

## Paints, varnishes and road markings

### Definition:

The product group 'Paints and Varnishes shall comprise indoor and outdoor paints and varnishes, woodstains and related products, as defined below, intended for use by professional users (please note that these are not industrial users).

'Road markings' are addressed separately as a specific product with distinct characteristics and performance requirements. The definition used for road markings is the outcome of the undertaken consultation based on the definitions from existing standards.

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| Paint formulation   |  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|---|--|--|---|----------------------------------|--|----|---|----|-------------------------------------|----|---|----|---|----|---|----|--|----|-----------------|----|-------------------------------|----|--|-----|----------------------------|-----|------------------|----|
|   |  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| 1.1   | Subject Matter (suggestion on how to draft the tender title)   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   | The purchase of paints and varnishes with a reduced environmental impact   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   |  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| 1.2   | Technical Specification (to be included in the terms of reference / technical specifications)  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   | <p><b>White pigment content</b></p> <p>Paints shall have a white pigment content (white inorganic pigments with a refractive index higher than 1,8) per m2 of dry film equal to or lower than:</p> <ul style="list-style-type: none"><li>• 38 g/m2 for indoor paints, with the exception of indoor wall paints claiming Class 1 wet scrub resistance (WSR) for which 40 g/m2 shall apply;</li><li>• 40 g/m2 for all outdoor paints.</li></ul> <p>Undercoats and primers shall have a white pigment content (white inorganic pigments with a refractive index higher than 1,8) per m2 of dry film equal to or lower than 25 g/m2</p>  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   | Verification:  | <p>The tenderer shall provide either:</p> <p>a) a calculation of the VOC content, supported, if available, by Safety Data Sheets or;</p> <p>b) a test report carried out according to ISO 11890-2. Products with a VOC content lower than 1.0 g/l shall be tested according to ISO 17895.</p> <p>Products which have been awarded the EU Ecolabel for paints and varnishes, as established in Commission Decision (EU) 2014/312/EU are deemed to comply.</p> |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   |  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   | <p><b>Content of Volatile Organic Compounds</b></p> <p>The maximum content of Volatile Organic Compounds (VOCs) shall not exceed the limits given in the Table below. The content of VOCs shall be determined for the ready-to-use product and shall include any recommended additions prior to application such as colourants and/or thinners.</p> <table><tr><th>Product description (with subcategory denotation according to Directive 2004/CE/42)</th><th>VOC limits (g/l including water)</th></tr><tr><td>Interior matt walls and ceilings (Gloss &lt;25@60°)</td><td>15</td></tr><tr><td>Interior glossy walls and ceilings (Gloss &gt;25@60°) 60</td><td>60</td></tr><tr><td>Exterior walls of mineral substrate</td><td>30</td></tr><tr><td>Interior/Exterior trim and cladding paints for wood and metal</td><td>90</td></tr><tr><td>Interior trim varnishes and woodstains, including opaque woodstains</td><td>75</td></tr><tr><td>Exterior trim varnishes and woodstains, including opaque woodstains</td><td>90</td></tr><tr><td>Interior and Exterior minimal build woodstains</td><td>75</td></tr><tr><td>Binding primers</td><td>15</td></tr><tr><td>One-pack performance coatings</td><td>15</td></tr><tr><td>Two-pack reactive performance coatings for specific end use such as floors</td><td>100</td></tr><tr><td>Decorative effect coatings</td><td>100</td></tr><tr><td>Anti-rust paints</td><td>90</td></tr></table> |  | Product description (with subcategory denotation according to Directive 2004/CE/42) | VOC limits (g/l including water) | Interior matt walls and ceilings (Gloss <25@60°) | 15 | Interior glossy walls and ceilings (Gloss >25@60°) 60 | 60 | Exterior walls of mineral substrate | 30 | Interior/Exterior trim and cladding paints for wood and metal | 90 | Interior trim varnishes and woodstains, including opaque woodstains | 75 | Exterior trim varnishes and woodstains, including opaque woodstains | 90 | Interior and Exterior minimal build woodstains | 75 | Binding primers | 15 | One-pack performance coatings | 15 | Two-pack reactive performance coatings for specific end use such as floors | 100 | Decorative effect coatings | 100 | Anti-rust paints | 90 |
| Product description (with subcategory denotation according to Directive 2004/CE/42) | VOC limits (g/l including water)   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Interior matt walls and ceilings (Gloss <25@60°)                                    | 15   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Interior glossy walls and ceilings (Gloss >25@60°) 60                               | 60   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Exterior walls of mineral substrate   | 30   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Interior/Exterior trim and cladding paints for wood and metal                       | 90   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Interior trim varnishes and woodstains, including opaque woodstains                 | 75   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Exterior trim varnishes and woodstains, including opaque woodstains                 | 90   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Interior and Exterior minimal build woodstains                                      | 75   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Binding primers   | 15   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| One-pack performance coatings   | 15   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Two-pack reactive performance coatings for specific end use such as floors          | 100  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Decorative effect coatings  | 100  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
| Anti-rust paints  | 90   |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   | Verification:  | <p>The tenderer shall provide either:</p> <p>a) a calculation of the VOC content, supported, if available, by Safety Data Sheets or;</p> <p>b) a test report carried out according to ISO 11890-2. Products with a VOC content lower than 1.0 g/l shall be tested according to ISO 17895.</p> <p>Products which have been awarded the EU Ecolabel for paints and varnishes, as established in Commission Decision (EU) 2014/312/EU are deemed to comply.</p> |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   |  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |
|   | <p><b>Product hazard labelling</b></p> <p>The final product shall not be classified as being acutely toxic, a specific target organ toxicant, carcinogenic, mutagenic or toxic for reproduction, hazardous to the environment, in accordance with Regulation (EC) No 1272/2008 (CLP Regulation), as indicated in Table 3.</p>  |  |   |                                  |  |    |   |    |                                     |    |   |    |   |    |   |    |  |    |                 |    |                               |    |  |     |                            |     |                  |    |

|  |  |  |
|--|--|--|
|  | Acute toxicity   | Acute Tox. 1<br>Acute Tox. 2<br>Acute Tox. 3   |
|  | Specific target organ toxicity - repeated exposure<br>Specific target organ toxicity - single exposure   | STOT RE 1 or 2<br>STOT SE 1, 2 or 3  |
|  | Carcinogenicity  | Carc. 1A<br>Carc. 1B<br>Carc. 2  |
|  | Germ cell mutagenicity   | Muta. 1A<br>Muta. 1B<br>Muta. 2  |
|  | Reproductive toxicity  | Repr. 1A<br>Repr. 1B<br>Repr. 2  |
|  | Hazardous to the aquatic environment   | Aquatic Acute 1<br>Aquatic Chronic 1 or 2  |
|  | <b>Verification:</b>   | The tenderer shall provide appropriate documentation confirming that the products to be supplied are not classified with the listed hazards.<br>The documentation of the mixture classification shall be provided in accordance with the rules provided in Regulation (EC) No 1272/2008 (CLP Regulation) and/or Safety Data Sheets.<br>Products which have been awarded the EU Ecolabel for paints and varnishes, as established in Commission Decision (EU) 2014/312/EU are deemed to comply. |
| <b>Hazardous ingredients</b>   |  |  |
| The paint shall be compliant with the restrictions presented in Table 5, which either restrict the presence of or limit the concentration of the indicated hazardous substances in the paint.  |  |  |
| Table 5 Paint hazardous ingredient requirements  |  |  |
| Ingredient   | Restriction or upper concentration limit   |  |
| Preservatives:   | Preservatives shall be non bio-accumulative <sup>1</sup> .   |  |
| Dry film preservatives:  | Dry film preservatives shall not be intentionally used with the exception of: - Indoor paints specifically required for high humidity areas with an upper concentration limit of 0.10% w/w - Outdoor paints with an upper concentration limit of 0.30% w/w |  |
| Alkylphenolethoxylates: Alkylphenolethoxylates (APEOs) and their derivatives shall not be used in any paint or varnish preparations or formulations.   | Shall not be intentionally used.   |  |
| Phthalates: Phthalates <sup>2</sup> identified as substances of very high concern and listed in the candidate list of the REACH Regulation <sup>3</sup> shall not be present in any paint or varnish preparations or formulations thereof. |  |  |
| Formaldehyde:  | 0.010% w/w   |  |
| Formaldehyde:<br>Free formaldehyde in the white base, tinting base and colour tint <sup>2</sup> :  |  |  |
| Metals: Cadmium, lead, chromium VI, mercury, arsenic, selenium.  | 0.010% w/w per metal or metallic complex/salt, as appropriate  |  |

|   | <sup>1</sup> An ingredient is considered bio-accumulative when Log Kow ≤ 4.0 or bio-concentration factor (BCF) ≤ 500.<br><sup>2</sup> In the case that a wide range of colour tints are to be used the bidder shall indicate which colour tint has the highest potential for formaldehyde release. A test report shall then only be requested for this tint.   |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|---|--|--|---------------|--------------------------------------|---|--|------------------------------|---|------------------------|--|-----------|---|---|---|-------------------------------------|---|---------------------------|-----------------------|----------------------------|---|
|   | <b>Verification:</b>   | <p>The tenderer shall provide appropriate documentation confirming compliance with the criterion, namely:</p> <ul style="list-style-type: none"><li>• for preservatives and APEOs: Safety Data Sheets for the product mixture.</li><li>• for phthalates: Safety Data Sheets for the product mixture .</li><li>• additionally for preservatives: a test report using OECD 305 Test Guideline can be used as an alternative to the Safety Data Sheet for the sole purpose of confirming that the preservatives used are non bioaccumulative.</li><li>• for formaldehyde: a test report based on the Merckoquant method or • high-performance liquid chromatography (HPLC) method (See Annex 2),</li><li>• for metals: a test report based on ISO 3856 series or equivalent.</li></ul> <p>Products which have been awarded the EU Ecolabel for paints and varnishes, as established in Commission Decision (EU) 2014/312/EU are deemed to comply.</p> |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|   |  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|   | <b>Spreading rate</b><br><br>The paint shall achieve an efficient spreading rate according to the applicable performance requirement inTable 7.<br><br>Table 7 Spreading rates for specific paint products   |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|   | <table><tr><th>Type of paint</th><th>Spreading rate<sup>1</sup> (m 2 /l)</th></tr><tr><td>White paints and light-coloured paints (including finishes and intermediates)</td><td>- indoor: 8<br/>- outdoor: 6<br/>- indoor &amp; outdoor: 8</td></tr><tr><td>Tinting systems<sup>2</sup></td><td>8</td></tr><tr><td>Primers and undercoats</td><td></td></tr><tr><td>a. opaque</td><td>8</td></tr><tr><td>b. with specific blocking/sealing, penetrating/binding properties</td><td>6</td></tr><tr><td>c. with special adhesion properties</td><td>6</td></tr><tr><td>Thick decorative coatings</td><td>1m2 per kg of product</td></tr><tr><td>Elastomeric outdoor paints</td><td>4</td></tr></table> |  | Type of paint | Spreading rate <sup>1</sup> (m 2 /l) | White paints and light-coloured paints (including finishes and intermediates) | - indoor: 8<br>- outdoor: 6<br>- indoor & outdoor: 8 | Tinting systems <sup>2</sup> | 8 | Primers and undercoats |  | a. opaque | 8 | b. with specific blocking/sealing, penetrating/binding properties | 6 | c. with special adhesion properties | 6 | Thick decorative coatings | 1m2 per kg of product | Elastomeric outdoor paints | 4 |
| Type of paint   | Spreading rate <sup>1</sup> (m 2 /l)   |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| White paints and light-coloured paints (including finishes and intermediates) | - indoor: 8<br>- outdoor: 6<br>- indoor & outdoor: 8   |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| Tinting systems <sup>2</sup>  | 8  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| Primers and undercoats  |  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| a. opaque   | 8  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| b. with specific blocking/sealing, penetrating/binding properties             | 6  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| c. with special adhesion properties   | 6  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| Thick decorative coatings   | 1m2 per kg of product  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
| Elastomeric outdoor paints  | 4  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|   | <p>Notes:</p> <p><sup>1</sup>The spreading rates apply at a hiding power of 98%</p> <p><sup>2</sup>Only base should be tested</p>  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|   | <b>Verification:</b>   | <p>The tender shall provide a test report using the following methods, or their equivalent:</p> <ul style="list-style-type: none"><li>• ISO 6504/1 (Paints and varnishes – determination of hiding power – Part - 1: Kubelka-Munk method for white and light-coloured paints);</li><li>• ISO 6504/3 (Part 3: determination of contrast ratio (opacity) of light-coloured paints at a fixedspreading rate);</li><li>• NF T 30 073 for paints specially designed to give a three-dimensional decorative effect or which are characterised by a very thick coat.</li></ul> <p>Products which have been awarded the EU Ecolabel for paints and varnishes, as established in Commission Decision (EU) 2014/312/EU are deemed to comply.</p>   |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|   |  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |
|   | <b>Weathering resistance (only outdoor paints)</b><br><br>Masonry, wood and metal paints shall demonstrate resistance to the possible forms of weathering-induced deterioration in Table 8.<br><br>Masonry paints shall be exposed to artificial test conditions for 1000 hours, wood and metal paints for 500 hours.  |  |               |                                      |   |  |                              |   |                        |  |           |   |   |   |                                     |   |                           |                       |                            |   |

|                                  | <p>This shall be demonstrated according to the recommended test methods, or their equivalent, under artificial weathering conditions. Corrosion resistance for metal paints shall also include blistering.</p> <p>Tests should be performed on the tinting base.</p> <p>Table 8 Weathering resistance tests</p> <table border="1"> <thead> <tr> <th>Weathering induced deterioration</th><th>Performance requirement</th><th>Recommended test</th></tr> </thead> <tbody> <tr> <td>Decrease of gloss<sup>1</sup></td><td>Less than or equal to 30% of its initial value</td><td>ISO 2813</td></tr> <tr> <td>Chalking</td><td>1,5 or better (0,5 or 1,0)</td><td>EN ISO 4628-6</td></tr> <tr> <td>Flaking</td><td>Flake density 2 or less, flake size 2 or less</td><td>ISO 4628-5</td></tr> <tr> <td>Cracking</td><td>Crack quantity 2 or less, crack size 3 or less</td><td>ISO 4628-4</td></tr> <tr> <td>Blistering</td><td>Blister density 3 or less, blister size 3 or less.</td><td>ISO 4628-2</td></tr> <tr> <td>Corrosion<sup>2</sup></td><td>Rusting equal to or better than Ri2</td><td>ISO 4628-3</td></tr> </tbody> </table> <p><sup>1</sup>Not applicable to mid-sheen and matt-finishes (refer to Annex 1 for details).<br/> <sup>2</sup> For anti-rust paints</p> |  | Weathering induced deterioration | Performance requirement | Recommended test | Decrease of gloss <sup>1</sup> | Less than or equal to 30% of its initial value | ISO 2813   | Chalking | 1,5 or better (0,5 or 1,0) | EN ISO 4628-6 | Flaking | Flake density 2 or less, flake size 2 or less | ISO 4628-5 | Cracking | Crack quantity 2 or less, crack size 3 or less | ISO 4628-4 | Blistering | Blister density 3 or less, blister size 3 or less. | ISO 4628-2 | Corrosion <sup>2</sup> | Rusting equal to or better than Ri2 | ISO 4628-3 |
|----------------------------------|--|--|----------------------------------|-------------------------|------------------|--------------------------------|--|------------|----------|----------------------------|---------------|---------|---|------------|----------|--|------------|------------|--|------------|------------------------|-------------------------------------|------------|
| Weathering induced deterioration | Performance requirement  | Recommended test   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Decrease of gloss <sup>1</sup>   | Less than or equal to 30% of its initial value   | ISO 2813   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Chalking                         | 1,5 or better (0,5 or 1,0)   | EN ISO 4628-6  |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Flaking                          | Flake density 2 or less, flake size 2 or less  | ISO 4628-5   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Cracking                         | Crack quantity 2 or less, crack size 3 or less   | ISO 4628-4   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Blistering                       | Blister density 3 or less, blister size 3 or less.   | ISO 4628-2   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Corrosion <sup>2</sup>           | Rusting equal to or better than Ri2  | ISO 4628-3   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
|                                  | <b>Verification:</b>   | The tenderer shall provide test results demonstrating performance of the paint according to the requirements listed in Table 8. With the exception of corrosion for metal paints the artificial weathering conditions shall reflect the conditions described in ISO 11507 or (for outdoor wood finishes) QUV accelerated weathering apparatus with cyclic exposure with UV(A) radiation and spraying according to EN 927-6 or their equivalent. For corrosion the relevant atmospheric corrosivity categories in EN ISO 12944-2 and the accompanying procedures specified in EN ISO 12944-6, or equivalent, shall be used. Anti-rust paints for steel substrates shall be tested after 240h salt spray following ISO 9227 or equivalent. Products which have been awarded the EU Ecolabel for paints and varnishes, as established in Commission Decision (EU) 2014/312/EU are deemed to comply with the above criteria. |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
|                                  | <p><b>Fungal and algal resistance of the film (only outdoor paints)</b></p> <p>(For applications where fungal and algal resistance of the film are needed)<br/> Base paints used for exterior masonry and wood and for which fungal and/or algal resistant properties are needed should meet the requirements in Table 9.</p> <p>Table 9 Fungal and algal resistance requirements</p> <table border="1"> <thead> <tr> <th>Application</th><th>Fungal resistance</th><th>Algal resistance</th></tr> </thead> <tbody> <tr> <td>Masonry</td><td>Class 1 or lower</td><td>Score of 0</td></tr> <tr> <td>Wood</td><td>Class 1 or lower</td><td>Score of 0</td></tr> </tbody> </table>   |  | Application                      | Fungal resistance       | Algal resistance | Masonry                        | Class 1 or lower                               | Score of 0 | Wood     | Class 1 or lower           | Score of 0    |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Application                      | Fungal resistance  | Algal resistance   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Masonry                          | Class 1 or lower   | Score of 0   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
| Wood                             | Class 1 or lower   | Score of 0   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
|                                  | <b>Verification:</b>   | The tenderer shall provide test results demonstrating compliance according to the test methods EN 15457 and/ or EN 15458, or their equivalent. For coatings containing encapsulated dry-film biocides altered conditioning protocols shall also be accepted. Manufacturers shall provide information about any variation in conditioning along with test results of the EN 15457 and/or 15458 standards. Products which have been awarded the EU Ecolabel for paints and varnishes, as established in Commission Decision (EU) 2014/312/EU are deemed to comply.   |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |
|                                  | <p><b>Packaging</b></p> <p>Paints should be delivered in containers of (no smaller than) X litres (to be decided by the public authority in order to reduce packaging).</p>  |  |                                  |                         |                  |                                |  |            |          |                            |               |         |   |            |          |  |            |            |  |            |                        |                                     |            |

| Painting works contracts |  |  |
|--------------------------|--|--|
|                          |  |  |
| 2.1                      | Subject Matter (suggestion on how to draft the tender title)   |  |
|                          | Painting works which maximise the lifespan of the paint whilst minimising associated environmental impacts   |  |
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| 2.2                      | Technical Specification (to be included in the terms of reference / technical specifications)  |  |
|                          | Painting work contracts shall be performed using paint products that comply with EU Green Public Procurement requirements as specified in Technical Specifications for core criteria of EU GPP Section 4.1 Paints and varnishes.   |  |
|                          | Verification:  | The tenderer shall provide supporting documentation that the products to be used meet the criteria specified above   |
|                          |  |  |
|                          | <b>Management of waste and unused paint</b><br><br>The tenderer shall submit a waste management plan for paint leftover from the preparation of the substrate and application. The plan shall include<br><br>• Where paint removal/demarking needs to be conducted, an assessment of the potential hazardous content of paint that has been stripped from substrates and, if a risk is identified, a method statement for mitigating the risk by safe handling and disposal.<br>• A method statement for on-site practices for the cleaning of painting equipment and the storage of waste and unused paint for safe disposal as hazardous waste.<br>• Measures to minimise waste and unused paint |  |
|                          | Verification:  | The tenderer shall provide a documented waste management plan which shall include method statements for safe paint stripping, equipment cleaning and waste and unused paint handling and disposal, as well as the measures applied to minimise waste and unused paint. |

| Road markings   |   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
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|   |   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| 3.1   | Subject Matter (suggestion on how to draft the tender title)  |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
|   | The purchase of road markings with a reduced environmental impact   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
|   |   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| 3.2   | Technical Specification (to be included in the terms of reference / technical specifications)   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
|   | <p><b>Product hazard labelling</b></p> <p>The final product shall not be classified as being acutely toxic, a specific target organ toxicant, carcinogenic, mutagenic or toxic for reproduction, hazardous to the environment, in accordance with Regulation (EC) No 1272/2008 (CLP Regulation), as indicated in Table 13.</p> <p>Table 13 Final product classification</p> <table><tr><td>Acute toxicity</td><td>Acute Tox. 1<br/>Acute Tox. 2<br/>Acute Tox. 3</td></tr><tr><td>Specific target organ toxicity - repeated exposure<br/>Specific target organ toxicity - single exposure</td><td>STOT RE 1 or 2<br/>STOT SE 1, 2 or 3</td></tr><tr><td>Carcinogenicity</td><td>Carc. 1A<br/>Carc. 1B<br/>Carc. 2</td></tr><tr><td>Germ cell mutagenicity</td><td>Muta. 1A<br/>Muta. 1B<br/>Muta. 2</td></tr><tr><td>Reproductive toxicity</td><td>Repr. 1A<br/>Repr. 1B<br/>Repr. 2</td></tr><tr><td>Hazardous to the aquatic environment</td><td>Aquatic Acute 1<br/>Aquatic Chronic 1 or 2</td></tr></table> |  | Acute toxicity | Acute Tox. 1<br>Acute Tox. 2<br>Acute Tox. 3 | Specific target organ toxicity - repeated exposure<br>Specific target organ toxicity - single exposure | STOT RE 1 or 2<br>STOT SE 1, 2 or 3                        | Carcinogenicity   | Carc. 1A<br>Carc. 1B<br>Carc. 2 | Germ cell mutagenicity | Muta. 1A<br>Muta. 1B<br>Muta. 2 | Reproductive toxicity | Repr. 1A<br>Repr. 1B<br>Repr. 2 | Hazardous to the aquatic environment | Aquatic Acute 1<br>Aquatic Chronic 1 or 2 |
| Acute toxicity  | Acute Tox. 1<br>Acute Tox. 2<br>Acute Tox. 3  |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| Specific target organ toxicity - repeated exposure<br>Specific target organ toxicity - single exposure  | STOT RE 1 or 2<br>STOT SE 1, 2 or 3   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| Carcinogenicity   | Carc. 1A<br>Carc. 1B<br>Carc. 2   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| Germ cell mutagenicity  | Muta. 1A<br>Muta. 1B<br>Muta. 2   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| Reproductive toxicity   | Repr. 1A<br>Repr. 1B<br>Repr. 2   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| Hazardous to the aquatic environment  | Aquatic Acute 1<br>Aquatic Chronic 1 or 2   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
|   | <b>Verification:</b>  | The tenderer shall provide appropriate documentation confirming that the products to be supplied are not classified with the listed hazards. The documentation of the mixture classification shall be provided in accordance with the rules provided in Regulation (EC) No 1272/2008 (CLP Regulation) and/or Safety Data Sheets. |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
|   |   |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
|   | <p><b>Hazardous ingredients</b></p> <p>The paint shall be compliant with the restrictions presented in Table 5, which either restrict the presence of or limit the concentration of the indicated hazardous substances in the paint.</p> <p>Table 5 Paint hazardous ingredient requirements</p> <table><tr><td>Ingredient</td><td>Restriction or upper concentration limit</td></tr><tr><td>Preservatives:</td><td>Preservatives shall be non bio-accumulative<sup>1</sup>.</td></tr><tr><td>Phthalates:<br/>Phthalates<sup>2</sup> identified as substances of very high concern and listed in the candidate list of the REACH Regulation<sup>3</sup> shall not be present in any paint or varnish preparations or formulations thereof.</td><td>0.1% w/w</td></tr></table>  |  | Ingredient     | Restriction or upper concentration limit     | Preservatives:   | Preservatives shall be non bio-accumulative <sup>1</sup> . | Phthalates:<br>Phthalates <sup>2</sup> identified as substances of very high concern and listed in the candidate list of the REACH Regulation <sup>3</sup> shall not be present in any paint or varnish preparations or formulations thereof. | 0.1% w/w                        |                        |                                 |                       |                                 |                                      |   |
| Ingredient  | Restriction or upper concentration limit  |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| Preservatives:  | Preservatives shall be non bio-accumulative <sup>1</sup> .  |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |
| Phthalates:<br>Phthalates <sup>2</sup> identified as substances of very high concern and listed in the candidate list of the REACH Regulation <sup>3</sup> shall not be present in any paint or varnish preparations or formulations thereof. | 0.1% w/w  |  |                |  |  |  |   |                                 |                        |                                 |                       |                                 |                                      |   |

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|--|--|--|--|---|
|  | <table><tr><td>Metals:<br/>Cadmium, lead, chromium VI, mercury, arsenic, selenium.</td><td>0.010% w/w per metal or metallic complex/salt, as appropriate</td></tr></table>   |  | Metals:<br>Cadmium, lead, chromium VI, mercury, arsenic, selenium. | 0.010% w/w per metal or metallic complex/salt, as appropriate |
| Metals:<br>Cadmium, lead, chromium VI, mercury, arsenic, selenium. | 0.010% w/w per metal or metallic complex/salt, as appropriate  |  |  |   |
|  | <sup>1</sup> An ingredient is considered bio-accumulative when Log Kow ≤ 4.0 or bio-concentration factor (BCF) ≤ 500.  |  |  |   |
|  | <b>Verification:</b>   | <p>The tenderer shall provide appropriate documentation confirming compliance with the criterion, namely:</p> <ul style="list-style-type: none"><li>• for preservatives: Safety Data Sheets for the product mixture.</li><li>• additionally for preservatives: a test report using OECD 305 Test Guideline can be used as an alternative to the Safety Data Sheet for the sole purpose of confirming that the preservatives used are nonbioaccumulative.</li><li>• for phthalates: Safety Data Sheets for the product mixture and/or a REACH Article 33(1) 6 declaration that is valid for the products to be supplied</li></ul> |  |   |
|  |  |  |  |   |
|  | <b>Content of hazardous ingredients in glass beads</b>   |  |  |   |
|  | The glass beads used shall not contain arsenic, antimony and lead at individual concentrations exceeding 200 ppm.  |  |  |   |
|  | <b>Verification:</b>   | The tenderer shall provide a test report verifying the concentrations of the specified substances present in the glass beads according to EN 1423 or equivalent.   |  |   |
|  | <b>Quality and durability of road marking system</b>   |  |  |   |
|  | <p>The tenderer shall demonstrate that the road marking maintains the minimum performance requirements, namely for night time visibility, day time visibility, skid resistance and erosion, after a defined number of wheel passages<sup>1</sup>, as specified by the procurer in the call for tender.</p> <p><sup>1</sup> Indicatively, a reasonable performance could be considered as 500.000 wheel passages, according to standards EN 1824 and EN 13197. If a higher level of performance is desired, then a higher number of wheel passages should be specified.</p> |  |  |   |
|  | <b>Verification:</b>   | The tenderer shall provide a test report or the approval of a national test facility demonstrating compliance of the road marking system under the conditions appropriate to the contract and according to EN 1824, EN 13197 or equivalent. To ensure comparability, the contracting authority shall specify in the call for tender the test method to be used by all tenderers.   |  |   |



| Road marking works contracts |   |  |
|------------------------------|---|--|
|                              |   |  |
| 4.1                          | Subject Matter (suggestion on how to draft the tender title)  |  |
|                              | The letting of works contracts which maximise the lifespan of road marking whilst minimising associated environmental impacts.  |  |
|                              |   |  |
| 4.2                          | Technical Specification (to be included in the terms of reference / technical specifications)   |  |
|                              | <b>Use of road markings meeting the EU GPP criteria</b><br><br>All work contracts shall be performed using road marking products that comply with the EU Green Public Procurement requirements as specified in Technical specifications for core criteria of EU GPP - Section 4.3 Road markings.  |  |
|                              | <b>Verification:</b>  | The tenderer shall provide supporting documentation that the products used meet the criteria specified above   |
|                              |   |  |
|                              | <b>Management of waste and unused road marking material</b><br><br>The tenderer shall submit a waste management plan for road marking material leftover from the preparation of the substrate and application. The plan shall include: <ul style="list-style-type: none"><li>• Where demarking needs to be conducted, an assessment for the potential hazardous content of road marking material to be stripped from substrates and, if a risk is identified, a method statement for mitigating the risk by safe handling and disposal.</li><li>• A method statement for on-site practices in the cleaning of equipment and the storage of waste and unused road marking material for safe disposal as hazardous waste.</li><li>• Measures to minimise waste and unused road marking material</li></ul> |  |
|                              | <b>Verification:</b>  | The tenderer shall provide a documented waste management plan which shall include method statements for safe demarking, equipment cleaning and waste and unused road marking material handling and disposal, as well as the measures applied to minimise waste and unused road marking material. |