Additional acetic acid salt spray test (test results after 1500 and 2000 hours)

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Our Reference:	***TABE-2025-ML-00860-B-ENG***	*Date:*	***30/01/2026***

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1| Introduction

This report presents the results of an additional acetic acid salt spray test, performed on test samples that were previously tested during 1000 hours (see report TABE-2025-ML-00860-A). The test time was prolonged to a total test time of 2000 hours.

The test has been performed on the following 3 sample types:

- Profile with 1 hole (sample 1): Treated according to Qualicoat Seaside
- Profile with 2 holes (sample 2): “PreDura” pré-treatment method
- Profile with 3 holes (sample 3): Treated with a pré-ano layer

2| Received samples

The test samples received on 10/10/2025 (internal reference code 00224) are shown in Table 1. Note: The included figure references refer to the figures included in Appendix 2.

Table 1: Received samples, applied for acetic acid salt spray test

Sample type name	Sample code	Dry film thickness (µm)		
		Average	St. Dev.	
QC Seaside	1	190	17	Fig. 1
PreDura	2	201	5	Fig. 2
PréAno	3	257	7	Fig. 3

(B)

Method : Dry film thickness acc. to ISO 2360, average of 5 measurements (MP 4.5.14). Instrument: MI-M-070/01. LOD: 12µm

Test results marked with (B) are under BELAC scope 742-TEST. Measurement uncertainty can be presented on request.

3| Acetic acid salt spray test

3.1 Test conditions

The received samples were exposed to acetic acid salt spray test conditions according to ISO 9227 AASS (continuous exposure to an acidified 5% NaCl salt fog at 35°C). The test has been executed for a period of 2000 hours, with an intermediate evaluation after 1000 hours (see report TABE-2025-ML-00860-A) and 1500 hours. A X-shape scribe with a width of 1 mm is made to cut the organic coating down to the substrate.
Further test parameters and sample treatment procedures are presented in Appendix 1.

The exposed test samples have been evaluated in accordance with §6.2 of the Qualicoat Specification (max. infiltration length and infiltrated surface area around the scribe).

Qualicoat requirements (only applicable for acetic acid salt spray tests during 1000 hours):

- Max. infiltration length: ≤ 3 mm
- Infiltrated surface area: ≤ 16 mm²/10cm
- No blistering in excess of 0(S0) acc. to ISO 4628-2

Only one sample per sample type is tested.

3.2 Test results

The results of the performed tests are presented in Table 2, 3 and 4 for respectively 1000, 1500 and 2000 hours. Macro photographs, referenced in the result tables, are presented in the photo report in Appendix 2.

Table 2: Acetic acid salt spray test results after 1000 hours, evaluated acc. to Qualicoat specifications (§6.2)

Sample type name	Sample code	Blistering acc. to ISO 4628-2 (max. 0(S0))	Max. infiltration length (mm), rounded to nearest 0.5 mm	Evaluation for max. infiltration (≤3mm)	Infiltrated surface area (mm²)	Total scratch length (cm)	Infiltrated surface area (mm²/10cm)	Evaluation for infiltrated surface (≤16mm²)	Rating acc. to Qualicoat spec. (per sample)
QC Seaside	1	0	1.0	Pass	3	11	3	Pass	Pass
PreDura	2	0	0.0	Pass	0	10	0	Pass	Pass
PréAno	3	0	0.0	Pass	0	12	0	Pass	Pass

Table 3: Acetic acid salt spray test results after 1500 hours, evaluated acc. to Qualicoat specifications (§6.2)

Sample type name	Sample code	Blistering acc. to ISO 4628-2 (max. 0(S0))	Max. infiltration length (mm), rounded to nearest 0.5 mm	Evaluation for max. infiltration (≤3mm)	Infiltrated surface area (mm²)	Total scratch length (cm)	Infiltrated surface area (mm²/10cm)	Evaluation for infiltrated surface (≤16mm²)	Rating acc. to Qualicoat spec. (per sample)	Figure Ref.
QC Seaside	1	0	2.5	Pass	15	11	14	Pass	Pass	Fig. 4, 5
PreDura	2	0	1.0	Pass	0	10	0	Pass	Pass	Fig. 6
PréAno	3	0	0.0	Pass	0	12	0	Pass	Pass	Fig. 7

Table 4: Acetic acid salt spray test results after 2000 hours, evaluated acc. to Qualicoat specifications (§6.2)

Sample type name	Sample code	Blistering acc. to ISO 4628-2 (max. 0(S0))	Max. infiltration length (mm), rounded to nearest 0.5 mm	Evaluation for max. infiltration (≤3mm)	Infiltrated surface area (mm²)	Total scratch length (cm)	Infiltrated surface area (mm²/10cm)	Evaluation for infiltrated surface (≤16mm²)	Rating acc. to Qualicoat spec. (per sample)	Figure Ref.
QC Seaside	1	0	2.5	Pass	28	11	27	Fail	Fail	Fig. 8, 9
PreDura	2	0	1.0	Pass	1	10	1	Pass	Pass	Fig. 10
PréAno	3	0	0.0	Pass	0	12	0	Pass	Pass	Fig. 11

Note: The pass/fail results presented in Table 3 and 4 are only mentioned for informative reasons, because these criteria are only applicable for acetic acid salt spray test of 1000 hours.

APPENDIX 1 : Test Parameters - Acetic acid salt spray testing acc. to ISO 9227 AASS

Applied standard :	ISO 9227 AASS	Method : MP 4.5.12		**(B)**
Applied climate Chamber :	Ascott CC1000xp (MI-E-021)		According to specification?	
Exposure conditions :	Temp.: 35°C ±2°C		OK	
	Continuous salt fog deposition: 1 - 2 ml/h.80cm²		OK	
	pH of collected salt: 3.1 - 3.3 (25°C)		OK	
	Density of collected salt: 1.026 - 1.038 (RT)		OK	
	Corrosivity control (C-steel): 40 ±10 g/m².24h		69-7 - 75-2	(*)
	(*) Reported corrosivity values (min. - max., in g/m².24h) are based on the last available data (max. 3 months before test end date)			
Note :	5 ±0.5 m% NaCl (free of Ni & Cu, <0.1 m% NaI, <0.3 m% total impurities)			
	pH of applied salt solution: 3.1 - 3.3 (adjusted with HOAc)			
	Air supply: Free of oil and dirt, 69-172 kPa/m² or 10-25 psi			
Time of 1 test cycle :	>24h	Number of test hours :	~2000	
Start date :	21/10/25	End date :	13/01/26	
Registration of received samples :	Box Code 00224	Received on :	10/10/25	
Pretreatment of the samples :	Exposed in the received condition			
Application of a scratch :	1 X-cut scratch on each sample (L: 2x10cm, w: 1mm, cfr. QC)			
Relevant test surface :	Plate surface, excl. edges			
Angle of exposure :	15-25° vs. vertical line			
Test program :	Specific			
Sample treatment :	Samples are not rinsed for intermediate evaluations			
Time of evaluation :	After 1500 & 2000 hours			

Figure : Exposed samples in climate chamber

APPENDIX 2 : Photo Report - AASS test

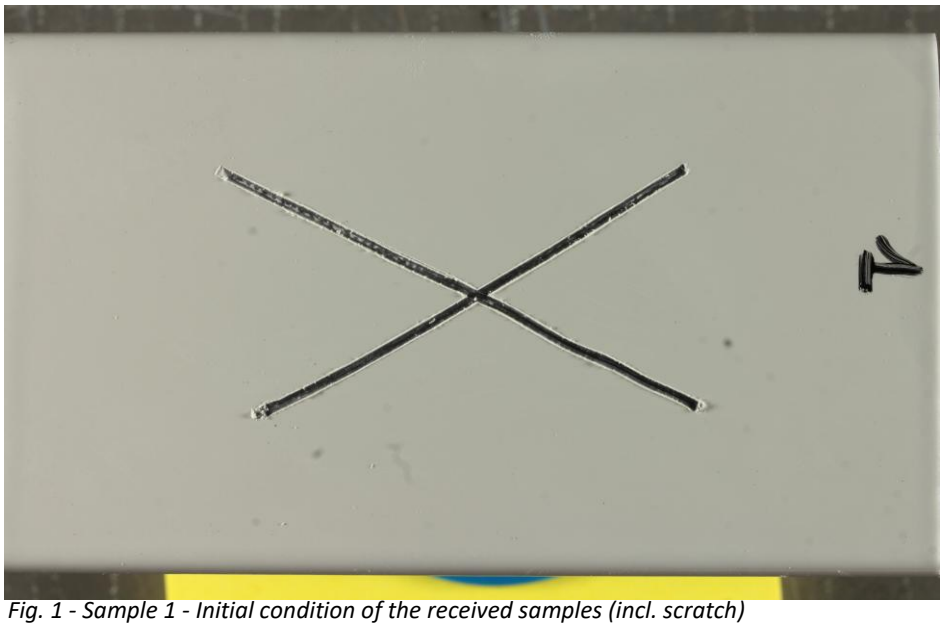

Fig. 1 - Sample 1 - Initial condition of the received samples (incl. scratch)

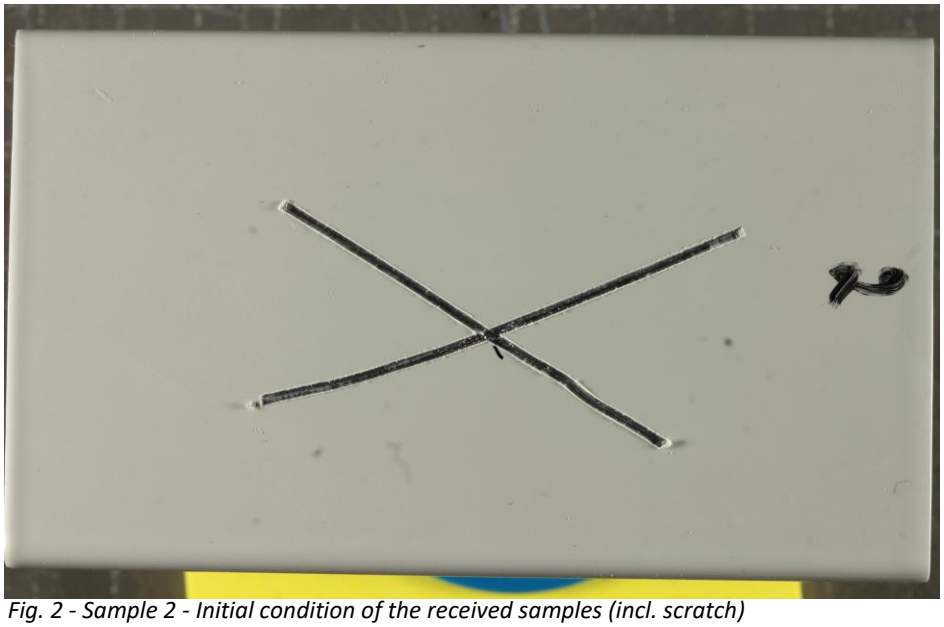

Fig. 2 - Sample 2 - Initial condition of the received samples (incl. scratch)

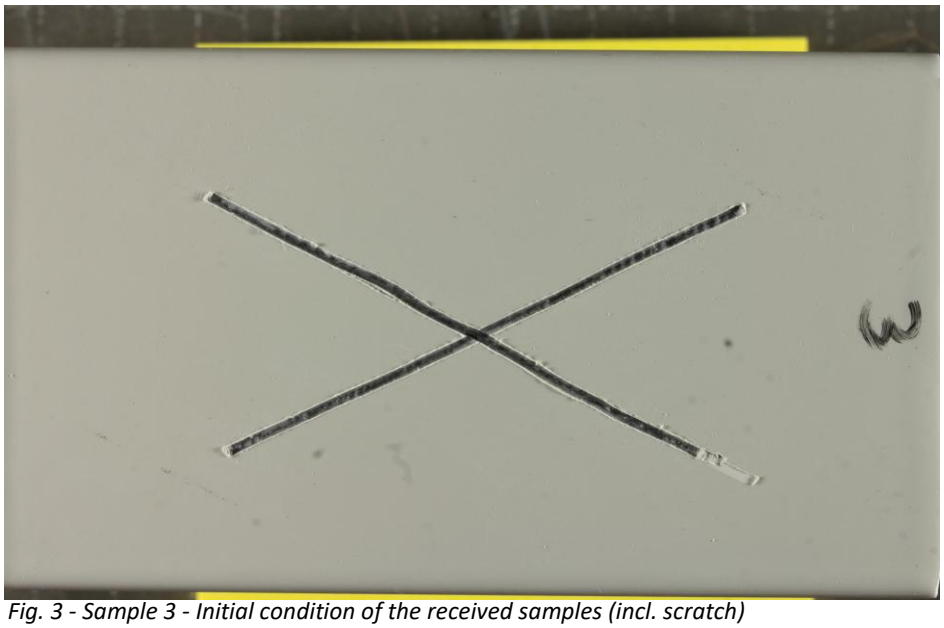

Fig. 3 - Sample 3 - Initial condition of the received samples (incl. scratch)

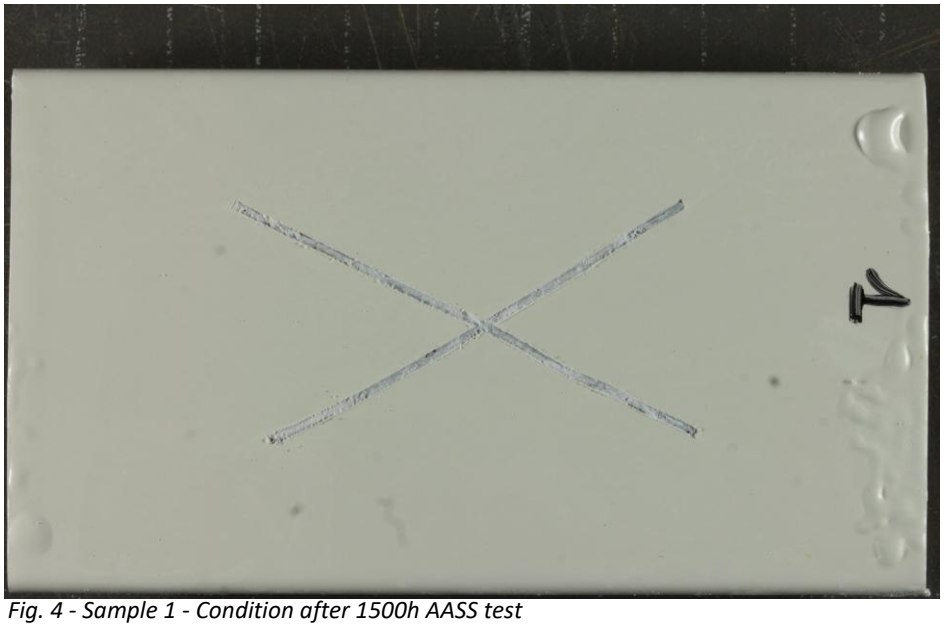

Fig. 4 - Sample 1 - Condition after 1500h AASS test

Fig. 5 - Sample 1 - Condition after 1500h AASS test (detail)

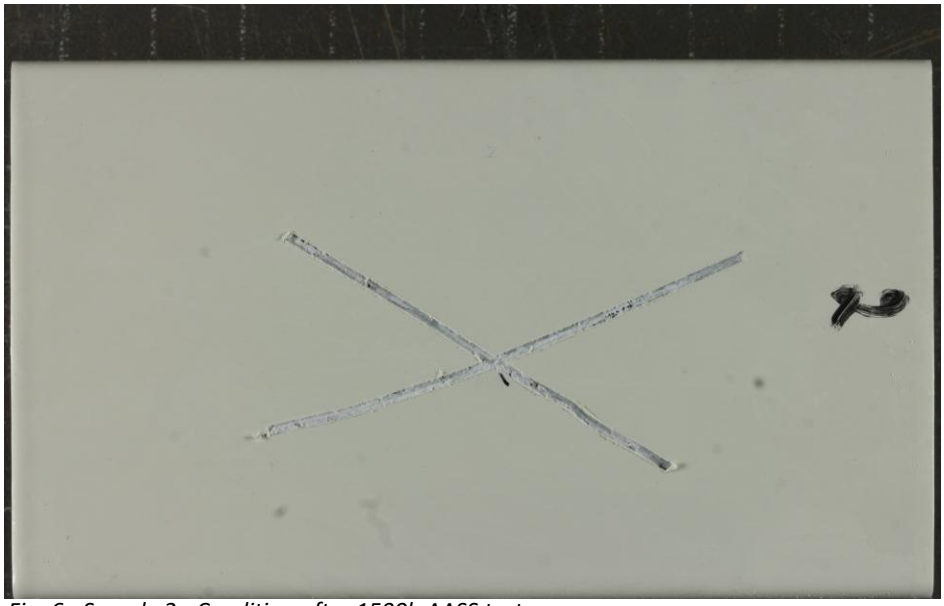

Fig. 6 - Sample 2 - Condition after 1500h AASS test

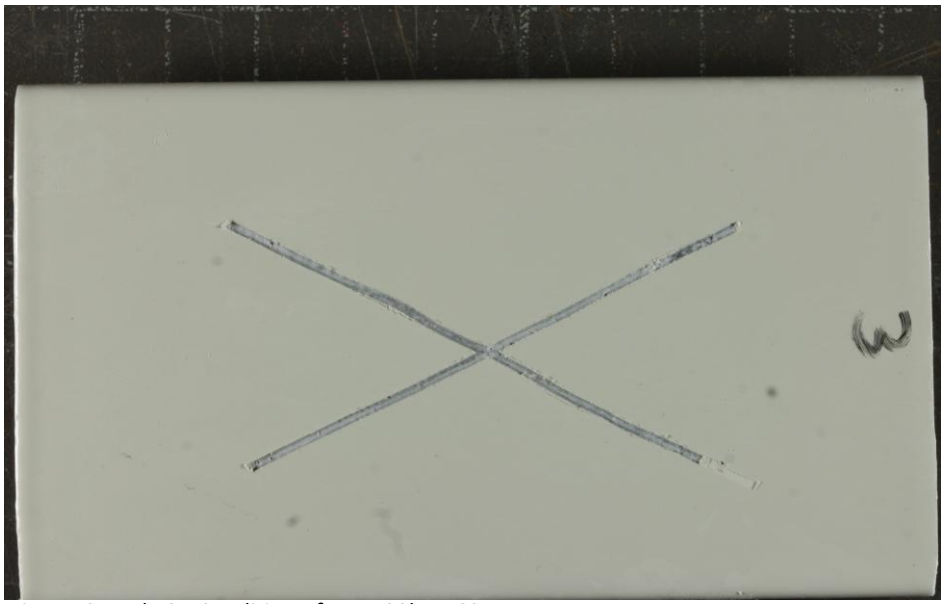

Fig. 7 - Sample 3 - Condition after 1500h AASS test

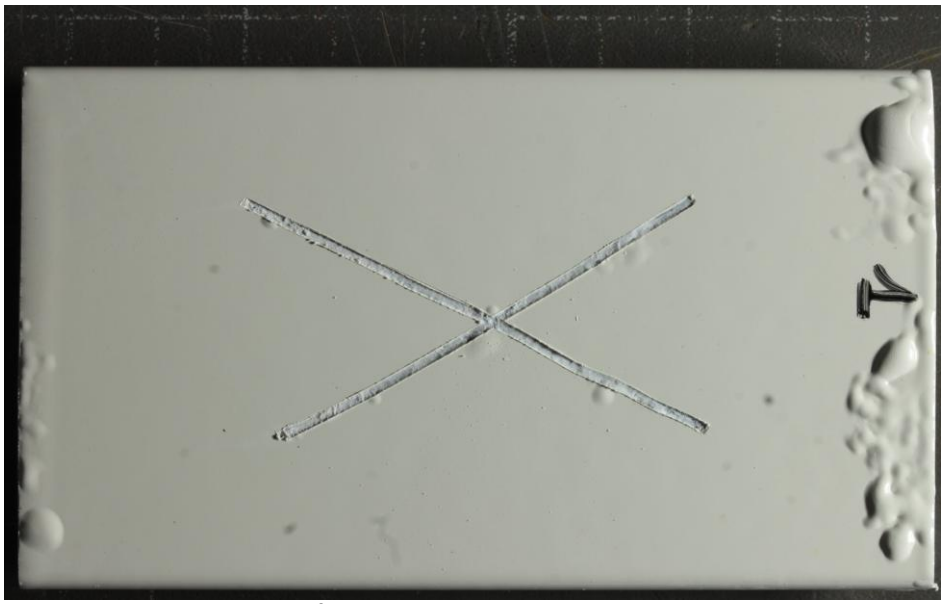

Fig. 8 - Sample 1 - Condition after 2000h AASS test

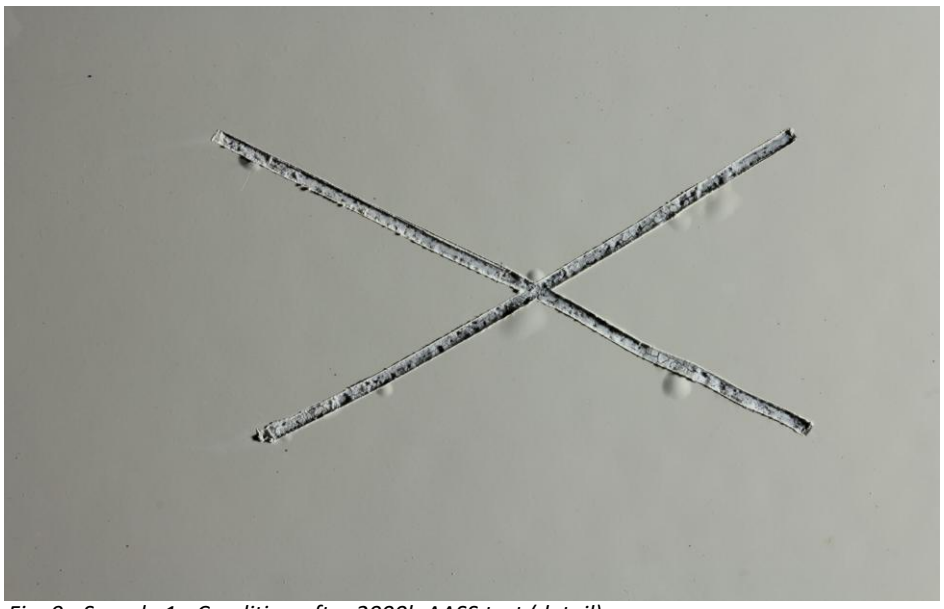

Fig. 9 - Sample 1 - Condition after 2000h AASS test (detail)

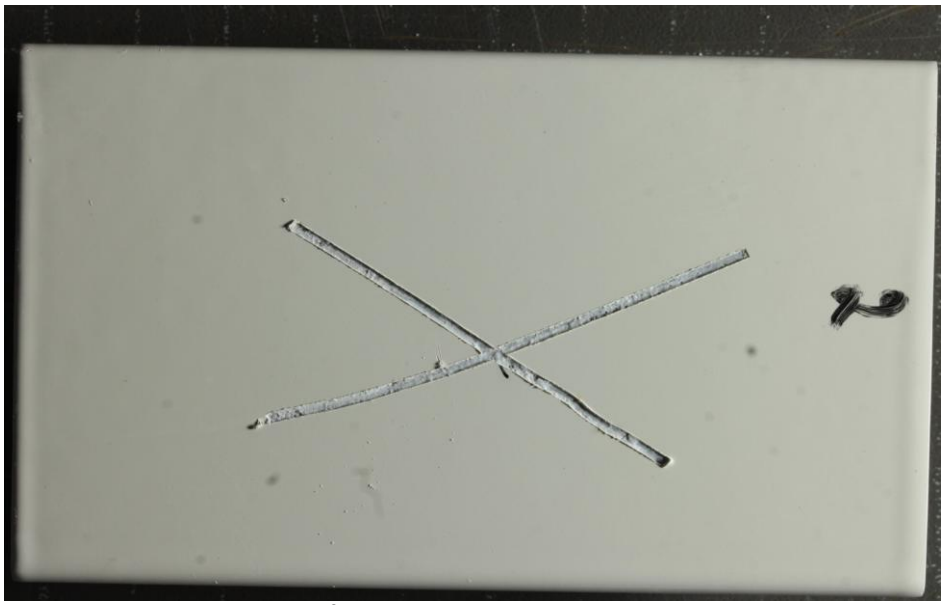

Fig. 10 - Sample 2 - Condition after 2000h AASS test

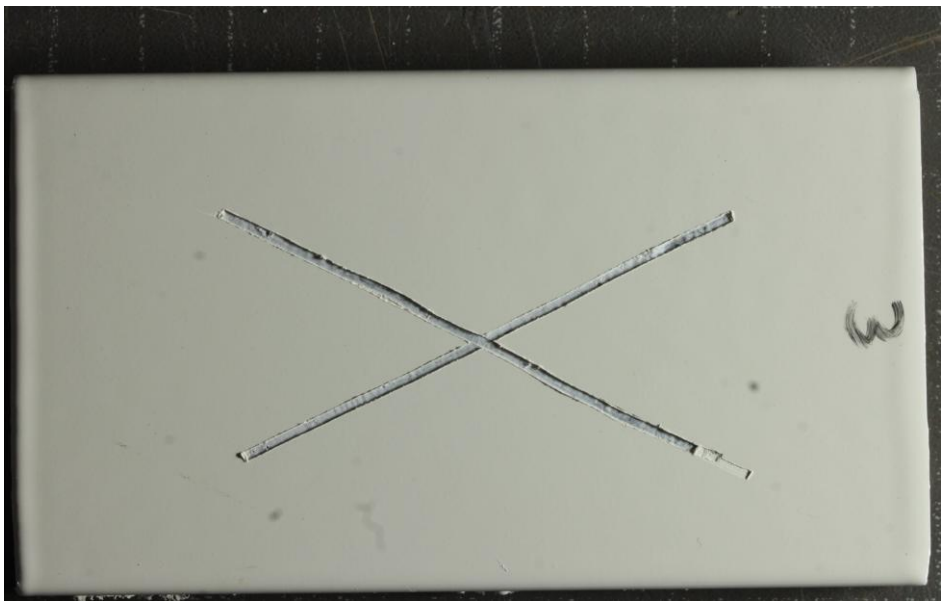

Fig. 11 - Sample 3 - Condition after 2000h AASS test

All tests are performed in the TUV AUSTRIA Belgium test lab, located in Wingepark 43 – 3110 Rotselaar – Belgium. TUV AUSTRIA Belgium assures the correctness of the expertise work on the pieces involved and garantees the validity of its research, for which it can not be held accountable.

Test condition datalogs and measurement uncertainty of test results under ISO 17025 scope can be provided on request.

Any conformity assessments, opinions or interpretations within the report are not issued under accreditation.

The results of the investigations are presented in this report. The conclusions in this report are based on these investigations as well as on information received from the client. Based upon this report no conclusions can be drawn concerning the general safety and usability of the investigated installation. When TÜV AUSTRIA Belgium nv has not performed sampling, samples are treated in the as-received state.

TÜV AUSTRIA Belgium nv confidential information.

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