

**Technical Definition**

Layer Thickness measurement – Aluminium painted panels

You shall respect the HSE policy of your laboratory for each performed test.

Please read these instructions carefully BEFORE starting the tests.

1. 3 specimens (80 x 50 x 1 mm) are supplied to each participant.
 - PI1 specimen without any coatings or treatments
 - PI2 specimen with Unsealed CAA + Primer
 - PI3 specimen with Unsealed CAA + Primer + Top coat

2. Each participant is required to determine the thicknesses of layers for each specimen as indicated below:

Eddy currents method

The thickness of the coating shall be measured in accordance with **ISO 2808:2019** and **ISO 2360:2017**. The baseline shall be performed on untreated specimen (PI1) and at least 3 measurements shall be made on each layer. Thus, the CAA, primer and top coat thickness will be determined (PI2 & PI3).

Microscopic method – only for Test Specimen PI3 (not mandatory if you are not qualified by your sponsor for using this measurement method)

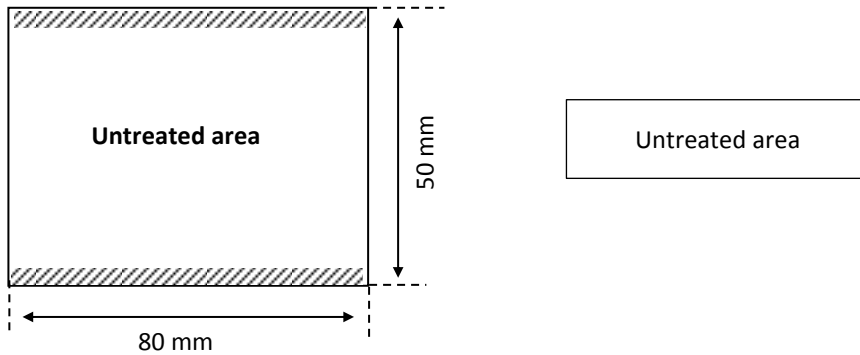
A cross section shall be performed on the test specimens lengthways (after measurement by eddy currents method) in order to measure the thickness of each layer. The measurements shall be performed in accordance with **ISO 1463 (2003)**. For each layer, at least 10 measurements shall be done, uniformly distributed along one of the sides of the test specimens and covering the 20 mm length of the cross section.

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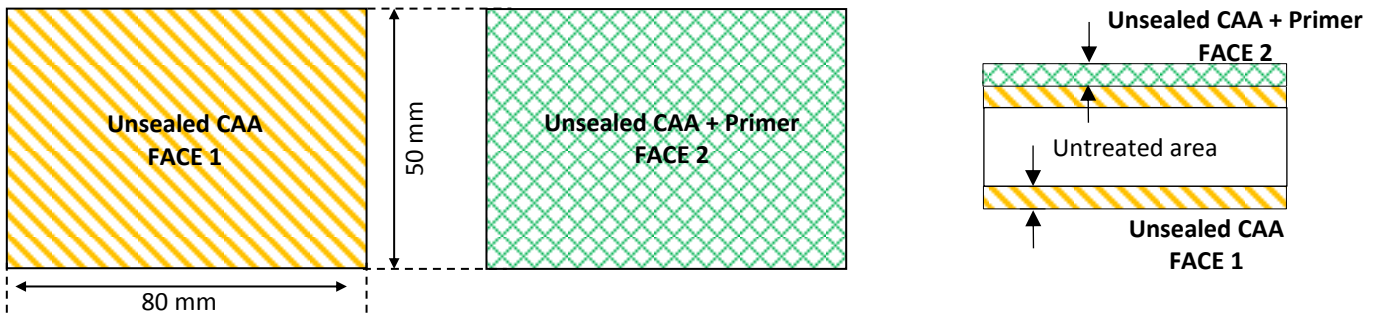
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Description of test specimens

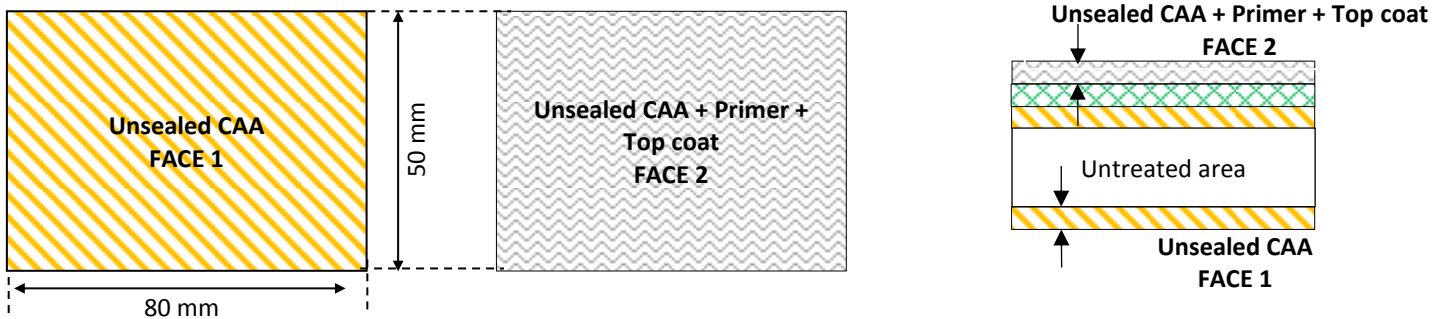
Test Specimen PI1 (Identification 10-8-**PI1**-XXX)



Test Specimen PI2 (Identification 10-8-**PI2**-XXX)



Test Specimen PI3 (Identification 10-8-**PI3**-XXX)



The tests shall be performed respecting the following conditions:

- One operator only
- One testing machine only
- Tests performed in sequence



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3. Results for both methods are to be reported as follows:

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Unsealed CAA average thickness (Eddy current method) – <u>to be measured on Face 1 of PI2</u>	µm	X,X	At least one method has to be used	Yes
Unsealed CAA average thickness (Microscopic method) – <u>to be measured on PI3</u>	µm	X,X		Yes
Unsealed CAA + Primer average thickness (Eddy current method) - <u>to be measured on Face 2 of PI2</u>	µm	XX,X	At least one method has to be used	Yes
Primer average thickness (Microscopic method) – <u>to be measured on PI3</u>	µm	XX,X		Yes
Unsealed CAA + Primer + Top coat average thickness (Eddy current method) – <u>to be measured on Face 2 of PI3</u>	µm	XX,X	At least one method has to be used	Yes
Top coat average thickness (Microscopic method) – <u>to be measured on PI3</u>	µm	XX,X		Yes
For microscopic method, pictures of the sample with measurements	N/A	N/A	Mandatory	No

All evaluated characteristics will be analysed according to the algorithm A (ISO 13528 – 2015) and evaluated using z-score.

4. Testing shall start **as soon as test specimens are received**. Please contact the following e-mail address for any technical or administrative query.

Submission date :	May 1st, 2020
Technical and administrative support :	info@ptpscheme.com


5. Instructions for submission of results are detailed on the website:

<https://ptpscheme.com>

6. To ensure the confidential treatment of your results in the final report, you will be allocated a unique identity number when you register for the program.

7. Collusion and falsification of your PTP results are totally forbidden. In case of identification or suspicion of collusion or falsification, the laboratory will be excluded from the program and the sponsors will be immediately informed. The sponsors could ask you proofs of your records and analyses, so be sure to conserve data, curves and specimens.

8. The tested specimens do not need to be sent back to the PTP office.

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APPENDIX : Instructions for IRR participation

The Internal Round Robin participation (IRR) is **optional** and **independent** from your PTP participation.

Confidentiality : The IRR results and reports are confidential and only accessible by your laboratory. They are not shared with the scheme sponsors or any other accreditation or certification bodies.

The extra samples shall be tested according to the following table:

	Operator 1	Operator 2	Operator 3	Operator 4	Operator X
Test machine 1	PTP kit (3 samples)	1 kit	1 kit	1 kit	1 kit
Test machine 2	1 kit				
Test machine 3	1 kit				
Test machine Y	1 kit				

Operator 1 (OP1) is to be the most experienced operator currently conducting tests on a regular basis and shall perform tests on all machines (TM1, TM2, TM3...)

Test Machine 1 (TM 1) is to be the most utilised machine for this test in your laboratory and shall be tested by all operators (OP1, OP2, OP3...)

Example: A laboratory has 2 operators and 3 test machines. They receive a PTP kit and 3 extra kits. Operator 1 shall test the PTP kit on TM1, 1 kit on TM2 and 1 kit on TM3. Operator 2 shall test 1 kit on TM1.

The IRR results have to be submitted on a separate results form available on the PTP website. The identification of operators and test machines you provide will appear on the IRR final report. These identifications will not be seen by other laboratories.

The IRR results will be classified against the acceptance classes of the kit 10-8-2020.

Reminder: Laboratories are not permitted to switch specimens between the PTP kit and IRR samples. The traceability of the samples will be checked during the evaluation. Laboratories found to have switched samples will invalidate their PTP participation.

REVISION HISTORY

Issue Date	Issue N°	Changes
07/01/2020	1	Document creation