

QUALICOAT SPECIFICATIONS

25th Edition

Introduction to the Specifications

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QUALICOAT

Inspired by architecture, trusted by professionals

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CHAPTER 1 - GENERAL INFORMATION

1. Scope

These Specifications apply to the QUALICOAT quality label, which is a registered trademark.

In response to general demand from those involved in the label (general licensees, licensees, approval holders), QUALICOAT has restructured its specifications by dividing them into several volumes dedicated to the various players in the quality system.

The current document sets out the content of the various volumes, the general rules governing the Specifications (terminology, reference standards, publication and updating), as well as regulations for the use of the logo by third parties.

2. Language

The official version of these Specifications is the English language version.

In the English language version, certain verbal forms have meanings which correspond to the requirements of the ISO/IEC Directives, Part 2, Clause 7.

The following verbal forms indicate strict requirements to be followed to comply with these Specifications and from which no deviation is permitted:

- Shall
- Shall not

The following verbal forms indicate that among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required. Additionally, in the negative form, a certain possibility or course of action is deprecated but not prohibited:

- Should
- Should not

The following verbal forms indicate a course of action permissible within the limits of these Specifications:

- May
- Need not

The following verbal forms are used for statements of possibility and capability—whether material, physical, or causal:

- Can
- Cannot

In case of ambiguities or uncertainties in any part of the Specifications, clarification shall be requested from QUALICOAT.

3. Terminology

Anodic pretreatment

Electrochemical process used to produce an anodic layer before coating.

Approval

Confirmation that a specific material (coating or chemical conversion) meets the requirements of the QUALICOAT Specifications.

The following categories of approvals are available:

Classification	Description
P-No.	Approval for powder or liquid coating system
PF-No.	Approval for powder coating system suitable for postforming
A-No.	Approval for chemical pretreatment system (conversion coating) for etched material
AP-No.	Approval for chemical pretreatment system (conversion coating) for pre-anodised material
AN-No.	Approval for chemical pretreatment system (with modified processes or new technologies)

Chromate conversion

Chemical treatment using chromate or chromate-phosphate conversion.

Chemical pretreatment

Chemical treatment using non-chromate conversion.

Coating line

A production line used for coating aluminium for architectural applications that includes a single pretreatment cycle (surface preparation, conversion coating and drying) and a coating cycle (one or more spraying booths and ovens).

Continuous line

A production line where parts are pretreated, coated and cured without intermediate handling.

Curing index	A numerical index of cure value that quantifies directly from the curing graph the total coating cure experienced against the coating supplier's paint cure schedule
Licence/Sub-licence	Permission to use the quality label in accordance with the QUALICOAT Specifications for all coatings on aluminium for architectural applications produced on the coating line(s) at the production site inspected.
Licensee/Sub-licensee	<p>The legal entity operating the inspected production site, holding the QUALICOAT licence for this specific production site and acting as this specific licensee on the market. This means marketing all coatings on architectural aluminium produced at this production site using the QUALICOAT label in accordance with the Specifications.</p> <p>The same legal entity may also operate other production sites and hold separate QUALICOAT licences for these.</p>
General licence	Permission to grant licences and approvals in a certain territory.
General Licensee (GL)	National or international association holding the QUALICOAT general licence for a defined territory.
Material for postforming	Coated cold-rolled aluminium material suitable for postforming (sheets or coils).
Postforming	The act of working, by bending or forming (stamping), already coated aluminium sheets or coils.
Pretreatment cycle	A system of tanks for spray or dipping application of chemicals, rinses and/or electrochemical processes, creating a process sequence for pre-treating the workpieces to be coated. A single pretreatment cycle comprises one specific chemical conversion coating step or — in the case of pre-anodising— the pre-anodising bath.
Production site	A production facility for coating materials, chemicals, or coatings. In the case of a coating facility, the licensee may operate one or several coating lines in a production site. A production site shall have a distinct postal address.
Testing laboratories	Independent quality testing and/or inspection bodies duly authorised by the General Licensee or QUALICOAT.

4. List of standards used by QUALICOAT

Table 1 - List of standards used by QUALICOAT (including year of reference)

Nº	Year	Title	Relevant Test
ISO 2813	2014	Paints and varnishes - Determination of gloss value at 20° degrees, 60° and 85°	Gloss measurement
ISO 2360	2017	Non-conductive coatings on non-magnetic electrically conductive basis materials - Measurement of coating thickness - Amplitude-sensitive eddy current method	Coating thickness
ISO 2409	2020	Paints and varnishes - Cross-cut test	Dry adhesion test
ISO 2815	2003	Paints and varnishes - Buchholz indentation test	Buchholz indentation test
ISO 1520	2006	Paints and varnishes - Cupping test	Cupping test
ISO 1519	2011	Paints and varnishes - Bend test (cylindrical mandrel)	Bend test
EN 13523-7	2021	Coil coated metals - Test methods - Part 7: Resistance to cracking on bending (T-bend test)	Bend test for postforming
EN 1396	2023	Aluminium and aluminium alloys. Coil coated sheet and strip for general applications. Specifications	
ISO 6272-1	2011	Paints and varnishes - Rapid-deformation (impact resistance) tests - Part 1: Falling-weight test, large-area indenter	Impact test (for powder coating only)
ISO 6272-2	2011	Paints and varnishes - Rapid-deformation (impact resistance) tests - Part 2: Falling-weight test, small-area indenter	
ASTM D2794	2010	Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)	
ISO 22479	2019	Paints and varnishes - Determination of resistance to humid atmospheres containing sulphur dioxide	Resistance to humid atmospheres containing sulphur dioxide
ISO 4628-2	2016	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 2: Assessment of degree of blistering	Resistance to humid atmospheres containing sulphur dioxide, Constant climate condensation water test, and Acetic acid salt spray test
ISO 9227	2022	Corrosion tests in artificial atmospheres - Salt spray tests	Acetic acid salt spray test
ISO 16474-2	2013	Paints and varnishes - Method of exposure to laboratory light sources -Part 2 - Xenon-arc lamps	Accelerated weathering test for classes except class 3
ISO 11664-4	2019	Colorimetry - Part 4:CIE 1976 L*a*b* Colour space	Colour measurement
ISO 2810	2020	Paints and varnishes - Natural weathering of coatings - Exposure and assessment	Natural weathering test (Outdoor exposure in Florida)

Nº	Year	Title	Relevant Test
EN 12206-1	2021	Paints and varnishes - Coating of aluminium and aluminium alloys for architectural purposes - Part 1: Coatings prepared from coating powder	Resistance to mortar
ISO 6270-2	2017	Paints and varnishes - Determination of resistance to humidity - Part 2: Procedure for exposing test specimens in condensation - water atmospheres	Constant climate condensation water test
ISO 4623-2	2003	Paints and varnishes - Determination of resistance to filiform corrosion - Part 2 Aluminium substrates	Filiform corrosion (FFC) test for SEASIDE and PRE-OX
ISO 4628-10	2016	Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 10 Assessment of degree of filiform corrosion	
EN 16611	2023	Furniture - Assessment of the surface resistance to micro scratching	Scratch and mar resistance (Martindale) test
EN 12487	2007	Chemical conversion coatings - Rinsed and non-rinsed chromate conversion coatings on aluminium and aluminium alloys	Chromate conversion coatings
ISO 3892	2000	Conversion coatings on metallic materials - Determination of coating mass per unit area - Gravimetric methods	
EN 1706	2020 + A1: 2021	Aluminium and aluminium alloys - Castings - Chemical composition and mechanical properties	Etching stage

5. Release and revision of the Specifications

The Specifications may be supplemented or amended with update sheets that set out and incorporate QUALICOAT's resolutions until a new edition is issued. These numbered sheets will state the subject of the resolution, the date when QUALICOAT passed the resolution, the effective date and the details of the resolution.

The General Licensees are responsible for the distribution of the Specifications and related update sheets to their members. In countries where there is no General Licensee, these documents are disseminated directly by QUALICOAT.

Any third party wishing to obtain either volume of the QUALICOAT Specifications must send a written request to info@qualicoat.net.

6. Impartiality

QUALICOAT does not allow commercial, financial or other pressures to compromise its impartiality. The Specifications may be amended when risks of impartiality have been identified or when they need to conform to new standards.

CHAPTER 2 - SCOPE OF THE VARIOUS VOLUMES

1. Specifications for Coaters (Volume No. 1)

Volume No. 1 specifies minimum requirements that production sites, coating lines, processes and finished products shall meet before a licence is granted to a coating plant.

Table 2 - Contents of Volume No. 1 - Specifications for Coaters

Chapter 1 General Information	Scope, language, definitions, relevant standards, release and revision of specifications
Chapter 2 Work Specifications	<ol style="list-style-type: none"> 1. Aluminium alloy material 2. Storage 3. Layout of equipment 4. Pretreatment installations 5. Surface preparation 6. Chemical conversion coatings 7. Anodic pretreatment 8. Electrophoretic coatings 9. Drying 10. Coating 11. Stoving 12. Laboratory 13. Operating instructions 14. Registers 15. General Data of Licensee 16. Training
Chapter 3 In-House Control	<ol style="list-style-type: none"> 1. Introduction 2. Controlling the production process parameters 3. Quality control of the surface preparation and chemical conversion coatings 4. Quality control of the finished products 5. Quality control registers 6. Summary of in-house control 7. Test methods and requirements

Chapter 4 Granting of a licence	<ol style="list-style-type: none"> 1. Introduction 2. Application 3. Preliminary inspection 4. Inspections for granting a licence 5. Final assessment for granting the licence 6. Granting of a SEASIDE endorsement 7. Granting of a PRE-OX endorsement 8. Granting of a POSTFORMING endorsement
Chapter 5 Renewal of a licence	<ol style="list-style-type: none"> 1. Introduction 2. Inspections for renewing a licence 3. Unforeseen problems during renewal inspections 4. Deadlines for submission of inspection reports 5. Issues and non-conformities 6. Final assessment for renewing the licence 7. Renewal of a SEASIDE endorsement 8. Renewal of a PRE-OX endorsement 9. Renewal of a POSTFORMING endorsement 10. Suspension of an inspection
Chapter 6 Regulations for the use of the QUALICOAT Quality Label	<ol style="list-style-type: none"> 1. Definitions 2. Ownership of the Quality Label 3. QUALICOAT Logo 4. QUALICOATBrand colour palette 5. Register of licensees 6. Significant changes in a company 7. Failure to comply with the use of the Quality Label 8. Voluntary withdrawal 9. Sanctions
Chapter 7 Right of Appeal	<ol style="list-style-type: none"> 1. Definitions 2. General Procedure

2. Specifications for Chemical Pretreatment Manufacturers (Volume No. 2)

Volume No. 2 reports on the instructions given to coaters with regard to pretreatment and specifies the general pretreatment processes and the procedure for granting and renewing an approval for pretreatment processes, except for chromate conversion coatings. It also describes the testing programme to be followed by the laboratories involved and the requirements for every test.

Table 3 - Contents of Volume No. 2 - Specifications for Chemical Pretreatment Manufacturers

Chapter 1 General information	Scope, language, definitions, relevant standards, release and revision of specifications, impartiality
Chapter 2 Specifications for pretreatment at coating plants	<ol style="list-style-type: none"> 1. Storage of chemical products 2. Pretreatment installations 3. Surface preparation 4. Chemical conversion coatings 5. Anodic pretreatment (PRE-OX endorsement) 6. Drying
Chapter 3 Preliminary conditions for the approval of chemical pretreatments	<ol style="list-style-type: none"> 1. Formal application prior to testing 2. Preliminary conditions
Chapter 4 Granting of approvals	<ol style="list-style-type: none"> 1. Introduction 2. Panel preparation 3. Laboratory tests 4. Outdoor exposure in Genoa 5. Conformity assessment 6. Certificates
Chapter 5 Renewal of approvals	<ol style="list-style-type: none"> 1. Time schedule 2. Pretreatment systems manufactured at different production sites 3. Repetition of unsatisfactory tests 4. AASS test '10+2' rule and FFC test '15+3' rule
Chapter 6 Responsibilities of chemical manufacturers and/or suppliers	<ol style="list-style-type: none"> 1. Responsibility and cooperation with licensed coaters 2. Compulsory declaration of changes in formulation of pretreatments

Chapter 7 Pretreatment systems with modified processes or new technologies	<ol style="list-style-type: none"> 1. Introduction 2. Preliminary Sampling and Testing programme (PST)
Chapter 8 Use of the QUALICOAT Quality Label	<ol style="list-style-type: none"> 1. Definitions 2. Ownership of the Quality Label 3. Logo
Chapter 9 Right of appeal	<ol style="list-style-type: none"> 1. Definitions 2. General Procedure

3. Specifications for Powder Manufacturers (Volume No. 3)

Volume No. 3 specifies the procedure for granting and renewing an approval for organic coatings, with the exception of coating materials used for decoration, which are specified in a separate volume. It also describes the testing programme to be followed by the laboratories involved and the requirements for every test.

Table 4 - Contents of Volume No. 3 - Specifications for Powder Manufacturers

Chapter 1 General Information	Scope, language, definitions, relevant standards, release and revision of specifications
Chapter 2 Principles for the approval of coating materials	<ol style="list-style-type: none"> 1. Identification of coating materials 2. Special cases 3. Changes in formulation
Chapter 3 Preliminary Conditions for the approval of organic coatings	<ol style="list-style-type: none"> 1. Formal application prior to testing 2. Minimum laboratory equipment 3. Inspection of powder manufacturer's plant
Chapter 4 Granting of approvals	<ol style="list-style-type: none"> 1. Basic colours 2. Sampling 3. Testing programme 4. Summary of test requirements 5. Assessment of test results 6. Overview of the granting procedure
Chapter 5 Renewal of approvals	<ol style="list-style-type: none"> 1. Principles 2. Renewal of class 1 and class 1.5 approvals 3. Renewal of class 2 approvals 4. Renewal of class 3 approvals 5. Renewal of approvals for postforming (PF-No.) 6. Renewal of special approvals 7. Sampling 8. Assessment of laboratory test results 9. Assessment of the Florida test results 10. Banned colours 11. Suspended colours 12. Procedure for unbanning colour families for class 2 13. Withdrawal of an approval or extension 14. Overview of the renewal procedure

Chapter 6 Routine inspections of coating manufacturers plants	1. Principles 2. Inspection form 3. Assessment of inspection reports
Chapter 7 Use of the QUALICOAT Quality Label	1. Definitions 2. Ownership of the Quality Label 3. Logo
Chapter 8 Right of appeal	1. Definitions 2. General procedure 3. Appeal after Florida exposure

CHAPTER 2 - USE OF THE QUALICOAT QUALITY LABEL

1. Definitions

The term **Quality Label** refers to our certification activities and our brand, while the term **Logo** covers the graphic representation of our brand.

2. Ownership of the Quality Label

The Quality Label is owned by QUALICOAT and shall not be used by anyone unless authorised to do so by QUALICOAT.

Authorisation to use the Quality Label may be granted on condition that the applicant operates in accordance with the Specifications. This authorisation is governed by a contract.

The granting of a licence entitles the licensee to use the Quality Label for the products specified. A licence cannot be transferred.

3. QUALICOAT logo

a) Logo description

The QUALICOAT logo represents our commitment to quality, highlighting the elegance and precision of architecture, particularly through the use of our signature 'Q'.

Our brand promise, '*Inspired by architecture, trusted by professionals*', integrates seamlessly. And the use of Reflex Blue and Silver convey quality, our heritage, and our core product, aluminium.

The **standard logo** should be used whenever possible to maintain brand consistency.



Figure 1 - Standard logo

Alternative one- and two-colour versions are also available for use in situations where colour printing is not feasible or when a monochrome design is required for aesthetic or practical reasons. Only original logo files should be used, and no attempt should be made to recreate the logo.



Figure 2 - Alternative logo options

b) Improper use of the logo

The logo shall not be altered in any way, including its appearance, proportions, colours, or graphical elements.



Figure 3 - Examples of incorrect logo usage

c) Use of the logo by third parties

Some businesses using QUALICOAT coated products may wish to use the logo on the products they manufacture or in their business literature.

They shall request written authorisation which may be granted on condition that they:

- undertake to use solely aluminium products coated by licensees;
- undertake to submit all documents that refer to QUALICOAT to the GL for approval or directly to QUALICOAT in countries where there is no GL;
- undertake to undergo inspections and controls by the GL or QUALICOAT.
- Such authorisation may require payment of an annual fee.