or antimony nickel in an insoluble TiO2 lattice).

(n) The applicant shall declare which of their products should have the highest theoretical free formaldehyde content within each family of products. This declaration shall be based on the choice of the paint formulator to use formaldehyde donors as in-can preservatives and declarations from suppliers regarding the amounts of formaldehyde donors used to preserve supplied ingredients (especially binders). The addition of these substances (and any other ingredients that release formaldehyde) to the worst-case formulations shall not result in the content of free formaldehyde in the final product exceeding the relevant concentration limit, as measured by the Merckoquant method, the VdL RL 03 method or HPLC analysis in accordance with UNI 11775 or an equivalent standard.

Criterion 4. Volatile Organic Compounds (VOCs) emissions

Note: only applicable to indoor performance coatings

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

Table X: VOC emission limits

Parameter	**28-day test results**
TVOC*	≤ 300 µg/m^3

R value**	≤ 1.0
Formaldehyde	≤ 10 µg/m^3
Any other category 1A or 1B carcinogenic VOCs not covered by EU LCI values***	≤ 1 µg/m^3 per substance

** TVOC shall be measured as defined in EN 16402 and including quantification of any non-target compounds*

*** R value, as defined in EN 16402. Results for the cumulative R value shall be rounded to one decimal place before determining compliance or non-compliance with the limit of 1.0.*

**** Does not apply to formaldehyde, which is a VVOC and is covered by a specific individual limit. Does not apply to any other carcinogenic VVOCs or VOCs that have an EU-LCI value, since these are already covered by the R-value limit.*

Assessment and verification:

The applicant shall submit a copy of an EN 16402 test report for the worst-case product formulation within each of the relevant families of products being covered by the EU Ecolabel license application. Any changes to the formulations that would create a higher worst-case VOC content shall trigger the requirement to submit an updated VOC emission test report. When relevant, a clear explanation of the distinctions made between families of products (e.g. binder chemistry, product category etc.) shall be provided, together with a justification of the worst-case product within each family of products.

In cases where a coating system has multiple layers, the full system should be applied to the test substrate according to manufacturer instructions prior to emission testing.

For the calculation of the R value, reference should be made to the latest set of agreed EU LCI (Lowest Concentration of Interest) values available at the time of testing. These values can be consulted on the European Commission website (1).

If chamber air concentrations can be shown to comply with the 28-day limits before the 28 day period has been completed but after a period of at least 3 days, then those results can be accepted as proof of compliance and the test can be halted at that point.

(1) See https://single-market-economy.ec.europa.eu/sectors/construction/eu-lci-subgroup/eu-lci-values_en

Criterion 5. Consumer information

5(a) The following texts shall appear on or be attached to the packaging:

— ‘Minimise paint wastage by estimating how much paint you will need before buying’

— ‘Recover unused paint for re-use’.

— ‘Reuse of paint can effectively minimise the products' life cycle environmental impact’

5(b) The following general information and advice shall be provided on or be attached to the packaging or be available via a web-link or QR code:

— How to estimate the amount of paint needed prior to purchase in order to minimise paint wastage and a recommended amount as a guideline (e.g. for 1 m^2 of wall, X litres of paint is needed).

— How to deal with the 'leftover paint'.

5(c) The following advice and recommendations on how to handle the paint shall be provided on or be attached to the packaging or be available via a web-link or QR code:

— Safety measures for the user. This shall include basic recommendation on personal protective equipment that should be worn. It shall also include additional measures that should be taken when using spray equipment.

— The use of cleaning equipment and appropriate waste management (in order to limit water and soil pollution). For example, text advising that unused paint requires specialist handling for safe environmental disposal and therefore it should not be thrown away with household or commercial waste (e.g. 'Do not put residual paint down the kitchen sink or toilet, or into a waste bin').

— Storage of the paint in appropriate conditions (before and after opening), including, where appropriate, safety advice.

Assessment and verification:

The applicant shall declare that the product complies with the requirement and provide the competent body with the artwork or samples of the user information and/or a link or QR code to a manufacturer's website containing this information as part of the application. The recommended amount of paint given as a guideline shall be provided.

Criterion 6. Information appearing on the EU Ecolabel

The optional label with text box shall contain, where relevant, the following texts:

— Minimised content of hazardous substances

— Reduced content of volatile organic compounds (VOCs): x g/l

— Reduced emissions of volatile organic compounds to indoor air (where indoor criteria have been met) or

— Good performance for indoor use (where indoor criteria have been met) or

— Good performance for outdoor use (where outdoor criteria have been met) or

— Good performance for both indoor and outdoor use (where both indoor and outdoor criteria have been met)

The guidelines for the use of the optional label with text box can be found in the 'Guidelines for use of the Ecolabel logo' on the website:

http://ec.europa.eu/environment/ecolabel/documents/logo_guidelines.pdf

Assessment and verification:

The applicant shall provide a sample of the product label or an artwork of the packaging where the EU Ecolabel is placed, together with a declaration of compliance with this criterion.