

Confidential

PESTEC P2X GmbH
Mr. Holger Jung
Rother Weingartenweg 42
65812 Bad Soden
Deutschland

ATLAS Material Testing Technology GmbH
Vogelsbergstraße 22, 63589 Linsengericht
Germany
atlas.lab-eu@ametek.com
Phone: +49 (0)6051 / 707 265
Fax: +49 (0)6051 / 707 278
Amtsgericht Hanau HR B 92424
USt.-IdNr. DE 259325108

TEST REPORT

Linsengericht, 31. März 2026

INSPECTION DATA AT 20000 Total Hours cor.

Purchase Order Number: according to the offer; Release Number: 20.07.2023
Client Code: DEPESJ

Test Number: DA13838
Report Number: 7
Test Type: Ci4000 Xenon Arc Weather-Ometer®
Test Location: Linsengericht, Germany (DU)
Specimens Inspected: 18
Description: Samples are part covered.

Test method: ISO 4892 -2 A

Test Parameter	Setting
Cycle:	102 min. light /18 min. light + SS
Filters:	Inner: Borosilicate S Outer: Borosilicate S
Interference:	300-400 NM
Sensor Type:	Black-Standard
Light Source:	Xenon
Irradiance:	60 ± 3 W/m ² @ 300 - 400 nm
Black Standard Temperature:	65°C ± 3°C
Dry Bulb Temperature:	38°C ± 3°C
relative Humidity:	50% ±10

Accelerated Weathering acc. ISO 4892-2 (2013); "Plastics - Methods of exposure to laboratory light sources - Xenon Arc sources"

Observations, Deviations and Waivers

Notes contained in relevant documents are an integral part of a test, and shall be included by the client in discussions, correspondence, and presentation of test results to a third party. This Test Report represents only one part of the test documentation. Interim reports and other test documentation may have been submitted prior to this date. Test results reported are pertinent only to the items tested and are not relevant to other specimens of the same type, or in the same lot, which are not being tested. Test Reports, and/or other pertinent test documentation, shall not be reproduced, except in full, without the written approval of Atlas Weathering Services Group and so certified by the client.

INSPECTION TEST PART 1

RADIATION DATA

Exposure Period: 27.07.2023 - 27.03.2026
 Type of Test: Total Hours

OBSERVATIONS FOR PART 1

5A-1	white	9003
5A-2	white	9016
5A-3	yellow	1023
5A-4	yellow	1003
5A-5	black	9005
5A-6	silver	9006
5A-7	grey	7035
5A-8	orange	2010
5A-9	red	3020
5A-10	blue	5017
5A-11	green	6017
5A-12	greywhite	9002
5A-13	beige	1015
5A-14	white	9003
5A-15	yellow	1023
5A-16	yellow	1003
B1-1	white	9003
B1-14	white	9003

VISUAL MEASUREMENTS (30.03.2026)

Grey Scale inspection following ISO 105 A02:1993 (Grey Scale for assessing change in colour). Evaluation of the exposed part of the sample against covered page.

Sample Number	VISUAL COLOUR CHANGE
5A-1	4-5 W
5A-2	4-5 W
5A-3	2 W
5A-4	2-3 W
5A-5	1-2 W
5A-6	3 W, D
5A-7	3 W
5A-8	1-2 W

Sample Number	VISUAL COLOUR CHANGE
5A-9	1-2 W
5A-10	1-2 W
5A-11	1-2 W
5A-12	4-5 W
5A-13	3 W
5A-14	4-5 W
5A-15	2 W
5A-16	2-3 W
1B-1	4-5 W
1B-14	4 W

VISUAL LEGEND

VISUAL COLOUR CHANGE = VISUAL COLOUR CHANGE

ISO	VISUAL COLOR
5 None	BL Bluer
4-5 Very Slight	G Greener
4 Slight	R Redder
3-4	Y Yellower
3 Moderate	W Weaker
2-3	Str Stronger
2 Pronounced	D Duller
1-2 Severe	Br Brighter
1 Very Severe	

COLOR MEASUREMENTS (30.03.2026)

Colour measurements are performed with a X-rite Color i7 Spectrophotometer with a 0/8 geometry in accordance with DIN EN ISO 11664-4(2012) „Colorimetry - Part 4: CIE 1976 L*a*b* Colour space“. The specimen port is circular with a 17 mm measurement area. The reduction of data is computed from spectral data taken every 10nm over the wavelength range from 360 to 740 nm. Measurements are performed with a CIE Lab color scale, with a 10 degree observer and illuminat D65. Colour difference is calculated in accordance with DIN 6174 (2007); "Colorimetric evaluation of colour coordinates and colour differences according to the approximately uniform CIELAB colour space".

Sample Number		L*	a*	b*	E*	C*	H*
5A-1	Initial	92,55	-1,53	2,60			
	Current Unwashed	94,12	-1,15	2,07			
	Delta	1,57	0,38	-0,53	1,70	-0,65	-0,05
5A-2	Initial	93,15	-1,61	2,10			
	Current Unwashed	94,49	-1,02	1,61			
	Delta	1,34	0,59	-0,49	1,54	-0,74	-0,17
5A-3	Initial	76,63	2,41	61,93			
	Current Unwashed	81,21	3,38	39,80			
	Delta	4,58	0,97	-22,13	22,62	-22,03	-2,32

Sample Number		L*	a*	b*	E*	C*	H*
5A-4	Initial	72,34	9,65	57,90			
	Current Unwashed	78,11	8,63	35,42			
	Delta	5,77	-1,02	-22,48	23,23	-22,24	-3,42
5A-5	Initial	25,80	-0,05	-0,68			
	Current Unwashed	32,00	-1,07	-5,45			
	Delta	6,20	-1,02	-4,77	7,89	4,87	-0,31
5A-6	Initial	63,33	-0,64	0,25			
	Current Unwashed	69,74	-1,21	-1,43			
	Delta	6,41	-0,57	-1,68	6,65	1,19	1,31
5A-7	Initial	78,39	-1,30	1,93			
	Current Unwashed	80,43	-0,97	1,40			
	Delta	2,04	0,33	-0,53	2,13	-0,62	0,00
5A-8	Initial	55,76	34,59	41,82			
	Current Unwashed	65,16	25,50	31,23			
	Delta	9,40	-9,09	-10,59	16,83	-13,95	0,54
5A-9	Initial	42,47	46,92	27,24			
	Current Unwashed	51,73	32,16	7,75			
	Delta	9,26	-14,76	-19,49	26,14	-21,17	-12,22
5A-10	Initial	42,23	-12,36	-31,64			
	Current Unwashed	53,38	-11,89	-23,04			
	Delta	11,15	0,47	8,60	14,09	-8,04	-3,09
5A-11	Initial	50,13	-26,83	32,86			
	Current Unwashed	59,94	-17,12	15,97			
	Delta	9,81	9,71	-16,89	21,81	-19,01	4,25
5A-12	Initial	81,48	-0,97	5,45			
	Current Unwashed	83,78	-0,63	4,92			
	Delta	2,30	0,34	-0,53	2,38	-0,58	-0,19
5A-13	Initial	84,62	1,98	15,97			
	Current Unwashed	87,48	1,93	9,86			
	Delta	2,86	-0,05	-6,11	6,75	-6,05	-0,88
5A-14	Initial	91,97	-1,54	2,99			
	Current Unwashed	93,36	-1,13	2,43			
	Delta	1,39	0,41	-0,56	1,55	-0,68	-0,09
5A-15	Initial	75,60	3,25	61,65			
	Current Unwashed	80,49	3,75	38,05			
	Delta	4,89	0,50	-23,60	24,11	-23,50	-2,26
5A-16	Initial	73,52	10,48	59,39			
	Current Unwashed	78,41	9,33	36,86			
	Delta	4,89	-1,15	-22,53	23,08	-22,29	-3,45

Sample Number		L*	a*	b*	E*	C*	H*
1B-1	Initial	91,17	-1,53	2,63			
	Current Unwashed	94,01	-1,22	1,78			
	Delta	2,84	0,31	-0,85	2,98	-0,88	0,20
1B-14	Initial	90,67	-1,39	3,25			
	Current Unwashed	93,03	-1,06	2,38			
	Delta	2,36	0,33	-0,87	2,54	-0,93	0,13

If you have any questions, please do not hesitate to contact us.

With kind Regards,
 ATLAS Material Testing Technology GmbH
 AWSG Europe



Patrick Jakoby

Manager EU Accelerated Lab &
 Manager North Sea Corrosion Test Center