



Update of QUALICOAT Specifications 2023

Update Sheet No. 12

applicable from 01.01.2024

Subject:	Procedure for the Approval of New Pretreatments
Proposals / Requests:	<p><u>Resolution No. 2 / TC 2021.06.09</u></p> <p>The TC asked the Pretreatment WG to prepare a procedure for the approval of new pretreatments that are not covered in § 3.2.1.</p> <p>Remark/explanatory extract from the TC minutes: the idea was to add a sentence to this section that would 'leave an open door to new products suitable for passing the tests'.</p>
QUALICOAT Resolution:	<p><u>Resolution No. 15 / TC 2023.05.16</u></p> <p>The TC approved the Procedure for the Approval of New Pretreatments proposed by the Pretreatment WG. An update sheet shall be prepared.</p>
Amendment to the Specifications:	<ul style="list-style-type: none">• Elaboration on the various approvals available under '§1 Terminology'• Supplementary paragraph in '§3.2 Surface Preparation', stating chemical pretreatments that are not described in Chapter 3 (other than the chromate conversion coatings) may not be used until they have been approved by QUALICOAT, following a test programme set out in the new Appendix A6b.• Introduction of new Appendix A6b

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Chapter 1. General Information

[...]

Terminology

Approval: Confirmation that a specific material (for coating or chemical **conversion pretreatment**) meets the requirements of the QUALICOAT Specifications.

The following categories of approvals are available:

Approval 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)

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).

[...]

Chapter 3. Work Specifications

[...]

3.2 Surface preparation

The surfaces of the parts to be treated shall be clean and free of any oxidation, scale or soils, oil, grease, lubricants, hand sweat or any other contamination that may be detrimental to the final finish. The parts shall therefore be etched before conversion coating. Two preliminary pretreatments are defined: standard (compulsory) and enhanced (voluntary, for SEASIDE endorsement).

The products to be treated shall either be attached to the jig individually or placed in a basket as stipulated in Appendix A7. Each product shall be treated fully in one pass, at each stage.

Cast accessories have special requirements (see Appendix A5 – Special specifications for coatings on aluminium accessories for architectural applications under the QUALICOAT quality label).

It is not permissible, to apply any etching or conversion coating process, which is not stipulated in [Chapter 3](#) or [Appendix A6](#) of QUALICOAT Specifications. In the case of modified processes or new technologies, which are not stipulated in [Chapter 3](#) or [Appendix A6](#), a preliminary sampling and testing (PST) of the etching and/or conversion coating process according to [Appendix A6b](#) shall be first required. Only after this preliminary testing is successfully completed, an approval (A-No.) of the pretreatment system according to [Appendix A6](#) can follow.

[...]

Appendices

[...]

A6 – Approval of chemical pretreatments

[...]

A6b – Preliminary sampling and testing (PST) of pretreatment-systems with modified processes or new technologies

1. Introduction

The pretreatment systems regulated in QUALICOAT Specifications today are, chromate conversion coatings (§ 3.3.1) and other chemical pretreatments (§ 3.3.2) in combination with different types of etching (§ 3.2.1) or anodic pretreatment (§ 3.4).

To consider the implementation of modified pretreatment processes or new technologies, [Appendix A6b](#) prescribes the procedure for preliminary sampling and testing (PST) of these new processes, prior the commencement of the approval (A-No.) testing. For pretreatment systems that fully comply to QUALICOAT Specifications and [Appendix A6](#), it is not necessary to apply for a PST request.

2. Preliminary Sampling and Testing (PST) Programme

The QUALICOAT Executive Committee must confirm or modify the following pre-defined minimum requirements for each PST request, before proceeding with Phase 3.

The Executive Committee can intervene at any time of this procedure and name the reasons. To accelerate the PST process, the Executive Committee can give mandates.

PROCEDURE STEPS (PHASE 1 TO 9):

PHASE 1	Responsible	Information to
<p>Formulation of the PST request:</p> <p>Description of the complete pretreatment process in detail including all relevant process steps, parameters, values and limits as well as TDS and safety data sheet of all chemicals involved.</p> <p>Proposal for the tests (test type and requirements). Minimum test requirements according to Appendix A6 laboratory test (outdoor exposure test will be stipulated by QUALICOAT on Phase 6).</p>	Supplier	General Licensee or to QUALICOAT in countries where there is no General Licensee
PHASE 2	Responsible	Information to
<p>Review of description. Confirm or modify the following PST procedure steps.</p> <p>Naming two QUALICOAT approved laboratories and additional laboratory required in case of inconsistent test results (see Phase 5) in agreement with the GL and/or QUALICOAT in countries where there is no General Licensee. Please note that all the testing institute involved shall not be part of the same corporate group.</p> <p>Naming tests for Phase 3 and 4.</p> <p>Release for Phase 3 and 4.</p>	Executive Committee, after consultation with Convenors of Technical Committee and Pretreatment WG	Supplier

PHASE 3	Responsible	Information to
<p>Institute sampling:</p> <p>Sampling in one of the two laboratories or in supplier's factory under the supervision of the laboratory (institute sampling).</p> <p>Sampling shall include a third set of samples as required for a third laboratory in case of inconsistent test results (see Phase 6).</p> <p>Sampling may include a set of samples as required for outdoor exposure in a subsequent approval process according QUALICOAT Specifications.</p> <p><i>*Note: It is permissible to perform Phase 3 and 4 at the same time.</i></p>	Laboratories	Supplier
PHASE 4	Responsible	Information to
<p>Field sampling:</p> <p>Sampling in QUALICOAT approved coating line (field sampling) under the supervision of a QUALICOAT inspector on basis of process description and the required tests. Minimum 1000 m² of finished products (extrusions or sheets) to be coated with the samples to be taken at the beginning, in the middle and the end of the lot.</p> <p>Sampling shall include a third set of samples as required for a third laboratory in case of inconsistent test results (see Phase 6).</p> <p><i>*Note: It is permissible to perform Phase 3 and 4 at the same time.</i></p>	Supplier and Laboratories	General Licensee or to QUALICOAT in countries where there is no General Licensee
PHASE 5	Responsible	Information to
<p>Testing in the two named laboratories. Samples of institute sampling (Phase 3) and field sampling (Phase 4) should preferably be tested simultaneously in the same test apparatus (§2.9, §2.10, §2.4.2, §2.17 and §2.19). All tests shall be performed in triplicate. If the results of more than one panel are unsatisfactory, the respective test result shall be rated as negative.</p>	Laboratories	General Licensee or to QUALICOAT in countries where there is no General Licensee
PHASE 6	Responsible	Information to
<p>Review test results of institute sampling (Phase 3) and field sampling (Phase 4).</p> <p>If the results in both laboratories are positive, the system is satisfactory.</p> <p>If the results in both laboratories are negative, the system is unsatisfactory.</p> <p>If the results are positive in one laboratory and negative in the other, the tests shall be repeated in a third laboratory.</p> <p>Proposal of modifications of QUALICOAT specifications, if necessary.</p>	Convenor of Pretreatment WG and QUALICOAT	Executive Committee and Technical Committee

Proposal to Executive Committee and Technical Committee to release for trial process and stipulating outdoor exposure tests required.		
PHASE 7	Responsible	Information to
With satisfactory test results from Phase 3 and 4, and with authorisation from the Executive and Technical Committee, the supplier can administer / operate the system in the plant used for field sampling with a six months testing programme (trial process). Two inspections shall be conducted which include one unannounced inspection.	Supplier and Laboratories	General Licensee or to QUALICOAT in countries where there is no General Licensee
PHASE 8	Responsible	Information to
Decision about release for approval process. Defining modifications of QUALICOAT specifications, if necessary.	Technical Committee and Executive Committee	General Licensee or to QUALICOAT in countries where there is no General Licensee
PHASE 9	Responsible	Information to
Informing the supplier about the decision of Executive Committee for possible approval (A-No.) process according QUALICOAT Specifications and Appendix A6 . Approval (A-No.) process: If the supplier applies for approval (A-No.) according QUALICOAT Specifications and Appendix A6 , the test results gathered in the PST process, shall be regarded as valid for the approval process as well. QUALICOAT shall issue an provisional approval certificate (AN-No.) which will be automatically reissued every year for a validity period equivalent to the duration of outdoor exposure testing. After the exposure tests, the convenors of the Technical Committee and Pretreatment WG shall evaluate the results and take a decision on transferring the provisional approval (AN-No.) to an approval (A-No.).	General Licensee or to QUALICOAT in countries where there is no General Licensee Convenors of the Technical Committee and Pretreatment WG	Supplier