EUROPEAN COIL COATING ASSOCIATION A.I.S.B.L

**ECCA PREMIUM® QUALITY AND SUSTAINABILITY LABEL**

**SPECIFICATIONS, PREPAINTED ALUMINIUM AND STEEL SUBSTRATES**

Version 1.1 main modifications (written in blue)

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| --- | --- | --- |
| **Chapter** | **Title** | **Modifications** |
| 2. | Scope | * Removed: “Exception can be made for film thickness tolerances when the thickness varies within the same product range due to colour matching needs, with the limit of max. 10μm from the nominal thickness. This variation may not lead to a lower film thickness than required in the Specifications.” |
| 3.5.5 | Responsible sourcing | * Details regarding supplier check added. |
| 5.8; 5.9; 7.9; 7.10 | UV resistance and corrosion resistance | Additional info:   * details for how to prove the required UV resistance level * requirements for cases when tests are performed by the applicant or paint supplier * details for how to test and document new products have been added |
| 7.9 | UV resistance, steel substrates | * Footnote about definition of sharp and saturated colours added. |
| 8.1 | Colour consistency | * Hunter lab scale accepted in addition to CieLAB scale. |

1. **General information**

These specifications apply to the ECCA Premium® quality and sustainability label for prepainted metal products for architectural and other outdoor applications (e.g. signage). ECCA Premium® is a registered trademark belonging to the European Coil Coating Association AISBL (ECCA), with its head office located in Brussels, Belgium.

These specifications define the minimum requirements and performance level for prepainted metal manufacturers and products that need to be fulfilled in order to be granted the ECCA Premium® label. In case of ambiguities or uncertainties regarding any of the requirements, the ECCA Premium® Certification Committee shall be consulted.

The person in charge of quality management at the applicant/label holder company responsible for the products in the scope of ECCA Premium® label shall always have the latest version of the ECCA Premium® Specifications.

The Specifications are updated and amended from time to time by the ECCA Premium® Advisory Committee. The amended version of the Specifications shall become effective as announced at the time of publication. All ECCA Premium® label holders will be informed of the publication of each new version of the Specifications and the latest version can be downloaded at any time at the website of ECCA Premium® ([www.eccapremium.com](http://www.eccapremium.com)).

These Specifications do not apply for post-painted metals.

1. **Scope**

ECCA Premium® Quality and Sustainability label has specific requirements both for the product and for the coil coating line where it is produced, i.e. the label is granted to a product produced on a specific coil coating line. If the same product is produced by the same company on another coil coating line, both coil coating lines need to be inspected separately.

Product is defined by the producer by its brand name and/or technical specifications. Any variations within the product range are allowed on the condition that no variation results in non-conformity with the ECCA Premium® Specifications.

A product may not vary on paint type and nominal thickness.

Line is defined as the coil coating process part of the line. Any combinations with other than prepainting (combilines) are accepted, but the line specific requirements defined later in this document only apply and are inspected on the prepainting section of the coil coating line.

In cases where there are several lines on the same site, all lines will be inspected regarding the emission limits and quality control requirements defined for ECCA Premium® label. In case one of the lines does not fulfil ECCA Premium® requirements, inspection of only a part of line(s) is possible in case the applicant is able to prove that ECCA Premium® products are only produced on this (these) particular lines.

1. **General requirements**
   1. **Organisation**

An organisation chart indicating the responsibilities in the company (general management, quality, environment, production) is available and up-to-date.

* 1. **ECCA Premium® Label use**

The ECCA Premium® label use is strictly restricted to prepainted metal producers, sites and products that have been audited and granted the right to use the label. Further details of the use of the label are given in the ECCA Premium® Procedural Regulations.

* 1. **Norms and standards**

The ECCA Premium® label holder is required to have the norms and standards referred to in the Specifications. The list of the required standards can be found in the Annex A.

* 1. **Measurement records**

Measurement records of product quality control, incoming material control and product approvals shall be kept at least for ten (10) years.

* 1. **Management systems**
     1. **ISO 9001**

Production site at which ECCA Premium® products are produced shall be ISO 9001 certified. A photocopy of a valid ISO 9001 certificate including in its scope the assessed product(s) shall be attached to the ECCA Premium® application form. The original certificate will need to be shown during the inspections.

* + 1. **ISO 14001**

Production site at which ECCA Premium® products are produced shall be ISO 14001 certified. A photocopy of a valid ISO 14001 certificate including in its scope the assessed product(s) shall be attached to the ECCA Premium® application form. The original certificate will need to be shown during the inspections.

* + 1. **Safety management system**

ECCA Premium® label holders must adopt a safety management system for their operations, e.g. OHSAS 18001 or similar. Adoption of a safety management system can be demonstrated by one of the following:

1) Presentation of a valid certificate of adoption of a safety management system given by a recognised certification body. A photocopy of a valid safety management system certificate shall be attached to the ECCA Premium® application form. The original certificate will need to be shown during the inspections.

2) Declaration of adoption of a safety management system (in the ECCA Premium® application form). In this case the safety management system must be audited during the initial inspection. The list of the compulsory minimum requirements can be found in Annex B.

* + 1. **Social responsibility**

Adherence to the UN Global Compact scheme or other social responsibility scheme is required. In case of no official adherence, a commitment of the company’s management to social responsibility principles shall be demonstrated.

* + 1. **Responsible sourcing**

ECCA Premium® label holder shall ensure that the main direct suppliers (coil, pretreatment and paint suppliers) are certified according to ISO 9001 and ISO 14001.

A procedure for approving the suppliers and a follow-up shall be demonstrated.

1. **Product sustainability**
   1. **Absence of harmful substances**

Requirement  
ECCA Premium® products shall not contain any Substances of Very High Concern included in the Annex XIV of REACH (EC N° 1907/2006). The absence of such substances shall be demonstrated by presenting supplier certificates or material safety data sheets for each chemical used in production of and in ECCA Premium® products.

Certificates and material safety data sheets shall be presented for each supplier separately. Requirement covers all non-metallic layers of the product: pretreatment, primer, and top coat(s).

1. **Product performance (quality) – Aluminium substrates, liquid coatings**
   1. **Aluminium substrate**

Quality and composition of the aluminium alloy  
Type, quality and composition of the aluminium alloy according to EN 1396 shall be demonstrated.

* Aluminium is produced internally within the same group or company sharing a quality control system that provides direct access to test results
  + Internal quality control procedure for ensuring the quality of the aluminium substrate shall be demonstrated
  + The aluminium alloy used in ECCA Premium® products is listed in EN 1396, Table 2.
* Aluminium coils are sourced from an external supplier
  + The quality and composition of the aluminium alloy used in ECCA Premium® labelled products is proven by a supplier certificate according to EN 10204, type 3.1.
  + The aluminium alloy of the coils used in ECCA Premium® products shall be designated by the supplier according to EN 573-3.
  + The aluminium alloy used in ECCA Premium® products is listed in EN 1396, Table 2.

Aluminium substrate thickness and thickness tolerances  
Aluminium substrate thickness is measured and controlled systematically. The aluminium substrate thickness remains within the tolerance limits defined in EN 485-4 compared with the nominal thickness.

Traceability of a given coil to its origin shall be ensured.

* 1. **Organic coating film thickness**

Test method

Nominal organic coating film thickness shall be determined according to EN 13523–1: clause 4.1

Requirement

The required minimum nominal organic coating film thickness is 17μm.

* 1. **Organic coating film thickness tolerances**

Test method

Nominal organic coating film thickness shall be determined according to EN 13523–1.

Requirement

The organic coating film thickness tolerances for smooth surfaces shall be as defined in EN 1396, clause 6.1, Table 3. The requirement does not apply for textured or embossed coatings.

Examples of conform and non-conform measurements

25µm specified thickness: 25 / 29 / 24 / 23 / 28 / 25 / 28 / 29 / 25 / 24 µm

Average: 26 µm Conform

Minimum value 23µm which is higher than the Conform

max. negative deviation for a single measurement (20 µm)

60µm specified thickness: 58 / 65 / 54 / 39 / 62 / 68 / 52 / 55 / 53 / 54 µm

Average: 56 µm Conform

Minimum value 39 µm which is lower than the Not conform

max. negative deviation for a single measurement (40 µm)

* 1. **Organic coating gloss tolerances (top coat)**

Test method

Specular gloss shall be measured as specified in EN 13523–2.

Requirement

The specular gloss tolerances for smooth surfaces shall be as defined in EN 1396, clause 6.2, Table 3.

* 1. **Organic coating colour consistency (top coat)**

A documented procedure to ensure the colour consistency (delta E) between different coils delivered to one client within one order shall be demonstrated.

* 1. **Adhesion**

Test method

Adhesion after indentation shall be tested according to EN 13523–6 and EN 1396, clause C.4.

Requirement

Class: 0 as defined in ISO 2409.

* 1. **Bendability**

Test method

Bendability shall be tested according to EN 1396, clause C.3 and EN 13523–7.

Requirement  
Bendability shall be assessed against customer specification. T-Bend properties shall be as agreed at the time of enquiry and order.

* 1. **Resistance to UV radiation**

Test methods

UV resistance shall be determined according to the following standards:

* Panel design and outdoor exposure: EN 13523-19
* Outdoor test field: EN 1396 (see Annex C.)
* Evaluation of results: EN 13523-21
* Accelerated test: EN 1396 and EN 13523-10, test duration 2000h (see Annex D.)

Requirement

RUV2 classification or higher according to EN 1396 (see Annex E.)

* Max. colour change deltaE = 5 (CieLAB units)
* Min. retained gloss of 30% (not applicable for textured surfaces)

RUV classification based on natural weathering test is required. Accepted outdoor test fields are listed in EN 1396. Another outdoor test field can be accepted if it is managed by a third party and can be shown to have at least 4500 MJ/m²/year of cumulative solar energy measured horizontally

Resistance to UV radiation shall be demonstrated by one of the following means:

* Test report or certificate provided by a third party managed outdoor test field including the colour and gloss measurement records performed by the same third party.

OR

* Test report provided by the paint supplier or the applicant himself if all the following criteria are met:
  + Outdoor exposure has been performed on one of the accepted third party managed outdoor test fields of which a test report can be presented.
  + Outdoor exposure has already been performed on samples produced on a full scale production line for a representative selection of colours.

The selection should not only be driven by technical difficulty but also by commercial relevancy: when a new colour is produced with a significant volume (typically more than 5% of total volume for the product), if this colour is from a category which has not yet been sampled from a production line and characterised, then it turns compulsory to do it.

If the Applicant is not yet able to provide results from production line samples and provided that outdoor exposure of such full scale production line samples has been started, lab samples can be temporarily accepted as long as they are representative of actual production (same substrate, same surface treatment and same primer).

* + The link between the fabricated product and the test results can be demonstrated (product ID and follow-up)
  + In case the colour and gloss measurements are performed by the paint supplier, an ISO 9001 certification is required.
  + In case the colour and gloss measurements are performed by the applicant he must successfully pass a laboratory audit performed by the ECCA Premium® organisation

RUV classification based on an accelerated test (QUV-A, 2000h) can be accepted for new products for which there are not yet any natural weathering test results available, provided that the outdoor exposure has been started.

In this case the following is required:

* The UV resistance based on an accelerated test (QUV-A) shall be demonstrated by
  + a test report or certificate from a laboratory that has an ISO 17025 accreditation for performing a QUV-A test OR
  + a QUV-A test report generated by the applicant on the condition that he has successfully passed a laboratory audit performed by the ECCA Premium® organisation
* An outdoor exposure on an accepted test field has been started. Intermediate test reports shall be provided to the ECCA Premium® Certification Committee after every 3 months of exposure.

In all cases an outdoor exposure must be either completed or started before the ECCA Premium® label can be granted.

The test certificate must indicate the name of the labelled product or sufficient amount of technical details to identify the product.

* 1. **Resistance to corrosion**

Test methods

* Outdoor exposure: EN 1396, clause C.6.2
* Outdoor test field: e.g. Hoek van Holland (Netherlands) or Bohus-Malmön (Sweden)
* Accelerated test:
  + Acetic acid salt spray: EN 1396, clause C.6.5 OR
  + Filiform test: EN 1396 (see Annex F.)
* Degree of blistering: EN ISO 4628-2

Requirement

Index 2 classification or higher

* Average undercreep in outdoor exposure (all durations required):
  + max. 1 mm in 3 months
  + max. 2 mm in 1 year
  + max. 4 mm in 3 years
* Acetic acid salt spray as defined in EN 1396, clause C.6.2, Table C.2
* Filiform test as defined in Annex F.

Corrosion resistance classification based on natural weathering test is required. Accepted outdoor test fields are listed in EN 1396. Another outdoor test field can be accepted if it is managed by a third party and has a proven corrosivity category of C3 or higher. Such test fields in Europe are e.g. Hoek van Holland (NL), Bohus-Malmön (SE) and Brest (FR).

Corrosion resistance shall be demonstrated by one of the following means:

* Test report or certificate provided by a third party managed, accepted outdoor test field including the colour and gloss measurement records performed by the same third party.

OR

* Test report provided by the paint supplier or the applicant himself if all the following criteria are met:
  + Outdoor exposure has been performed on one of the accepted, third party managed outdoor test fields of which a test report can be presented
  + Outdoor exposure has been performed on samples produced by the applicant on a full scale production line
  + The link between the fabricated product and the test results can be demonstrated (product ID and follow-up)
  + In case the corrosion creep and paint delamination measurements are performed by the paint supplier, an ISO 9001 certification is required.
  + In case the corrosion creep and paint delamination are performed by the applicant, he must successfully pass a laboratory audit performed by the ECCA Premium® organisation

Corrosion resistance based on an accelerated test (AASS or Filiform test) can be accepted for new products for which there are not yet any natural weathering test results available, provided that the outdoor exposure has been started.

In this case the following is required:

* The corrosion resistance based on an accelerated test (AASS or Filiform test) shall be demonstrated by
  + a test report or certificate from a laboratory that has an ISO 17025 accreditation for performing the test OR
  + a test report generated by the applicant on the condition that he has successfully passed a laboratory audit performed by the ECCA Premium® organisation
* An outdoor exposure on an accepted test field has been started. In all cases an outdoor exposure must be either completed or started before the ECCA Premium® label can be granted.
  1. **. Fire reaction**

Test method

Fire reaction shall be determined according to EN 13501-1 by an ISO 17025 accredited laboratory. One test certificate for one product and one company covering all production sites is accepted.

Requirement

ECCA Premium® labelled products need to fulfil the following minimum performance levels:

* Polyester paints (PE) of total 25μm nominal film thickness: no requirement (pre-approved)
* Polyester paints (PE) of higher than 25μm nominal film thickness and all other coating types: A2-s1,d0 (acc. to EN 13501-1)

1. **Product performance (quality) – Aluminium substrates, powder coatings**
   1. **Aluminium substrate**

The requirements are the same as for liquid coatings. See Chapter 5.1.

* 1. **Organic coating film thickness**

Test method

Nominal organic coating film thickness shall be determined according to EN 13523–1.

Requirement

The required minimum nominal organic coating film thickness is 45μm.

* 1. **Organic coating film thickness tolerances**

The requirements are the same as for liquid coatings. See Chapter 5.3.

* 1. **Organic coating gloss tolerances (top coat)**

The requirements are the same as for liquid coatings. See Chapter 5.4.

* 1. **Organic coating colour consistency (top coat)**

The requirements are the same as for liquid coatings. See Chapter 5.5.

* 1. **Adhesion**

The requirements are the same as for liquid coatings. See Chapter 5.6.

* 1. **Bendability**

The requirements are the same as for liquid coatings. See Chapter 5.7.

* 1. **Resistance to UV radiation**

Test methods

UV resistance shall be determined according to the following standards

* Panel design and outdoor exposure: EN 13523-19
* Outdoor test field: EN 1396 (see Annex C.)
* Evaluation of results: EN 13523-21
* Accelerated test: EN 1396 and EN 13523-10, test duration 1500h (see Annex D.)

Requirement

1 year outdoor exposure

* Max. colour change deltaE = 5 (CieLAB units)
* Min. retained gloss of 30% (not applicable for textured surfaces)

RUV classification based on natural weathering test is required. RUV classification based on an accelerated test (QUV-A, 1500h) can be accepted for new products for which there are not yet any natural weathering test results available, provided that the outdoor exposure has been started.

Resistance to UV radiation needs to be demonstrated by presenting test certificates provided by a third party managed outdoor test field. For accelerated test (new products only) a certificate or test report from a recognised test laboratory (ISO 17025 accredited or audited and approved by ECCA Premium®) is required. If no test report or certificate is available, one sample of each such product will be taken during the initial audit by the ECCA Premium® Approved Inspector and sent for testing.

The test certificate must indicate the name of the labelled product or sufficient amount of technical details to identify the product. The link between the test certificate and the labelled product needs to be proven.

* Test certificates need to be presented separately for each different paint type AND paint supplies
* Test certificates need to be presented separately for at least the following colour shades (if applicable): white, brown, grey, green, yellow and red
  1. **Resistance to corrosion**

The requirements are the same as for liquid coatings. See Chapter 5.9.

* 1. **Fire reaction**

Test method

Fire reaction shall be determined according to EN 13501-1 by an ISO 17025 accredited third party laboratory. One test certificate for one product and one company covering all production sites is accepted.

Requirement

ECCA Premium® labelled products need to fulfil the following minimum performance levels:

* All other coating types and thicknesses: A2-s1,d0 (acc. to EN 13501-1)

1. **Product performance (quality) – Steel substrates**
   1. **Steel substrate**

Requirement  
Steel substrate shall be compliant with the EN 10346. Certificate (in case of external sourcing of steel coils) OR internal document (steel production within the company) proving the mechanical performance of steel according to EN 10346 is required.

The Applicant shall be able to demonstrate that the delivered steel grade of a given ECCA Premium® product delivery corresponds to the customer order. Steel substrate thickness shall be measured and controlled systematically and traceability of a given coil to its origin needs to be ensured.

* 1. **Metallic (zinc or zinc alloy) coating mass**

Test method  
Metallic coating thickness shall be measured using the so called triple spot method according to EN 10346, clauses 8.4 and 8.5.5.

Requirement  
Minimum values for the metallic coating mass are as defined below:

Zinc (Z) = 200 g/m²  
Zinc Aluminium (ZA) = 195 g/m²  
Zinc Magnesium (ZM)[[1]](#footnote-1) = 120 g/m²

If national requirements are higher, then the higher limits are applied.

* 1. **Organic coating film thickness**

Test method  
Nominal organic coating film thickness shall be determined according to EN 13523–1.

Requirement  
The required minimum nominal organic coating thickness is 25 μm.

* 1. **Organic coating film thickness tolerances**

Test method  
Nominal organic coating film thickness shall be determined according to EN 13523–1.

Requirement  
The organic coating film thickness tolerances for smooth surfaces shall be as defined in EN 10169, Table 2. The requirement does not apply for textured or embossed coatings.

Examples of conform and non-conform measurements

25µm specified thickness: 25 / 29 / 24 / 23 / 28 / 25 / 28 / 29 / 25 / 24 µm

Average: 26 µm Conform

Minimum value 23µm which is higher than the Conform

max. negative deviation for a single measurement (20 µm)

60µm specified thickness: 58 / 65 / 54 / 39 / 62 / 68 / 52 / 55 / 53 / 54 µm

Average: 56 µm Conform

Minimum value 39 µm which is lower than the Not conform

max. negative deviation for a single measurement (40 µm)

* 1. **Organic coating gloss tolerances (top coat)**

Test method  
Specular gloss shall be measured as specified in EN 13523–2.

Requirement  
Specular gloss tolerances for smooth surfaces shall be as defined in EN 10169, clause 6.2.3.3, Table 3.

* 1. **Organic coating colour consistency (top coat)**

A documented procedure to ensure the colour consistency (delta E) between different coils delivered to one client within one order shall be demonstrated.

* 1. **Adhesion**

Test method  
Adhesion after indentation shall be tested according to EN 13523–6.

Adhesion after T-Bend test shall be tested according to EN 10169, clause 7.5.5.2 and EN 13523–7. T-Bend shall be made with taping.

Requirement  
No loss of adhesion after taping for a minimum indentation depth of 4 mm OR no loss of adhesion at ≥ 2T

* 1. **Bendability**

Test method  
Bendability shall be tested according to EN 10169, clause 7.5.5.2 and EN 13523–7. T-Bend shall be made without taping.

Requirement  
No cracking on bending at ≥ 3T

* 1. **Resistance to UV radiation**

Test methods

UV resistance shall be determined according to the following standards

* Panel design and outdoor exposure: EN 10169, clause 6.3.3.3.2 b) and EN 13523-19
* Outdoor test field: EN 10169, Annex D, clause D.3
* Evaluation of results: EN 13523-21
* Accelerated test: EN 10169, clause 7.5.8.4.2 and EN 13523-10

Requirement  
RUV3 classification or higher according to EN 10169, clause 6.3.3.3.2 b), Table 8

* Max. colour change deltaE = 3 (CieLAB units)
* Min. retained gloss of 50% (not applicable for textured surfaces)

For saturated and sharp colours[[2]](#footnote-2): RUV2 classification or higher according to EN 10169, clause 6.3.3.3.2 b), Table 8

* Max. colour change deltaE = 5 (CieLAB units)
* Min. retained gloss of 30% (not applicable for textured surfaces)

RUV classification based on natural weathering test is required. Accepted outdoor test fields are listed in EN 10169. Another outdoor test field can be accepted if it is managed by a third party and can be shown to fulfil the following criteria:

* Location north of latitude 45 N° (RUV2) or between 37 and 45 N° (RUV3), with an altitude not greater than 900m
* At least 4500 MJ/m²/year of cumulative solar energy measured horizontally

Resistance to UV radiation shall be demonstrated by one of the following means:

* Test report or certificate provided by a third party managed outdoor test field including the colour and gloss measurement records performed by the same third party.

OR

* Test report provided by the paint supplier or the applicant himself if all the following criteria are met:
  + Outdoor exposure has been performed on one of the accepted third party managed outdoor test fields of which a test report can be presented.
  + Outdoor exposure has already been performed on samples produced on a full scale production line for a representative selection of colours.

The selection should not only be driven by technical difficulty but also by commercial relevancy: when a new colour is produced with a significant volume (typically more than 5% of total volume for the product), if this colour is from a category which has not yet been sampled from a production line and characterised, then it turns compulsory to do it.

If the Applicant is not yet able to provide results from production line samples and provided that outdoor exposure of such full scale production line samples has been started, lab samples can be temporarily accepted as long as they are representative of actual production (same substrate, same surface treatment and same primer).

* + The link between the fabricated product and the test results can be demonstrated (product ID and follow-up)
  + In case the colour and gloss measurements are performed by the paint supplier, an ISO 9001 certification is required.
  + In case the colour and gloss measurements are performed by the applicant he must successfully pass a laboratory audit performed by the ECCA Premium® organisation

RUV classification based on an accelerated test (QUV-A, 2000h) can be accepted for new products for which there are not yet any natural weathering test results available, provided that the outdoor exposure has been started.

In this case the following is required:

* The UV resistance based on an accelerated test (QUV-A) shall be demonstrated by
  + a test report or certificate from a laboratory that has an ISO 17025 accreditation for performing a QUV-A test OR
  + a QUV-A test report generated by the applicant on the condition that he has successfully passed a laboratory audit performed by the ECCA Premium® organisation
* An outdoor exposure on an accepted test field has been started. Intermediate test reports shall be provided to the ECCA Premium® Certification Committee after every 3 months of exposure.

In all cases an outdoor exposure must be either completed or started before the ECCA Premium® label can be granted.

The test certificate must indicate the name of the labelled product or sufficient amount of technical details to identify the product.

* 1. . **Resistance to corrosion**

Test methods

* Outdoor exposure: EN 10169, clauses 6.3.3.3.2 a) and 7.5.8.3.2
* Outdoor test field: EN 10169, Annex D, clause D.2
* Accelerated test (neutral salt spray): EN 10169, clause 7.5.8.4.1 and EN 13523-8
* Degree of blistering: EN ISO 4628-2

Requirement

RC3 classification or higher according to EN 10169, clause 6.3.3.3.2 a), Table 7

* Min. 2 years testing time resulting in max. 5 mm average delamination and 2(s4) blistering

Corrosion resistance shall be demonstrated by one of the following means:

* Test report or certificate provided by a third party managed, accepted outdoor test field including the colour and gloss measurement records performed by the same third party.

OR

* Test report provided by the paint supplier or the applicant himself if all the following criteria are met:
  + Outdoor exposure has been performed on one of the accepted, third party managed outdoor test fields of which a test report can be presented
  + Outdoor exposure has been performed on samples produced by the applicant on a full scale production line
  + The link between the fabricated product and the test results can be demonstrated (product ID and follow-up)
  + In case the corrosion creep and paint delamination measurements are performed by the paint supplier, an ISO 9001 certification is required.
  + In case the corrosion creep and paint delamination are performed by the applicant, he must successfully pass a laboratory audit performed by the ECCA Premium® organisation

Corrosion resistance based on an accelerated test (neutral salt spray) can be accepted for new products for which there are not yet any natural weathering test results available, provided that the outdoor exposure has been started.

In this case the following is required:

* The corrosion resistance based on an accelerated test (neutral salt spray) shall be demonstrated by
  + a test report or certificate from a laboratory that has an ISO 17025 accreditation for performing the test OR
  + a test report generated by the applicant on the condition that he has successfully passed a laboratory audit performed by the ECCA Premium® organisation
* An outdoor exposure on an accepted test field has been started. Intermediate test reports shall be provided to the ECCA Premium® Certification Committee after every 3 months of exposure.

In all cases an outdoor exposure must be either completed or started before the ECCA Premium® label can be granted.

Outdoor test and accelerated tests (when applicable) shall be performed for the lowest nominal metallic coating weight of a labelled product.

* 1. **Fire Reaction**

Test method

Fire reaction shall be determined according to EN 13501-1 by a duly (ISO 17025) certified third party laboratory. One test certificate for one product and one company covering all production sites is accepted.

Requirement

ECCA Premium® labelled products need to fulfil the following minimum performance levels:

* Polyester paints (PE) of total 25μm nominal film thickness: no requirement (pre-approved)
* Polyester paints (PE) of higher than 25μm nominal film thickness and all other coating types: A2-s1,d0 (acc. to EN 13501-1)

1. **Manufacturing quality (quality control)**
   1. **On-line, off-line quality control**

Systematic on-line or off-line quality control and measurements shall be demonstrated on each production batch on the following properties:

Total coating film thickness *(according to EN 13523-1[[3]](#footnote-3))*

* The consistency of the film thickness is ensured on each production batch as part of a standard quality control procedure by measurements at min. 3 different points along the strip width; right, centre and left

Top coat gloss *(according to EN 13523-2)*

* Top coat gloss measurements are performed systematically on each production batch as part of a standard quality control procedure

Top coat colour consistency *(according to EN 13523-3)*

* Top coat colour measurements are performed systematically on each production batch as part of a standard quality control procedure at least on three different points along the metal strip width; right, centre and left

Adhesion and bendability *(according to EN 13523-7)*

* Adhesion and bendability are measured systematically on each production batch as part of a standard quality control procedure.

1. **Manufacturing sustainability**
   1. **Energy consumption**

Requirement

A continuous follow-up of the energy consumption of the coil coating process shall be demonstrated (energy consumption may be in combination with other process steps on the coil coating line). Consumption levels are recorded and followed-up regularly.

ISO 50001 certification for energy management is desired but not compulsory.

* 1. **VOC destruction and emissions**

VOC destruction and emissions requirements are not applicable for powder coating plants with no VOC use.

Requirements

* The curing oven(s) on the coil coating line is equipped with a VOC destruction system, e.g. thermal oxidiser or an RTO (Regenerative Thermal Oxidiser)
* The coil coating process is equipped with necessary tools to measure or to define:

1) total solvent input to the system

2) amount of solvents entering the oxidiser

3) unabated and abated point source emissions

4) amount of recovered solvents in the process

* The fugitive emissions calculated based on the recordings 1) – 4) mentioned above do not exceed 10% (5% for new installations) of the total solvent input (Industrial Emissions Directive IED, 2010/75/EU)
* The maximum carbon content of the exhaust gas shall not exceed 50 mg/m3 (average within 24 hours, Industrial Emissions Directive IED, 2010/75/EU)

Follow-up of the total amount of VOCs incinerated shall be demonstrated (production management system or similar).

Continuous or regular measurement of the carbon content in the exhaust gas shall be demonstrated.

* 1. **Water usage**

RequirementThe applicant is able to demonstrate a continuous and systematic follow-up of the total water consumption in the coil coating process.

* 1. **Waste treatment and recycling**

RequirementWaste treatment process, where non-hazardous and hazardous wastes are separated and treated appropriately shall be demonstrated. The amount of waste generated is followed-up and recorded systematically.

The sub-contractor of waste treatment is officially recognised and provides a report of treated wastes including at least the following:

* The total amount of different wastes treated
* The destiny of wastes (incineration, landfill, recycling, etc.)

1. **Granting of ECCA Premium® label**
   1. **Application procedure**

ECCA Premium® licence can be obtained following the steps below:

1. Self-declaration of the applicant
   * An easy and fast conformity check can be made by using the simple check-lists for aluminium or steel
2. Application – sent to ECCA Premium® Certification Committee
   * In order to launch the initial inspection, payment of an application fee and submission of an application form with the following attachments is mandatory
     + Copy of valid ISO 9001 and ISO 14001 certificates
     + Copy of a valid safety management system certificate OR declaration of adoption of a safety management system
     + Certificates or test reports of fire resistance, UV resistance, corrosion resistance. UV-test report for one colour and corrosion resistance for one metallic substrate type is sufficient for the application. Other colour shades and substrate types will be checked during the initial inspection.
3. Examination of the application by the ECCA Premium® Certification Committee
   * Demand for complementary information or approval for the initial inspection
4. Initial inspection
   * The applicant may contact one of the ECCA Premium® Approved Inspectors and agree the time and date for the initial inspection
5. Granting (or not) the ECCA Premium® licence
   * The decision of granting ECCA Premium® licence is taken by the Certification Committee based on the application, test reports, certificates, and the initial inspection report
   * ECCA Premium® licence is granted for a period of three (3) years at a time
6. During the period of validity of an ECCA Premium® licence, random inspections will be organised
   * 1-2 random inspections during a period of validity of three (3) years
   * Random inspections will be called for by the ECCA Premium® Certification committee
7. Renewal inspection at the end of the period of validity of an ECCA Premium® licence
   1. **ECCA Premium® Inspecting Organisations and Approved Inspectors**

ECCA Premium® Inspecting Organisations and Approved Inspectors are listed on the website of ECCA Premium® ([www.eccapremium.com](http://www.eccapremium.com)). Label holders and applicants may freely choose the organisation and inspector to work with. Inspection fees are to be agreed between the label holder/applicant and inspecting organisation, and are additional to the ECCA Premium® application, initiation and licence fees.

* 1. **Inspections**

ECCA Premium® inspections are carried out by Approved Inspectors (listed on [www.eccapremium.com](http://www.eccapremium.com)). The estimated duration of an inspection of one production site is one working day. Three types of inspections have been defined:

Initial inspection  
Initial inspection is announced and carried out at the time agreed between the applicant and the Inspector. An initial inspection can take place as soon as the Application has been approved by the ECCA Premium® secretariat.

After the initial inspection, a report will be produced and distributed in two copies, one for the applicant and one for the ECCA Premium® Certification Committee. If the initial inspection is successful, the applicant is granted the right to use the ECCA Premium® label for a period of three (3) years. In case of major non-conformities, the ECCA Premium® label is not granted and the applicant has the right to ask for a second initial inspection within 6 months.

Duration of an Initial Inspection is 1-2 days depending on the size of the production site and number of products to be labelled.

Random inspection  
During the period of validity of the ECCA Premium® label, random inspections will be carried out at least once, but not more than twice. Random inspections are unannounced and will be called for by the ECCA Premium® Certification Committee.

Duration of a random inspection is 1 day.

Renewal inspection  
Renewal inspection will be carried out as a random inspection if the label holder has not informed the ECCA Premium® secretariat of its desire to withdraw from the label scheme. If the renewal inspection is successful, the label holder will be granted the right to use the ECCA Premium® licence for another 3 years period.

Duration of a renewal inspection is 1 day.

**ANNEX A. List of standards**

Required:

* ISO 9001
* ISO 14001 OR EMAS
* OHSAS 18001 OR similar standard or set of rules
* EN 1396 OR EN 10169
* EN 485-4
* EN 573-3
* EN 10204
* EN 13523-1
* EN 13523-2
* EN 13523-3
* EN 13523-7
* EN 13523-8
* EN 13523-10
* EN 13523-19
* EN 13523-21

Aluminium coil coaters only:

* ISO 2409
* ISO 4628-2
* ISO 12944-2

Optional:

* EN 50001

**ANNEX B. Safety management – recordings**

Adoption of a safety management system is required. A safety management system certificate (e.g. OHSAS 18001) granted by a duly accredited third party is sufficient as such to fulfil the requirement. In case of no safety management system certificate, the safety management system of the Applicant will be audited during the ECCA Premium® inspection. In addition to a demonstrated commitment to a reported and documented safety management system, at least the following requirements shall be fulfilled:

* The applicant needs to have a safety management system at place and the commitment of the company management to follow-up with it.
* The applicant shall have appointed safety management personnel and organisation.
* Documented processes to ensure information within the own organisation and towards the mother company
* Documented processes to regularly report accident rate and actions taken to company management
* Documented processes to continuously improve safety at the site and throughout the group
* The following recordings are required:
  + Number of accidents (lost time and near miss)
  + Number of days lost due to accidents
  + For each lost time accident shall be recorded:
    - Incident type
    - Incident description
    - Actions taken to ensure follow-up and to avoid re-occurrence

**ANNEX C.** **Natural outdoor UV radiation resistance tests (EN 1396, clause C.6.3.2)**

The exposure site shall provide at least 4 500 MJ/m²/year of cumulative solar energy measured horizontally. Specimen cleaning conditions can influence test results significantly. Colour change and retained gloss shall be evaluated on correctly cleaned specimens. The cleaning conditions may be changed upon agreement at the time of enquiry and order. Lisbon (PT) – site recommended by ECCA – is an example of a UV radiation exposure. Other sites with the same minimum cumulative solar energy may be selected as well (Florida, Arizona, etc.).

The test duration is 2 years for all UV resistance categories *R*uv2, *R*uv3 and *R*uv4.

**Table C.4 — Examples of exposures for the different UV resistance categories**

|  |  |
| --- | --- |
| **UV Resistance category** | **Example** |
| *R*uv1 | Reverse coating of exterior elements. |
| *R*uv2 | Regions located north of about latitude 45 °N, with an altitude not greater than 900 m. |
| *R*uv3 | Regions located south of about latitude 45 °N and north of about latitude 37 °N, with an altitude not greater than 900m. |
| *R*uv4 | Regions located south of about latitude 37 °N.  Every region with an altitude greater than 900 m. |
| NOTE 1 Examples given are of general guidance since local conditions in relation with sunshine hours and UV-radiation can vary considerably even in a small geographical area  NOTE 2 For buildings located next to the sea or large lakes or areas covered with snow, UV-radiation can be increased due to reflection from the corresponding surfaces. | |

**ANNEX D.** **Resistance to accelerated UV radiation (EN 1396, clause C.6.3.3)**

UV radiation resistance tests shall be carried out in accordance with EN 13523-10.

UV resistance tests shall not be carried out on coatings of UV resistance category Ruv1.

The artificial ageing test under combined action of both UV radiation and condensation is carried out for coating system categories *R*uv2, *R*uv3 and *R*uv4 by using UV-A 340 lamps. The test duration is 2 000 hours (250 cycles). In case other radiation sources are used (such as UV-B 313 or Xenon), tolerances might differ from the values stated in Table C.5 and shall be agreed at the time of enquiry and order.

**ANNEX E. UV Resistance, General (EN 1396, clause C.6.3.1)**

Type 1, 2 and 3 specimens are specified in EN 13523-19. Type 1 specimens are exposed in a site providing at least 4500 MJ/m²/year of cumulative solar energy measured horizontally. See C.6.4 and C.6.5 for testing conditions. The aspect of Type 1 specimens shall not exhibit variations more than those reported in Table C.3 for UV resistance categories *R*uv2, *R*uv3 and *R*uv4.

**Table C.3 — Requirements for the UV resistance for natural and artificial testing conditions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Requirements**  (duration: two years of natural,  2 000 hours for artificial UV radiation). | **UV resistance category** | | | | |
| *Ruv2* | *Ruv3* | | *Ruv4* | |
| Maximum colour change ΔE\*a before and after the test (CIELab units) | 5 | 3 | | 3c | 2d |
| Minimum retained gloss after the test (RGb), % | 30 | 50c | 60d | 80 | |
| a The ΔE\* value is not applicable for saturated and other special colours such as metallic and pearlescent. In that case the colour change verification method and its acceptance value shall be agreed at the time of enquiry and order.  b The retained gloss (RG) is the ratio of the final gloss value, given in percent. The RG requirement is  not applicable to textured finished coatings.  c Natural UV radiation.  d Artificial UV radiation. | | | | | |

**ANNEX F.** **Filiform corrosion test, FFC (EN 1396, clause C.6.6)**

When tested for 500 h in accordance with ISO 4623-2 the average under creep shall not exceed the values specified in Table C.6.

**Table C.6 — Maximum values for average under creep and face filiforms  
after accelerated corrosion testing**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Testing time h | Corrosion resistance index | | |
| 1 | 2 | 3 |
| Under creep corrosion mm | 500 | L4/M4 | L2/M2 | L1/M1 |
| 1 000 | — | L3/M3 | L2/M2 |
| NOTE 1 L = longest filament, M = most frequent filament | | | | |

1. EN 10346 is currently under revision. ZM coatings are included in the EN 10346 and are, thus, included in the ECCA Premium® referential as well. [↑](#footnote-ref-1)
2. Sharp and saturated colours as defined by the applicant. In cases of dispute/disagreement or doubt, the ECCA colour assessment guideline document shall be used for defining whether the colour shade is sharp or saturated. [↑](#footnote-ref-2)
3. Usage of the Hunter lab scale for colour measurement is also accepted [↑](#footnote-ref-3)