

## **CRITERIA FOR AWARDING ENVIRONMENTAL LABEL TO PAINTS AND VARNISHES PRODUCT GROUP**

**ARTICLE 1** - The criteria developed for the "Indoor and outdoor paints and varnishes" product group have been regulated within the scope of the Environmental Label Regulation dated 19.10.2018 and numbered 30570.

**ARTICLE 2** - It includes indoor and outdoor decorative paints and varnishes, wood paints and related products intended for use by consumers and professional users.

The criteria will not include the following products<sup>1</sup>:

- a) Anti-fouling coatings;
- b) Protection products used for wood empire purposes;
- c) Paints for industrial and professional use;
- d) Powder coatings;
- e) UV curable paint systems;
- f) Paints suitable for use for vehicles;
- g) Products such as grease and varnish whose primary function is not to form a film on the surface;
- h) Fillers defined in TS EN ISO 4618;
- i) Road marking paints.

**ARTICLE 3** – In order for paint and varnish products falling within the scope of the Environmental Labelling Regulation to be eligible for the Environmental Label, the products must meet the specified Environmental Label criteria.

**ARTICLE 4** – The evaluation and verification requirements related to the Environmental Label criteria for the "Paint and Varnish" product group will be valid for 5 (five) years. Within the five-year period, the criteria may be updated when deemed necessary by the Environmental Label Board. Upon the appropriate opinion of the Environmental Label Board, the validity period of the criteria may be extended.

**ARTICLE 5** – If there is documented evidence that an accredited laboratory is not available for mandatory tests within the scope of evaluation and verification requirements, accreditation according to TS EN ISO/IEC 17025 is not required. When deemed suitable, the Ministry, evaluating the application, may accept the equivalence of test methods for each criterion different from those specified.

## **CRITERIA**

Criteria for awarding Environmental Label to Paints and Varnishes are as follows:

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<sup>1</sup> Due to their properties, these products have different environmental impacts, from both application area and raw material consumption to disposal than indoor and outdoor decorative paints and varnishes, wood paints and related products intended for use by consumers and professional users. Since it would not be appropriate to evaluate the products under the same scope, they are not included in the evaluation.

1. White Pigment and Wet Scrub Resistance
2. Use of Titanium Dioxide Pigment
3. Performance During Use
4. Content of Volatile and Semi-Volatile Organic Compounds
5. Restriction of Hazardous Substances and Mixtures
6. Consumer Information
7. Information Included on the Environmental Label

## **EVALUATION AND VERIFICATION REQUIREMENTS**

Each specific evaluation and verification requirement for each criterion is separately specified under each criterion. In cases where the applicant is requested to provide declarations, documents, analyses, test reports, or other evidence to demonstrate compliance with the criteria, these can be obtained from the applicant and/or their supplier(s) and/or their suppliers' suppliers, etc., as appropriate.

The Ministry recognizes tests conducted by laboratories accredited by an accreditation body that is a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) according to TS EN ISO/IEC 17025<sup>2</sup>. (Access to the list of organizations accredited by TÜRKAK can be obtained from the address "<https://secure.turkak.org.tr/kapsam/search.>") If there is documented evidence that there is no accredited laboratory for mandatory tests under the assessment and verification requirements, accreditation according to TS EN ISO/IEC 17025 is not required.

Where appropriate, if the Ministry accepts the equivalence of test methods, different test methods than those specified for each criterion can be used.

Where appropriate, the Ministry may request supporting documents and conduct independent verifications and on-site visits.

As a precondition, the product must meet all relevant legal requirements of the country where the product is intended to be placed on the market. The applicant declares that the product complies with these requirements.

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<sup>2</sup> General requirements for the competence of testing and calibration laboratories

## CRITERIA AND REQUIREMENTS

### CRITERION 1. White Pigment and Wet Scrub Resistance

#### CRITERION 1(a). Minimum requirement for white pigment content

Indoor wall and ceiling paints claiming Class I and Class II<sup>3</sup> wet scrubbing resistance will have a white pigment content per m<sup>2</sup> of dry film (white inorganic pigments with a refractive index higher than 1.8) or a value below the values specified in Table 2 (with 98% opacity).

For colouring systems, this requirement applies only to base paints.

**Table 1. The relationship between wet scrubbing resistance and TiO<sub>2</sub> content for indoor paints**

Wet Scrubbing Resistance	Indoor limit value, g/m <sup>2</sup>
Class I	40
Class II	36

For all other paints, including chalky paints, silicate paints, primer paints, anti-rust paints and facade paints, the content of white pigment in indoor products (white inorganic pigments with a refractive index higher than 1.8) cannot exceed 36 g/m<sup>2</sup>, and 38 g/m<sup>2</sup> for outdoor products. Indoor paint limits will apply when it comes to paints intended for both indoor and outdoor use.

However, if all other paints, including lime paints, silicate paints, primer paints, rust-preventive paints, and facade paints are covered by the exemption specified in subparagraph (b), the content of white pigment (white inorganic pigments with a refractive index higher than 1.8) cannot exceed 25 g/m<sup>2</sup> dry film with an opacity of 98%.

#### CRITERION 1(b). Minimum requirement for wet scrubbing resistance (for indoor paints)

All indoor wall and ceiling paints (finishing coats) must reach Class I or Class II in wet Scrub Resistance (WSR) according to TS EN 13300:2022<sup>4</sup> and TS EN ISO 11998:2006<sup>5</sup>. This requirement applies only to base paints used for colouring purposes.

Indoor wall and ceiling paints with an opacity of 98%, a white pigment content equal to or lower than 25 g/m<sup>2</sup> dry film (white inorganic pigments with a refractive index higher than 1.8) with a white pigment content are exempt from this requirement.

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<sup>3</sup> QUALICOAT is a global label and a non-profit organization. Within the organization, various coating classes are defined for paints, including Class 1, Class 2, Class 1.5, and Class 3. As the durability increases from Class 1 to Class 3, unfortunately, color, gloss, and effect options rapidly decrease. Detailed information about the classes can be obtained from QUALICOAT Specifications.

<sup>4</sup> Paints and varnishes – Water-borne coating materials and coating systems for interior walls and ceilings – Classification

<sup>5</sup> Paints and varnishes - Determination of wet-scrub resistance and cleanability of coatings

Only paints with WSR- Class I and II eco-labels can claim resistance to wet scrubbing on the label or other marketing documents.

**Evaluation and verification:** The requirements of both 1(a) and 1(b) will be met. The applicant will submit documents showing that the white pigment content meets this criterion.

The applicant will provide a test report according to TS EN 13300 using the TS EN ISO 11998 method.

### **CRITERION 2. The Use of Titanium Dioxide Pigment**

If the product contains more than 3.0% titanium dioxide by weight, the emissions and discharges of wastes from the production of any titanium dioxide pigment used shall not exceed the following values:

For the sulphate process<sup>6</sup>:

- SO<sub>2</sub> calculated as SO<sub>x</sub>: 7.0 kg/ton of TiO<sub>2</sub> pigment
- Sulphate waste: 500 kg/ton of TiO<sub>2</sub> pigment

For the chloride process:

- If using natural rutile ore: 103 kg chloride waste/ton TiO<sub>2</sub> pigment
- If synthetic rutile ore is used: 179 kg chloride waste/ton TiO<sub>2</sub> pigment
- If slag ore is used: 329 kg chloride waste/ton TiO<sub>2</sub> pigment

If more than one ore type is used, the values are applied proportionally to the amount of each ore type used.

Note: SO<sub>x</sub> emissions apply only to the sulphate process.

**Evaluation and verification:** The applicant will submit supporting documents in the form of a declaration of non-use or a declaration supported by data indicating the relevant levels of process emissions, indicating the compliance of the titanium dioxide manufacturer producing raw materials for the paint product.

### **CRITERION 3. Efficiency in Use**

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

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<sup>6</sup> Will be explained in Application Guidelines.

**Table 2. Performance requirements for different types of paints and varnishes**

Criteria	Paints and Varnishes <sup>7, 8</sup>							
	Surface Pretreatment (a,b)	Exterior wall paint (c)	Flooring and coating (d)	Thick decorative interior and exterior coating (l)	Varnish and wood paint (e,f)	One-component performance and floor coating paint (i)	Primer Paint (g)	Primer Paint and Primer Paint (h)
3(a) Spread rate (in colouring systems including the white-based paints used only for white and light-coloured paints)) - EN ISO 6504- 1 <sup>9</sup>	8 m <sup>2</sup> /L	4 m <sup>2</sup> /L (elastomeric paint) 6 m <sup>2</sup> /L (masonry paint)	Outdoor products 6 m <sup>2</sup> /L Indoor products 8 m <sup>2</sup> /L	1 m <sup>2</sup> /L	—	Outdoor products 6 m <sup>2</sup> /L Indoor products 8 m <sup>2</sup> /L	6 m <sup>2</sup> /L (transparent) 8 m <sup>2</sup> /L (opaque)	6 m <sup>2</sup> /L (transparent) 8 m <sup>2</sup> /L (opaque)
3(b) Water resistance - ISO 2812-3 <sup>10</sup>	—	—	—	—	Water resistant	Water resistant	—	—
3(c) Adhesion - TS EN ISO 4624 <sup>11</sup>	—	—	—	—	—	2 Points	1.5 MPa (wall paint)	1.5 MPa (wall paint)
3(d) Wear - TS EN ISO 7784-2 <sup>12</sup>	—	—	—	—	—	70 mg weight loss	—	—
3(e) Weather resistance - TS EN 927-6 <sup>13</sup>	—	1 000 hours	1 000 hours (outdoor)	1 000 hours (outdoor)	1 000 hours (outdoor)	1 000 hours (outdoor)	—	—
3(f) Water vapor permeability (1-TS EN ISO 7783 <sup>14</sup>	—	Class II or better	—	Class II or better (outdoor)	—	—	—	—

<sup>7</sup> Classification of paints were harmonized with Directive 2004/42/EC in order to comply with other ecolabels.

<sup>8</sup> Explanation of letters a, b, c, d, l, e, f, I, g, and h are given at the end of Table 2, taken from Annex-II of Directive 2004/42/EC

<sup>9</sup> Paints and varnishes -determination of hiding power

<sup>10</sup> Paints and Varnishes - Determination of resistance to liquids

<sup>11</sup> Paints and varnishes - Pull-off test for adhesion

<sup>12</sup> Paints and varnishes - Determination of resistance to abrasion - Part 2: Method with abrasive rubber wheels and rotating test specimen

<sup>13</sup> Paints and varnishes - Coating materials and coating systems for exterior wood - Part 2: Performance specification

<sup>14</sup> Paints and varnishes - Determination of water-vapour transmission properties - Cup method

3(g) Liquid water permeability 1 - TS EN 1062-3 <sup>15</sup>	—	Where the requests are made  Class III All other products are Class II or better	—	Class II or better (outdoor)	—	—	—	—
3(h) Mold resistance 1 - TS EN 15457 <sup>16</sup>	—	Class I or lower (masonry paint or wood paint)	Class 0 (outdoor wood products)	Class I or lower (outdoor)	—	—	—	—
3(h) Algae resistance - TS EN 15458 <sup>17</sup> (1)	—	Class I or lower (the masonry or wood paint)	Class 0 (outdoor wood products)	Class I or lower (outdoor)	—	—	—	—
3(i) Crack covering-TS EN 1062 <sup>18</sup>	—	A1 (elastomeric only)	—	—	—	—	—	—
3(j) Alkali resistance - TS EN ISO 2812- 4 <sup>19</sup>	—	masonry paint	—	—	—	—	Outdoor masonry	Outdoor masonry

<sup>15</sup> Paints and varnishes - Coating materials and coating systems for exterior masonry and concrete - Part 3: Determination of liquid water permeability

<sup>16</sup> Paints and varnishes - Laboratory method for testing the efficacy of film preservatives in a coating against fungi

<sup>17</sup> Paints and varnishes - Laboratory method for testing the efficacy of film preservatives in a coating against algae

<sup>18</sup> Paints and varnishes - Coating materials and coating systems for exterior masonry and concrete - Part 1: Classification

<sup>19</sup> Paints and varnishes - Determination of resistance to liquids - Part 1: Immersion in liquids other than water

3(k) Corrosion resiston1  TS EN ISO 12944-2 <sup>20</sup> and TS 12944-6, TS EN ISO 9227 <sup>21</sup> , TS EN ISO 4628-2 <sup>22</sup> and TS EN ISO 4628-3 <sup>23</sup>	—	Anti-rust paint  Bubbling: ≥ size 3 / density 3 Rusting: ≥ Ri2	Anti-rust paint  Bubbling: ≥ size 3 / density 3 Rusting: ≥ Ri2	—	—	Anti-rust paint  Bubbling: ≥ size 3 / density 3 Rusting: ≥ Ri2	Anti-rust paint  Bubbling: ≥ size 3 / density 3 Rusting: ≥ Ri2	Anti-rust paint  Bubbling: ≥ size 3 / density 3 Rusting: ≥ Ri2

(1) It is required only in cases where a declaration about this information is made to the marketing stage related to paints.

ANNEX II

A. MAXIMUM VOC CONTENT LIMIT VALUES FOR PAINTS AND VARNISHES

	Product Subcategory	Type	Phase I (g/l (*) (from 1.1.2007)	Phase II (g/l (*) (from 1.1.2010)
a	Interior matt walls and ceilings (Gloss <25@60°)	WB	75	30
		SB	400	30
b	Interior glossy walls and ceilings (Gloss >25@60°)	WB	150	100
		SB	400	100
c	Exterior walls of mineral substrate	WB	75	40
		SB	450	430
d	Interior/exterior trim and cladding paints for wood and metal	WB	150	130
		SB	400	300
e	Interior/exterior trim varnishes and woodstains, including opaque woodstains	WB	150	130
		SB	500	400

f	Interior and exterior minimal build woodstains	WB	150	130
		SB	700	700
g	Primers	WB	50	30
		SB	450	350
h	Binding primers	WB	50	30
		SB	750	750
i	One-pack performance coatings	WB	140	140
		SB	600	500
j	Two-pack reactive performance coatings for specific end use such as floors	WB	140	140
		SB	550	500
k	Multi-coloured coatings	WB	150	100
		SB	400	100
l	Decorative effect coatings	WB	300	200
		SB	500	200

(\*) g/l ready to use

<sup>20</sup> Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 2: Classification of environments (ISO 12944-2:2017)

<sup>21</sup> Corrosion tests in artificial atmospheres - Salt spray tests

<sup>22</sup> Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 2: Assessment of degree of blistering

<sup>23</sup> Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 3: Assessment of degree of rusting

**Evaluation and Verification:** Unless otherwise stated, additional tests for 3(a) spread rate, 3(b) water resistance, 3(c) adhesion, 3(d) wear, 3(e) weather resistance, 3(f) water vapor permeability, and 3(g) liquid water permeability will not be requested for products with G certificate.

### **CRITERION 3(a). Spread rate**

A spread ratio requirement is required for white and light-coloured paint products. For paints that are available in more colours, the spread ratio will apply to the lightest color.

White paints and light-coloured paints (including finishing coats and intermediates) will have a spread ratio of at least 8 m<sup>2</sup> per liter of the product for indoor paints and 6 m<sup>2</sup> for outdoor paints (with a Hiding power of 98%). Products marketed for both indoor and outdoor use will have a spread rate of at least 8 m<sup>2</sup> per liter (with a hiding power of 98%).

For colouring systems, this criterion applies only to white base dyes (the base containing the most TiO<sub>2</sub>). In cases where the white base cannot meet this requirement, the criterion will be met after coloring the white base to produce the standard RAL 9010 color.

For paints that are part of the coloring system, before applying a darker shade, the applicant must inform the end user on the product packaging and point of sale, which shade or primer/undercoat should be used before application.

Transparent and semi-transparent primers and undercoats shall have a spreading rate of at least 6 m<sup>2</sup>, and those with opacity at least 8 m<sup>2</sup>. Opaque primer paints with special blocking/sealing, penetrating /binding properties and primer paints with special adhesion properties will have a spread rate of at least 6 m<sup>2</sup> per liter of product.

Thick decorative coatings (paints specially designed to give a three-dimensional decorative effect and therefore characterized by a very thick coating) will alternatively have a spread ratio of 1 m<sup>2</sup> per kg of product.

Opaque elastomeric paints will have a spread rate of at least 4 m<sup>2</sup> per liter of product.

This requirement does not apply to varnishes, transparent bonding primers or other transparent coatings.

**Evaluation and verification:** The applicant will submit a test report using the EN ISO 6504-1<sup>24</sup> or 6504/3<sup>25</sup> method. 6504/3 or for paints specially designed to give a three-dimensional decorative effect and characterized by a very thick coating, will submit a test report using the NF T 30 073 method. For bases used to produce colored products that are not evaluated according to the above requirements, the applicant will provide evidence on how to advise the end user to use a primer and/or a gray (or other relevant shade of color) primer before the application of the product.

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<sup>24</sup> Paints and Varnishes -determination of hiding power

<sup>25</sup> Paints and varnishes. Determination of hiding power Determination of hiding power of paints for masonry, concrete and interior use



### **CRITERION 3(b). Water resistance**

All varnishes, floor coverings and floor paints will be water resistant, as determined in accordance with EN ISO 2812-3 so that there will be no changes in gloss or color after 24 hours of exposure and 16 hours of recovery.

**Evaluation and verification:** The applicant will submit a test report using the EN ISO 2812-3 method.

### **CRITERION 3(c). Adhesion Strength**

Pigmented wall primers for exterior wall use must be successful in the EN 24624 (ISO 4624) tensile test in cases where the adhesive strength of the substrate is less than the adhesive strength of the paint; otherwise, the adhesion of the paint must be above the transition value of 1.5 MPa.

Floor coverings, floor paints, floor primers, interior wall primers, metal and wood primers will score 2 or less points in the EN 2409 adhesion test.

Transparent primers are not included in this condition.

The applicant will evaluate the application of the primer and/or topcoat alone or both together. When testing the finish coat alone, this should be considered as a worst-case scenario related to adhesion.

**Evaluation and verification:** The applicant will submit a test report using the EN ISO 2409 or EN 24624 (TS EN ISO 4624) method depending on the situation.

### **CRITERION 3(d). Wear**

Floor coverings and floor paints will have a abrasion resistance that will not exceed 70 mg of weight loss after 1000 test cycles with a load of 1000 g and a CS10 wheel according to EN ISO 7784-2.

**Evaluation and verification:** The applicant will submit a test report demonstrating compliance with this criterion using the EN ISO 7784-2 method.

### **CRITERION 3(e). Exposure to Weather Conditions (For Outdoor Paints and Varnishes)**

Wood and metal coatings, including masonry covering paints and varnishes, will be exposed to artificial weather conditions in accordance with ISO 11507 in fluorescent UV lamps and apparatus containing condensation or water spray. These will be exposed to test conditions for 1000 hours. The test conditions are specified as 4 h/60 °C + humidity Tu 4 h/50 °C.

Alternatively, outdoor wood paints and wood varnishes will be exposed to UV(A) rays and spraying for 1000 hours in a QUV accelerated weathering weatherproofing device according to EN 927-6.

According to ISO 7724-3, the color change of samples ( $\Delta E^*$ ) exposed to weather conditions will not be greater than 4. This criterion does not apply to varnishes and bases.

For glossy paints and varnishes exposed to weather conditions, the gloss reduction will not be more than 30% of the initial value and will be measured according to ISO 2813. This requirement does not apply to medium gloss and matte surfaces with an initial brightness value of less than 60% at an angle of arrival of 60°.

Chalking will be tested using the TS EN ISO 4628-6 method on wall finishes and wood and metal surfaces (where applicable) after the samples have been exposed to weather conditions. Coatings will receive a score of 1.5 or better (0.5 or 1.0) in this test.

After the samples are exposed to weather conditions, the following parameters will also be evaluated on the wall finishes and wood and metal surfaces:

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

Cracking according to TS EN ISO 4628-4; crack amount 2 or less, crack size 3 or less

Blistering according to TS EN ISO 4628-2; bubble density 3 or less, bubble size 3 or less.

Tests should be performed on the basis of coloring.

**Evaluation and verification:** The applicant will submit test reports using ISO 11507 or EN 927-6 or both according to the specified parameters. The applicant will submit test reports using EN ISO 4628-2, -4, -5, -6 and, where applicable, a test report in accordance with ISO 7724-3.

#### **CRITERION 3(f). Water Vapor Permeability**

When a declaration is made that exterior wall and concrete paints are breathable, the paint will be classified as class II (V II) (medium vapor permeability) according to EN1062-1 or according to the EN ISO 7783 test method.

Due to the large number of potential colors, this criterion will be limited to testing the base paint.

**Evaluation and verification:** The applicant will submit a test report using the methodology of EN ISO 7783 and classification according to EN1062-1.

#### **CRITERION 3(g). Liquid Water Permeability**

When it is stated that exterior wall and concrete paints are water repellent or elastomeric, the coating will be classified as class III (W III -low liquid permeability) according to EN 1062-1 according to the EN 1062-3 method.

Due to the large number of potential colors, this criterion will be limited to the testing of the base dye.

All other wall paints will be classified according to EN1062-1 class II (W II -medium liquid permeability) or EN 1062-3 test method.

**Evaluation and verification:** The applicant will submit a test report using the methodology of EN 1062-3 and classification according to EN1062-1.

#### **CRITERION 3(h). Fungal and Algae Resistance**

When making a declaration that exterior cladding and wood paints have anti-fungal and anti-algae properties, the following requirements will be determined using EN 15457 and EN 15458.

- Wall paints will have a grade 1 or lower (1 or 0) score for fungal resistance (i.e. less than 10% fungal coverage) and a grade 1 or lower score for algae resistance.
- Wood paints will receive 0 points for fungus resistance and 0 points for algae resistance.

Due to the large number of possible colors, this criterion will be limited to the test of the base dye.

**Evaluation and verification:** The applicant will submit a test report using the method in EN 15457 and EN 15458.

**CRITERION 3(i). Crack covering**

If a claim is made that the wall (or concrete) paint has elastomeric properties, the paint should be classified as at least A1 at 23 ° C according to TS EN 1062.

Due to the large number of coloring options, this criterion will be limited to the testing of the base paint.

**Evaluation and verification:** The applicant will submit a test report using the TS EN 1062-7 methodology.

**CRITERION 3(j). Alkali resistance**

Wall paints and primers should not show any noticeable damage when the coating is stained with a 10% NaOH solution according to the ISO 2812-4 method for 24 hours. The evaluation is carried out after 24-hour drying-recovery.

**Evaluation and verification:** The applicant will submit a test report using the ISO 2812-4 methodology.

**CRITERION 3(k). Corrosion resistance**

The simulated corrosion stresses shall be applied to a substrate for grading purposes according to the appropriate atmospheric corrosion category or categories in EN ISO 12944-2 and the accompanying test procedures specified in EN ISO 12944-6. Anti-rust paints for steel surfaces will be tested after 240 hours of salt spray in accordance with ISO 9227.

The results will be graded using ISO 4628-2 for blistering and ISO 4628-3 for rusting. The paint will achieve a result that is worse than size 3 and density 3 in bubbling, and no worse than Ri2 in rusting testing.

**Evaluation and verification:** The applicant will submit test and rating reports to verify compliance with this criterion.

**CRITERION 4. The Content of Volatile and Semi-Volatile Organic Compounds**

The maximum content of Volatile Organic Compounds (VOC) and Semi-Volatile Organic Compounds (SVOC) shall not exceed the limits given in Table 3.

The content of VOCs and SVOCs will be determined for the ready-to-use product and will include recommended additions prior to application, such as colorants and/or thinners.

Paint and varnish products with VOC content in accordance with the limits in Table 4 can indicate '*reduced VOC content*' and VOC content in g/l next to the Turkish Environmental Label logo to be used on the packaging.

**Table 3. VOC and SVOC content limits in paint products**

<b>Product groups</b>	<b>VOC limits (g/l, including water)</b>	<b>SVOC limits (g/l, including water)</b>
a. Interior matt walls and ceilings (Brightness < 25@60°)	10	30 <sup>(1)</sup> /40 <sup>(2)</sup>
b. Interior bright walls and ceilings (Brightness >25@60°)	40	30 <sup>(1)</sup> /40 <sup>(2)</sup>
c. The outer walls of the mineral substrate	25	40
d. Interior/exterior coating and coating paints for wood and metal	80	50 <sup>(1)</sup> /60 <sup>(2)</sup>
e. Interior trim varnishes and woodstains, including opaque woodstains	65	30
f. Opaque wood paints, including exterior coating varnishes and wood paints	75	60
g. Minimally structured wood paints in Indoor and outdoor areas	50	30 <sup>(1)</sup> /40 <sup>(2)</sup>
h. Primers	15	30 <sup>(1)</sup> /40 <sup>(2)</sup>
i. Binding primers	15	30 <sup>(1)</sup> /40 <sup>(2)</sup>
j. One-component performance coatings	80	50 <sup>(1)</sup> /60 <sup>(2)</sup>
k. Two-component reactive performance coatings for specific ends, such as floors	80	50 <sup>(1)</sup> /60 <sup>(2)</sup>
l. Coatings with decorative effect	80	50 <sup>(1)</sup> /60 <sup>(2)</sup>
Anti-rust paints	80	60
<sup>(1)</sup> Indoor white paints and varnishes		
<sup>(2)</sup> Indoor colored paints/outdoor paints and varnishes		

The VOC content will be determined by calculation based on ingredients and raw materials, or using the methods given in ISO 11890-2<sup>26</sup>, or alternatively using the methods given in ISO 17895 for products with a VOC content of less than 1.0 g/L. The SVOC content will be determined using the method given in ISO 11890-2. The markers given in Table 5 will be used as the basis for limiting Gas Chromatography results for SVOCs. For products used both indoors and outdoors, the strictest SVOC limit value for indoor paints will apply.

**Table 4. Marker compounds to be used in the determination of SVOC content**

	Polar systems (water-based coating products)	Non-polar systems (solvent-based coating products)
SVOC	Dietil adipattan ( $C_{10}H_{18}O_4$ ) and metilpalmitata ( $C_{17}H_{34}O_2$ )	n-Tetradekan ( $C_{14}H_{30}$ ) and n-Docosan ( $C_{22}H_{46}$ )

**Evaluation and verification:** The applicant will submit a test report showing the VOC content of the ready-to-use product, compliance using the methods given in ISO 11890-2 or ISO 17895<sup>27</sup>, or a declaration of conformity supported by calculations based on paint ingredients and raw materials. Information on calculation methodology is given in Annex-I.

The applicant will submit a test report using the SVOC content of the ready-to-use product using the method given in ISO 11890-2 or a declaration of conformity supported by calculations based on paint contents and raw materials. The test should be performed with reference to the markers specified in Table 4. At the request of the Certification Body, applicants may be required to verify the calculations using the specified test method.

#### **CRITERION 5. Restriction of hazardous substances and mixtures**

The final product will not contain dangerous substances and mixtures in accordance with the rules set out in the following sub-criteria:

- Hazard classifications and risk statements
- Substances of Very High Concern
- Other specific substances listed

Applicants are required to prove that the final product formulation complies with the general evaluation and verification requirements, together with the additional requirements contained in Annex-II.

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<sup>26</sup> Paints and varnishes. Determination of volatile organic compounds (VOC) and/or semi volatile organic compounds (SVOC) content Gas-chromatographic method

<sup>27</sup> Paints and varnishes. Determination of the volatile organic compound content of low-VOC emulsion paints (in-can VOC)

**CRITERION 5(a). General restrictions on hazard classifications and risk expressions**

The final product formulation shall not contain substances or mixtures classified as toxic, environmentally harmful, respiratory or skin sensitizing or carcinogenic or toxic for reproduction in accordance with the Regulation on the Classification, Labelling and Packaging of Substances and Mixtures, unless expressly excluded in the Annex-II, including all intentionally added ingredients present in a concentration higher than 0.010%. The restricted hazard classifications and their classification are indicated in Table 5.

**Table 5. Restricted substance hazard classes**

Acute toxicity	
Categories 1 and 2	Category 3
H300 is lethal if swallowed (R28)	H301 Toxic if swallowed (R25)
H310 Lethal in contact with skin (R27)	H311 Toxic in contact with skin (R24)
H330 is lethal if inhaled (R23/26)	H331 Toxic by inhalation (R23)
H304 May be fatal if swallowed and enters the respiratory tract (R65)	EUH070 Toxic in case of eye contact (R39/41)

Specific target organ toxicity	
Category 1	Category 2
H370 Causes damage to organs (R39/23, R39/24, R39/25, R39/26, R39/27, R39/28)	H371 May cause damage to organs (R68/20, R68/21, R68/22)
H372 Causes damage to organs (R48/25, R48/24, R48/23)	H373 May cause damage to organs (R48/20, R48/21, R48/22)

Respiratory and skin sensitivity	
Category 1A	Category 1B
H317: May cause an allergic skin reaction (R43)	H317: May cause an allergic skin reaction (R43)
H334: May cause allergies, asthma symptoms or breathing difficulties if inhaled (R42)	H334: May cause allergies, asthma symptoms or breathing difficulties if inhaled (R42)

Carcinogenic, mutagenic or reproductively toxic	
Categories 1A and 1B	Category 2
H340 may cause genetic damage (R46)	H341 Suspected of causing genetic defects (R68)
H350 May cause cancer (R45)	H351 Suspected of causing cancer (R40)
H350i may cause cancer if inhaled (R49)	
H360F May harm fertility (R60)	H361f Suspected of harming fertility (R62)
H360D May cause harm to the unborn child (R61)	H361d Suspected of harming an unborn child (R63)
H360FD Can damage fertility. May cause harm to the unborn child (R60, R60/61)	H361fd is suspected of harming fertility. There is a suspicion of harming the unborn child (R62/63)
H360Fd Can damage fertility. There is a suspicion of harming the unborn child (R60/63)	H362 May cause harm to breastfed children (R64)
H360Df May harm the unborn child. There is a suspicion of damage to fertility (R61/62)	

Harmful to the Aquatic Environment	
Categories 1 and 2	Categories 3 and 4
H400 Very toxic to aquatic life (R50)	H412 Long-lasting, harmful effect in the aquatic environment (R52/53)
H410 Long-lasting, very toxic effect in aquatic environment Acute toxic T or T+ Specific target organ toxic substance (R50/53)	H413 May have long-term effects on aquatic life (R53)
H411 Long-lasting, toxic effect in the aquatic environment (R51/53)	
Harmful to the ozone layer	
EUH059 Harmful to the ozone layer (R59)	

Applicants are required to calculate the hazard classification of the final paint product in order to prove compliance. This will be in accordance with the methods for the classification of mixtures contained in the

Regulations on the Classification, Labelling and Packaging of Substances and Mixtures (SEA) and all legislation making amendments.

The final product shall not be classified and labelled as acute toxic, specific target organ toxic, respiratory or skin sensitising or carcinogenic, mutagenic or toxic for reproduction, harmful to the environment in accordance with SEA.

**CRITERION 5(a)(i). Exemptions applied to groups of substances**

For the purposes of this product group, exemptions have been granted for certain groups of substances that may be present in the final product. These exemptions stipulate the hazard classifications that are exceptionally applied for each specific group of substances, as well as the relevant exemption conditions and applicable concentration limits. The exemptions are specified in Annex-II and applicable for the following groups of items:

1. Preservatives added to colorants, binders and final product:

- (a) In-box protectors
- (b) Coloring machine protectors
- (c) Dry film protectors
- (d) Preservative stabilizers

2. Drying and anti-skinning agents

- (a) Drying agents
- (b) Anti-skinning substances

3. Corrosion inhibitors

- (a) Corrosion inhibitors
- (b) Prevention of verdigris

4. Surfactants

- (a) General purpose surfactants
- (b) Alkylphenoxyethoxylates (APEOS)
- (c) Perfluorinated surfactants

5. Various functional substances for general application

- (a) Silicone resin emulsion in white paints, coloring agents and coloring bases
- (b) Metals and their compounds
- (c) Mineral raw materials, including fillers
- (d) Neutralizing substances
- (e) Optical whiteners
- (f) Pigments



6. Various functional substances that require specialization

- (a) UV protectors and stabilizers
- (b) Plasticizers

7. Residual substances that may be present in the final product

- (a) Formaldehyde
- (b) Solvents
- (c) Unreacted monomers
- (d) Volatile Aromatic Compounds and halogenated compounds.

**CRITERION 5(a)(ii). Exemptions applicable to production sites**

In case of exceptions for acute toxins or certain target organ toxins, additional conditions for the production of paints and varnishes will apply. In this case, applicants will provide evidence that they meet the following requirements:

- Substances for which the classification as acutely toxic or specific target organ toxins applies, must comply with the Occupational Exposure Limit Values ( MMKSDs ) specified in the Regulation on Health and Safety Measures in Working with Chemical Substances. MMKSDs for the substance(s), with the strictest application;
- Where there is no MMKSD reference, the applicant shall declare practices to demonstrate how health and safety procedures for handling the substance(s) entering the production facilities for the environmentally labelled paint product minimize exposure;
- Substances for which classification as aerosol or vapor is valid, employees are released in this form;
- Substances for which the classification applies in dry forms shall indicate that workers cannot come into contact with the substance in this form during production.

**Evaluation and verification:** The applicant will demonstrate his/her compliance with this criterion by submitting a classification and/or non-classification statement for the following:

The final paint or varnish product based on the methodologies for the classification of mixtures under SEA and all amended legislation

Components of the paint or varnish formula that fall into the groups of substances listed in 5(a)(i) and are present in concentrations of more than 0.010%

This statement will be based on the information collected in accordance with the requirements given in Annex-II.

Within the scope of SEA, the active ingredients to which certain concentration limits may be applied and which may fall below the cut-off value of 0.010% will also be defined.

The following technical information will be provided to support the declaration of classification or non-classification of the contents:

(i) for substances that are not registered under the Regulation on Registration, Evaluation, Authorization, and Restriction of Chemicals (Kimyasalların Kaydı, Değerlendirilmesi, İzni ve Kısıtlanması KKDİK) or do not yet have a harmonized SEA classification: information that meets the requirements listed in KKDİK Annex-VII.

(ii) For substances registered under the KKDİK that do not meet the requirements for SEA classification: Information based on the KKDİK file confirming the unclassified status of the substance;

(iii) For substances with a harmonized classification or self-classified: safety data sheets, if any. If these are not available or the substance is self-classified, information on the hazard classification of substances according to KKDİK Annex-II will be provided.

Substances and mixtures will be characterized in accordance with KKDİK Annex-II Section 10, 11, 12 (Requirements for the Compilation of Safety Data Sheets). This will include information on the physical shape and condition of the components and will include the identification of manufactured nanomaterial components in which 50% or more of the particles in the number size distribution have one or more external dimensions in the size 1 nm-100 nm.

The applicant will also identify the substances and mixtures used in the formulation of the paint and which fall within the scope of the special exception requirements specified in the Annex of regulation. For each exceptional substance or mixture, supporting information will be provided showing how the exceptional requirements are met.

#### **CRITERION 5(b). Restrictions Applied to Substances of Very High Concern**

The final product and any ingredient or raw material will not contain following substances, unless specifically exempted:

- Meeting the criteria in the article 47 of the KKDİK;
- It is defined according to the procedure described in Article 49(1) of KKDİK and creates a List of Candidates for Substances of Very High Concern.

No exceptions will be made for substances that meet one or both of these conditions and are found in concentrations higher than 0.10% (by weight) in a paint or varnish product.

**Evaluation and verification:** The applicant will submit a declaration of conformity to this criterion, supported by declarations of conformity signed by their suppliers. Applicants should submit that they have carried out the screening of incoming substances according to the current List of Candidates for Substances of Very High Concern and respective article of KKDİK Article 47.

#### **CRITERION 5(c). Restrictions on certain dangerous substances**

The final product shall not contain hazardous substances specifically identified in the Annex at or above the specified concentration limits.

The restrictions on substances in the Annex apply to the following paint and varnish ingredients and residues:

- (i) Dry film preservatives
- (ii) Coloring machine guards
- (iii) In-box protectors
- (iv) Preservative stabilizers
- (v) Alkylphenolethoxylates ( APEOs ) surfactants
- (vi) Perfluorinated surfactants
- (vii) Metals and their compounds
- (viii) Pigments
- (ix) Plasticizers
- (x) Free formaldehyde

**Evaluation and verification:** Verification and testing requirements are as set out in the Annex for each substance and relate to specific forms of paints and varnishes.

#### **CRITERION 6. Consumer Information**

Regarding consumer information, the Regulation on Classification, Labelling, and Packaging of Substances and Mixtures, the Market Surveillance and Control Regulation, and the legend information or relevant emblems specified below should be found on the product label or the manufacturer's website.

##### **CRITERION 6(a). The following texts will be placed on the packaging or attached to the packaging:**

- 'Minimize paint waste by estimating how much paint you will need'
- 'Save unused paint for reuse'
- 'The reuse of paint can effectively minimize the life cycle environmental impacts of products'

##### **CRITERION 6(b). The following information will be placed on the packaging or attached to the packaging:**

- How to estimate the amount of paint needed before purchasing to minimize paint waste and the recommended amount as a guide (for example, required for 1 m<sup>2</sup> wall x liter of paint).

##### **CRITERION 6(c). The following advice and recommendations on how to handle the paint should be attached to or on the packaging:**

- Security measures for the user. This will include basic recommendations on the personal protective equipment that should be worn. It will also include additional precautions that must be taken when using spraying equipment.
- The use of cleaning equipment and proper waste management (to limit water and soil pollution). For example, the text advising that unused paint requires special treatment for safe disposal into the environment and therefore should not be disposed of with household or commercial waste (for example, 'Do not throw residual paint in the kitchen sink or toilet or in the trash can').
- Regarding consumer information, the Regulation on Classification, Labeling and Packaging of Substances and Mixtures, the Market Surveillance and Inspection Regulation and the following legend information or relevant emblems must be included on the product label or on the manufacturer's website.

- Storage of the paint under appropriate conditions (before and after opening), including safety recommendations where appropriate.

**Evaluation and verification:** The applicant will declare that the product complies with the requirement and, as part of the application, submit drawings or samples of user information to the authorized organization and/or a link to the manufacturer's website containing this information.

#### **CRITERION 7. Information on the Environmental Label**

The instructions for the use of the label are found in the section "[Environmental Label User's Manual](#)" on the website:

The Ministry should be contacted to declare the low environmental impact statement on the final product label related to the criteria specified below:

- Minimum hazardous substance content;
- Reduced volatile organic compound (VOC) content: x g/L;
- Good performance for indoor use (when indoor criteria are met); or
- Good performance for outdoor use (when outdoor criteria are met); or
- Good performance for both indoor and outdoor use (when both indoor and outdoor criteria are met).

**Evaluation and verification:** The applicant will provide a sample of the product label with a declaration of compliance with this criterion or a visual of the packaging in which the Environmental Label is placed.

## Annex I

### Theoretical Calculation for VOC Content

**VOC:** For all product categories except low solids coatings, the VOC content of the product is determined according to the following theoretical calculation:

$$\text{VOC} = \frac{W_s - W_w - W_{ec}}{V_s - V_w - V_{ec}}$$

where:

- VOC is the VOC content in grams per liter, excluding water and exempt compounds (also known as "Coating VOC").
- $W_s$  is the weight of volatile compounds in grams.
- $W_w$  is the weight of water in grams.
- $W_{ec}$  is the weight of exempt compounds in grams.
- $V_s$  is the coating volume in liters.
- $V_w$  is the water volume in liters.
- $V_{ec}$  is the volume of exempt compounds in liters.

**For low solids content products:** the VOC content of the product is calculated according to the following theoretical calculation:

$$\text{VOC} = \frac{W_s - W_w - W_{ec}}{V_m}$$

where:

- VOC is the actual VOC in grams per liter (also known as "Material VOC").
- $W_s$  is the weight of volatile compounds in grams.
- $W_w$  is the weight of water in grams.
- $W_{ec}$  is the weight of exempt compounds in grams.
- $V_m$  is the coating volume in liters.

Exempt compounds are those defined by the U.S. EPA<sup>28</sup>. The VOC content will exclude colorants added at the point of sale and VOCs produced as a result of on-site chemical or curing reactions. For multi-component products, the VOC content will be determined based on the total of all components using the appropriate calculation.

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<sup>28</sup> [https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-51#se40.2.51\\_1100](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-51#se40.2.51_1100)

*Annex II*

*Restriction and Reduction List of Hazardous Substances*

The term "a/a" used in the table is employed to define the weight percentage expression, representing the weight fraction of a substance in a unit product by weight.

Item group	Scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
1. Preservatives added to colorants, binders and final product			

(i) Rules regarding the biocide permit status

The paint formulation shall contain only preservatives that meet the requirements of 1a, 1b and 1c (as applicable) permitted under Directive 98/8/EC<sup>29</sup> (1) of the European Parliament and of the Council and Regulation (EU) No. 528. / 2012 and the Evaluation Report provides a risk assessment for professional and/or consumer (non-professional) use. Applicants should consult to the most up-to-date authorization list.

(ii) The permissible amounts of in-box and dry film preservatives in the ready-to-use product

In-box and dry film preservatives can be used in indoor and outdoor products according to the total concentrations detailed in the following table.

**The sum of the total preservatives allowed in paint and varnish products**

Type of protection	Interior products	Outdoor products
In-box preservatives	%0,060	%0,060
Dry film preservatives Exceptions: (i) Paints intended for use in areas with high humidity (ii) IPBC combinations for outdoor protection	Not allowed  %0,10  A defined limit value is not applicable	%0,30  A defined limit value is not applicable %0,65
The sum of the total preservatives	%0,060	%0,360
Exceptions (i) or (ii) with 0.160% for dry film protection	%0,160	%0,710

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<sup>29</sup> Biocidal Products Directive

(iii) Permissible amounts of isothiazolinone substances and compounds in the ready-to-use product

The total amount of isothiazolinone compounds in any paint or varnish product may not exceed 0.050% (500 ppm), except for outdoor wood paints and varnishes, which do not exceed 0.20%. The use of the following preservatives is exempt, subject to certain limitations on their contribution to the total of isothiazolinone compounds in the final ready-to-use product.

2-methyl-2H-isothiazole-3-one: 0.0200%

1,2-Benzisothiazole-2(2H)-one: 0.0500%

2-Octyl-2H-Isothiazole-3-one: 0.0500% 5-chloro-2-methyl-4-isothiazoline-3-one, except outdoor wood paints and varnishes, where it can be used in higher concentrations 5-chloro-2-methyl-4-isothiazoline-3-one/

2-methyl-4-isothiazoline-3-one: 0.0015%

<b>1. Preservatives added to colorants, binders and final product</b>			
Item group	The scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
(a) In-box preservatives  Applicability  All products unless otherwise stated	In-box preservatives classified with the following exceptional hazard classifications can be used on eco-labeled products:  Exceptional classifications: H331, H400, H4, H411, H412, H317  In-box protectors classified with these exceptional classifications must also meet the following exception conditions:  - The total concentration shall not exceed 0.060% w/W.  - Substances classified with H400 and/or H410 should not be bio accumulative. Non-bio accumulative substances should have a LogKow ≤ 3.2 or	In-box protectors  In the final product total:  0.060% a/a  Concentration limit:  %0,050  %0,050	Verifying:  Declaration of the applicant and the binder supplier, supported by CAS numbers and classifications of the active ingredients in the final product and binder.  This will involve the calculation of the concentration of active ingredients in the final product by the applicant.  Article 58(3) of the Biocide Regulation (EU) No. 528/2012  in accordance with the requirements, all active components manufactured in which 50% or more of the particles in the number size distribution have one or more

	<p>a Bioconcentration Factor (BCF) <math>\leq 100</math>.</p> <p>- It is mandatory to prove the authorization conditions in accordance with Directive 98/8 / EC and (EU) Regulation.</p> <p>No. 528/2012 is complied with for the product.</p> <p>— In cases where preservatives with formaldehyde donors are used, the formaldehyde content and emissions from the final product must meet the requirements of article restriction 7(a).</p> <p>Specific concentration limits apply for the following preservatives:</p> <p>(i) Zinc pyrithione</p> <p>(ii) N-(3-aminopropyl)-N-dodecylpropane-1, 3-diamine</p>		<p>external substances, sizes in the size range of 1 nm-100 nm will be defined.</p>
<p>(b) Coloring (dyeing) machine preservatives</p>	<p>the exceptional hazard classifications and exception conditions listed in 1(a) will also apply to preservatives used to protect color shades while stored in machines before mixing with base paints.</p> <p>The total amount of preservatives added to protect the color tones to be distributed from the machines cannot exceed 0.20% by weight/weight.</p> <p>The following preservatives indicate that the preservatives in the colorant are</p>	<p>In the Colorant the sum of the savers:</p> <p>0.20% w/w</p>	<p>Verifying:</p> <p>The applicant and/or the tint supplier, in the final product and in the binder</p> <p>a statement of the active ingredients supported by CAS numbers and classifications.</p> <p>This will involve calculating the concentration of the active ingredient in the final tint product.</p> <p>In accordance with the requirements of Article 58(3) of the Biocide Regulation (EU) No. 528/2012, 50% or more of the</p>



	<p>it is subject to certain maximum concentration limits that contribute to its total:</p> <p>(i) 3-iodo-2-propynyl butylcarbamate (IPBC)</p> <p>(ii) Zinc pyrithione</p> <p>(iii) N-(3-aminopropyl)-N-dodecylpropane-1,3-diam</p>	<p>%0,10</p> <p>%0,050</p> <p>%0,050</p>	<p>particles in the number size distribution have one or more external substances</p> <p>all manufactured active ingredients sizes in the size range of 1 nm-100 nm will be determined.</p>
<p>(c) Dry film protectors</p> <p>Applicability:</p> <p>Outdoor paints, special for applications interior paints</p>	<p>Dry film protectors and their stabilizers, classified by the following exceptional hazard classifications, can be used on all outdoor products and only on certain indoor products:</p> <p>Exceptional classifications: H400, H410, H411, H412, H317</p> <p>Dry film protectors classified with these exceptional classifications must also meet the following exception conditions:</p> <ul style="list-style-type: none"> <li>- The total total concentration shall not exceed 0.10% a/a or 0.30% a/a (as applicable).</li> <li>- Substances classified with H400 and/or H410 will not be bioaccumulative. Non-bioaccumulative substances will have a Log Kow <math>\leq</math> 3.2 or a Bioconcentration Factor (BCF) <math>\leq</math> 100.</li> </ul>	<p>Dry film preservatives</p> <p>In the final product total:</p> <p>Indoor paints intended for use in areas with high humidity, including kitchens and bathrooms 0.10% w/w</p> <p>Paint the entire exterior wall in their applications 0.30% w/w</p>	<p>Verifying:</p> <p>Of the applicant and the binding supplier,</p> <p>a statement of the active ingredients in the final product and in the binder, supported by CAS numbers and classifications.</p> <p>This will involve the calculation of the concentration of active ingredients in the final product by the applicant.</p> <p>Article 58(3) of the Biocide Regulation (EU) No. 528/2012 according to the requirements, 50% or more of the particles in the number size distribution</p> <p>all manufactured active ingredients with one or more external substances in excess of 1 nm-100 nm size</p> <p>the dimensions in the range will be determined.</p>

	<p>- Proof of compliance with the conditions specified in the Permit conditions for preservatives in accordance with the Biocide Directive 98/8 / EC and the Biocide Regulation (EU) 528/2012 will be provided.</p> <p>A higher total applies only to the following dry film protectors for the specified applications:</p> <p>3-iodo-2-propynyl butylcarbamate (IPBC) combinations Outdoor paints and varnishes</p> <p>Special concentration limits apply to the following preservatives:</p> <p>Zinc pyrithione</p>	<p>IPBC combinations for outdoor space</p> <p>the sum of his paints</p> <p>%0,650</p> <p>%0,050</p>	
(d) Protective stabilizer	<p>The use of zinc oxide as a stabilizer has been excluded for dry film protective combinations requiring zinc pyrithione or 1,2 Benzisothiazole-3(2H)-one (BIT).</p>	0,05%	<p>Verifying:</p> <p>Declaration of the applicant and raw material suppliers</p>

<b>2. Drying and anti-skinning agents</b>			
Item group	The scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
(a) Dryers	<p>Exceptional classifications: H301, H317, H373, H412, H413</p>	Total drier content	Verifying:

Applicability: Opposite unless stated all paint products	In addition, cobalt driers in alkyd paints classified with H400 and H410 are exempt only up to the following concentration limit for white and light coloured paints.	0.10% a/a Cobalt drier content %0,050	The declaration will be provided by the applicant and raw material suppliers, supported by CAS numbers and classifications.
(b) Anti-skinning agents Applicability: All paint products	Exceptional classifications: H412, H413, H317	%0,40 a/a	Verifying: Declaration, applicant and raw material suppliers by CAS numbers and classifications it will be provided with support.

<b>3. Corrosion inhibitors</b>			
Item group	The scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
(a) Anti-corrosion pigments Applicability: When Necessary	Exceptional classifications: H410, H411 H412, H413 Concentration limits to be applied: (i) Paints Directive 2004/42/EC classes d, i, j (ii) All other products	%8,0 a  %2,0 a/a	Verifying: The declaration will be provided by the applicant and his raw material suppliers supported by SDS.
(b) Verdigris prevention Applicability:	Exceptional classifications: H412, H413	%0,50 a/a	Verifying: The declaration will be provided by the applicant and raw material suppliers, supported by CAS numbers and classifications.

When Necessary			
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<b>4. Surfactants</b>			
Item group	The scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
<p>(a) General purposeful surfactants</p> <p>Applicability: Surfactants used in all products.</p>	<p>Exceptional classifications: H411, H412, H413</p> <p>The following total, total values apply to the ready-to-use final product:</p> <ul style="list-style-type: none"> <li>- White and light colored products</li> <li>- All other colors</li> </ul> <p>The exception applies to the surfactant formulation provided to the paint manufacturer. Special restrictions apply to alkylphenoethoxylates (APEOS) and Perfluorinated surfactants.</p>	<p>Total of surfactants in the ready-to-use product:</p> <p>1.0% a/a</p> <p>3.0% a/a</p>	<p>Verifying:</p> <p>The declaration will be provided by the applicant, raw material suppliers and/or their surfactant supplier, supported by CAS Numbers and classifications related to the surfactants used.</p>
<p>(b) Alkylphenol-toxylates (APEOS)</p> <p>Applicability: Surfactants used in all products.</p>	<p>Alkylphenoethoxylates (APEOS) and their derivatives shall not be used in any paint or varnish preparations or formulations.</p>	-	<p>Verifying:</p> <p>A declaration of non-use supported by the CAS Numbers and classifications of the surfactants used will be submitted by the applicant and the raw material suppliers.</p>

<p>(c) Perfluorinated surfactant ingredients</p> <p>Applicability:</p> <p>Surfactants used in certain products</p>	<p>As specified in the following OECD definition, long-chain perfluorinated surfactants will not be used:</p> <p>(i) Perfluorocarboxylic acids with carbon chain length <math>\geq C8</math>, including perfluorooctanoic acid (PFOA);</p> <p>(ii) Perfluoroalkyl sulfonates with a carbon chain length <math>\geq C6</math>, including perfluorohexane sulfonic acid (PFHxS) and perfluorooctane sulfonate (PFOS); and</p> <p>(iii) The relevant compounds that may degrade into the substances defined in (i) or (ii) shall not be present as residues in the surfactant or in the paint or varnish product.</p> <p>perfluorinated surfactants that do not meet (i), (ii) or (iii) can only be used in paint that must be waterproof or repellent (see efficiency criteria 3(b) and 3(g), respectively) and must have a spread ratio greater than 8 m<sup>2</sup>/l (see usage efficiency criteria 3(a).</p>	<p>-</p>	<p>Verification: A declaration of non-use will be submitted by the applicant and raw material suppliers, supported by the identification of the CAS numbers and chain length of the surfactants used.</p>
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5. Various functional substances for general application			
Item group	The scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
<p>(a)</p> <p>Silicon resin emulsion in white paints, colourant and tinting bases</p> <p>Applicability: All paint products</p>	<p>Exceptional classifications: H412, H413</p>	%2,0 a/a	<p>Verification: The declaration will be provided by the applicant and raw material suppliers, supported by CAS numbers and classifications.</p>
<p>(b) Metals and their compounds</p> <p>Applicability: All products</p>	<p>The following metals or their compounds will not be present in the product or the components used in it above the specified cutting limit:</p> <p>Cadmium, lead, chromium VI, mercury, arsenic, barium, selenium, antimony and cobalt.</p> <p>The following exceptions apply:</p> <ul style="list-style-type: none"> <li>- Barium, antimony and cobalt in pigments (see Fig. restriction 5(f))</li> <li>- Cobalt in dryers (see Fig. restriction 2(a))</li> </ul>	0.010% Shear per listed metal	<p>Verification: The declaration of the applicant and the raw material suppliers.</p>
<p>(c) Mineral raw materials, including fillers</p>	<p>Mineral raw materials, including crystalline silica and crystalline silica-containing leucophyllite minerals, are covered by the exception for H373.</p>		<p>Verifying:</p> <p>The declaration will be provided by the applicant and raw material suppliers, supported by CAS numbers and classifications.</p>

<p>Applicability: All paint products</p>	<p>Mineral raw materials containing metals specified in restriction 5(b) may be used if laboratory tests show that the metal is bound in a crystal lattice and insoluble (see the appropriate test method).</p> <p>The following fillers are exceptions on this basis it is covered by:</p> <p>Nepheline syenite containing barium</p>		<p>Candidates who wish to use binders containing restricted metals will submit test reports conducted in accordance with the listed standard.</p> <p>Test method: DIN 53770-1 or equivalent</p>
<p>(d) Neutralizer agents</p> <p>Applicability: All paint products unless specified</p>	<p>Exceptional classifications: H311, H331, H400, H410, H411, H412, H413</p> <p>The following concentration limits will apply:</p> <ul style="list-style-type: none"> <li>- Varnishes and floor paints</li> <li>- All other products</li> </ul>	<p>%1,0 a/a %0,50 a/a</p>	<p>Verifying: Declaration, applicant and his raw material suppliers by CAS numbers and classifications it will be provided with support.</p>
<p>(e) Optical brightness</p> <p>Applicability: All paint products</p>	<p>Exceptional classifications: H413</p>	<p>%0,10 a/a</p>	<p>Verification: The declaration will be provided by the applicant and raw material suppliers, supported by CAS numbers and classifications.</p>
<p>(f) Pigments</p> <p>Applicability: All products</p>	<p>Pigments containing metals will be used only in cases where laboratory tests of the pigment show that the metal chromophore is bound into a crystal lattice and insoluble.</p> <p>The following metal-containing pigments have been excluded</p>	<p>-</p>	<p>Test results showing that the pigment chromophore is bound in a crystal lattice and insoluble.</p> <p>Test method: DIN 53770-1 or equivalent</p>

	<p>from use without the need for testing:</p> <ul style="list-style-type: none"> <li>- Barium sulfate</li> <li>- Antimony nickel in an insoluble TiO<sub>2</sub> cage</li> <li>- Cobalt aluminate blue spinel</li> <li>- Cobalt chromite blue-green spinel</li> </ul>		
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<b>6. Various functional substances that require specialization</b>			
Item group	The scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
<p>(a) Outdoor paints</p> <p>UV protectors for and stabilizing substances</p> <p>Applicability: Outdoor paints</p>	<p>Exceptional classifications: H317, H411, H412, H413.</p>	<p>%0,60 a/a</p>	<p>Verifying:</p> <p>The declaration will be provided by the applicant and raw material suppliers, supported by CAS numbers and classifications.</p>
<p>(b) In paint and varnish plasticizers</p> <p>Applicability:</p>	<p>The following phthalates should not be intentionally added as plasticizers:</p> <p>DEHP(Bis-(2-ethylhexyl)-phthalate)</p> <p>BBP (Butylbenzylphthalate)</p>	<p>Concentration limit for any phthalate:</p> <p>%0,010</p>	<p>Verifying:</p> <p>The declaration will be provided by the applicant and raw material suppliers, supported by CAS numbers and classifications.</p>



Included in the formulation places where it is performed	DBP (Dibutylphthalate)		
	DMEP (Bis2-methoxyethyl) phthalate		
	DIBP (Diisobutylphthalate)		
	DIHP (Di-C6-8-branched alkyphthalates)		
	DHNUP (Di-C7-11-branched alkyphthalates)		
	DHP (Di-n-hexylphthalate)		

<b>7. Residue in the final product</b>			
Item group	The scope of the restriction and/or exception	Concentration limits (if any)	Evaluation and verification
(a) Formaldehyde  Applicability: All products	<p>Free formaldehyde should not be intentionally added to the final product. The final product will be tested to determine the free formaldehyde content. The requirements for sampling for testing will reflect the product range.</p> <p>The following total limit value will be applied:</p> <p>The following exceptions are made to this requirement:</p> <p>(i) When preservatives with a formaldehyde donor are needed as an in-box preservative to protect a particular type of paint or varnish, and when a formaldehyde donor is used</p>	%0,0010	<p>Verifying:</p> <p>The free formaldehyde content will be determined for some of the white base or transparent coloring, which is theoretically estimated to contain the highest amount of formaldehyde. The content of the hue, which is theoretically estimated to contain the highest amount of formaldehyde, will also be determined.</p> <p>Test method:</p> <p>0.0010% limit value:</p> <p>Determination of in-box concentration using Mercoquant method.</p>

	<p>instead of an isothiazolinone preservative.</p> <p>(ii) In cases where polymer dispersions (binders) provide the function of formaldehyde donors instead of in-box preservatives through residual formaldehyde levels.</p> <p>In these cases, the total will not exceed the following limit value:</p>	%0,010	<p>If the result is not conclusive according to this method, high-performance liquid chromatography (HPLC) will be used to confirm the in-box concentration.</p> <p>0.010% limit value:</p> <p>(1) All dyes: Determination of in-box formaldehyde concentration by analysis using VDL-RL 03 or high-performance liquid chromatography (HPLC).</p> <p>and</p> <p>(2) Indoor paints and varnishes: detection by analysis according to ISO 16000-3. Emissions should not exceed 0.25 ppm at the first application and should be less than 0.05 ppm 24 hours after the first application.</p>
<p>(b) Solvents</p> <p>Applicability: All products</p>	<p>Exceptional classifications: H304</p>	%2,0 a/a	<p>Verifying:</p> <p>Declaration, applicant and his raw material suppliers by CAS numbers and classifications</p> <p>it will be provided with support.</p>
<p>(c) Unreacted monomers</p> <p>Applicability: Polymer binder</p>	<p>Unreacted monomers from binders, including acrylic acid, may be present in the final product up to the total limit.</p>	%0,050 a/a	<p>Verifying:</p> <p>Declaration, applicant and his raw material suppliers by CAS numbers and classifications</p>

systems			it will be provided with support.
(d) Volatile Aromatic Hydrocarbons and halogenated solvents  Applicability: All products	Volatile Aromatic Hydrocarbons and halogenated solvents will not be present in the final product.	residual limit of 0.01%  the value of	Verifying: Declaration, applicant and his raw material suppliers by CAS numbers and classifications  it will be provided with support.