

Subject:	Modified FFC test method
Proposal:	Laboratories WG
QUALICOAT resolution:	<p><u>Resolution No. 2/TC 22.11.17</u></p> <p>The TC rejected the draft Update Sheet “Modified FFC test method” and asked the Laboratories WG to reconsider its proposal and make a comparative study of the two available methods.</p> <p><u>Resolution No. 18/TC 16.05.18</u></p> <p>The TC endorsed the Laboratories WG’s proposal that the ISO 4628-10 standard should be followed for assessing the FFC test results and ratified the draft Update Sheet No. 10 to become effective on 1 January 2019.</p>
Date of ratification:	16 May 2018
Date of application:	1 January 2019
Amendments to the Specifications:	Section 2.19. Filiform corrosion test

2.19. Filiform corrosion test

TEST METHOD

ISO 4623–2 with the following modification:

Size of samples: preferably 150 x 70 mm

The scratches shall be made as follows:

~~Make the horizontal and vertical incisions (method A) with a length of 10 cm each. If the panels are not wide enough, the horizontal incisions may be replaced by two incisions, each 5 cm in length, at the top and bottom of the panel.~~

On each sample, make two scribe marks perpendicular to each other, each at least 30 mm long and at a distance of at least 10 mm from each other and from the edges.

The scribe marks shall be 1 mm in width with a rectangular shape.

If the samples have a small width (<50 mm), no horizontal scribe mark (perpendicular to the extrusion direction) shall be made.

Corrosion is produced by dripping hydrochloric acid (concentration 37%, density 1.18 g/cm³) along the scratches for 1 minute. ~~Then the acid shall be removed carefully with a piece of cloth.~~ Then the acid shall then be removed by dabbing gently with a piece of cloth or laboratory paper and the sample shall be allowed to stand at laboratory conditions for 60 minutes.

~~After 1 hour in laboratory conditions, the samples shall be put into the test cabinet at 40 ±2°C and 82 ±5% relative humidity for 1000 hours.~~

The samples shall then be put into the test cabinet at 40 ±2°C and 82 ±5% relative humidity for 1000 hours in a horizontal position.

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~~Sample size
Preferably 150 x 70 mm.~~

ASSESSMENT

Based on the ISO 4628-10 standard.

Using a ruler, determine the length of the longest filament L (mm) as described in the ISO 4628-10 standard, reporting the results for the two scribe marks separately.

The worst results of each test sample shall be reported for the final assessment.

In case of regular filiform corrosion, use **method 1**.

For irregular filiform corrosion, use **method 2**.

REQUIREMENTS:

Acceptable limits within 10 cm on each side of the scratch

L (longest filament) ≤ 4 mm

M (average length of filaments) ≤ 2 mm

~~Number of filaments ≤ 20~~

The inspector takes three test pieces from different lots. The results are classified according to the scale below:

- A. 3 samples satisfactory = 0 sample unsatisfactory
- B. 2 samples satisfactory = 1 sample unsatisfactory
- C. 1 sample satisfactory = 2 samples unsatisfactory
- D. 0 sample satisfactory = 3 samples unsatisfactory

Final assessment of the FFC test:

RATING	GRANTING / RENEWAL OF	
	APPROVAL OF ALTERNATIVE PRETREATMENT SYSTEMS	SEASIDE ENDORSEMENT
A	Satisfactory	Satisfactory
B	Satisfactory	Satisfactory with a comment to the coating applicator
C	Unsatisfactory <ul style="list-style-type: none"> ▶ Repetition of the filiform corrosion test. ▶ If the result of this second test is C or D, all tests shall be repeated. 	Unsatisfactory <ul style="list-style-type: none"> ▶ Repetition of the filiform corrosion test ▶ If the result of this second test is C or D, the inspection shall be repeated.
D	Unsatisfactory <ul style="list-style-type: none"> ▶ All laboratory tests shall be repeated. 	Unsatisfactory <ul style="list-style-type: none"> ▶ The inspection shall be repeated.