Test Report

EN 927-3

Report No.: 214938-14

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bnou/sbrh
Order no.: 214938
No. of appendices: 1

Assignor: Teknos A/S
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Denmark

Material: The test specimens were treated according to assignor's directions:
TEKNOL AQUA 1410-01. Dipping 90 (80-100) g/m²
ANTISTAIN AQUA 5200-00. Spraying 210 (189-231) g/m²
AQUATOP VIRTA BASE 1. Spraying 180 (162-198) g/m²

Sampling: The test material was sampled by the client and received at the Danish Technological Institute on 14-12-2023.

Method: EN 927: Paints and varnishes - Coating materials and coating systems for exterior wood
Part 3:2019. Natural weathering test.
Part 11:2020. Assessment of air inclusions/microfoam in coated films.
Substrate: Scotch pine (Pinus sylvestris L.).

Period: The testing was carried out from 31-01-2024 to 20-06-2025.
The weathering took place from 04-06-2024 to 20-06-2025.

Result:

Property	Evaluation scale Test method	Results after 12 months		
		Tested system	Reference	
			WRM	Scots pine
Change of gloss	EN ISO 2813	2.2	-6.5	-2.4
Change in colour (ΔE^*_{ab})[a]	EN ISO 11664-4	3.7	1.1	2.4
Blistering[1, b]	EN ISO 4628-2	0.0	0.0	0.0
Flaking[1, b]	EN ISO 4628-5	0.0	0.0	0.0
Cracking[1, b]	EN ISO 4628-4	0.0	0.0	0.0
Chalking[1]	EN ISO 4628-6	3.0	0.0	0.0
Mould growth[1, 3, 4]	EN 16492	1.0	0.0	1.0
Alge growth[1, 3, 4]	EN 16492	0.0	0.0	0.0
Adhesion[2]	EN 927-3, Annex A	0.0	0.0	0.0
General appearance[1, 3]	EN ISO 4628-1	2.0	2.0	2.0
Air inclusions/microfoam[5]	EN 927-11	0.0	0.0	0.0

[1] 0 = None, 5 = Dense - [2] 0 = Excellent, 5 = Poor. Single-blade cutting tool is used - [3] After washing - [4] Intensity. [5]Average per 10 mm. [6] Microscope magnification of 200 X.
[a]: Measurement geometry 45º/0º. b: Quantity is considered for the performance specification in EN 927-2

Assessment: According to EN 927-2:2022. Part 2: Performance specification: The system under test can be categorized as 'Stable' concerning the properties: Blistering, flaking, cracking and adhesion. The test is valid.
According to EN 927-1:2013. Part 1: Classification and selection: The exposure conditions are rated as 'Severe'.

Terms: This test was conducted accredited in accordance with international requirements ISO/IEC 17025:2017 and in accordance with the General Terms and Conditions of Danish Technological Institute. The test results solely apply to the tested item. This test report may be quoted in extract only if Danish Technological Institute has granted its written consent.
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30. juni 2025
TEKNOLOGISK INSTITUT

ilac-MRA DANAK TEST Reg.no. 2

Detailed results

Substrate: Scotch pine (Pinus sylvestris L.).

Average density: 565 m³
Annual rings per 10 mm: 3-8

Weathering: Danish Technological Institute, Taastrup. Oriented 45° to the south, min. 1.5 m above terrain.
Danish Technological Institute, Denmark. 55°39´36.4"N; 12°16´34.5"E. Elevation: about 34 m. Average temperatures; maximum: 9-20°C, minimum: -2-5°C. Average annual precipitation: about 672 mm. Humidity: 70-80%.
The test site is located in an urban pasture ecosystem without high vegetation.

System under test:

Material specification: TEKNOL AQUA 1410-01. SKU: 1711455.
ANTISTAIN AQUA 5200-00. SKU: 2105864 Lot: 402790-401.
AQUATOP VIRTA BASE 1. SKU: 10003122 Lot: 406533-301.

Treatment:

Coat	Trade name	Type	Application method and date	Recommended amount [g/m²]
1	TEKNOL AQUA 1410-01	Impregnation	Dipping 31-01-2024	80-100
2	ANTISTAIN AQUA 5200-00	Intermediate	Spraying 29-04-2024	189-231
3	AQUATOP VIRTA BASE 1	Topcoat	Spraying 02-05-2024	162-198

Detailed results

Results:

Test panels		Un-exposed	Exposed			Average
Panel no.		1401	1402	1403	1404	
Application data for EN 927-3						
Coat 1 [g/m²]		86	92	80	95	88
Coat 2 [g/m²]		196	195	214	193	200
Coat 3 [g/m²]		177	171	195	198	185
Application data for EN 927-11						
Coat 1 [g/m²]		95				
Coat 2 [g/m²]		212				
Coat 3 [g/m²]		198				
Inspection before exposure						
Film thickness [µm][3)]		150				150
Gloss		25.7	25.7	25.9	25.4	-
Colour	L*	96.3	96.4	96.5	96.6	-
	a*	-0.9	-1.0	-1.0	-1.0	-
	b*	3.7	3.6	3.8	3.5	-
Initial defects		-	-	-	-	-
Inspection after exposure [1)]						
Blistering		-	0	0	0	0.0
Flaking		-	0	0	0	0.0
Cracking		-	0	0	0	0.0
Chalking		-	3	3	3	3.0
Mould growth [2)]		-	1(q1)1	1(q1)1	1(q1)1	1.0
Alge growth [2)]		-	0	0	0	0.0
General appearance		-	3	3	3	3.0
Inspection after exposure and washing [1)]						
Gloss		26.2	28.2	27.8	27.6	-
Change of gloss		0.6	2.4	1.9	2.1	2.2
Colour	L*	95.7	92.7	92.9	92.9	-
	a*	-0.8	-0.4	-0.3	-0.3	-
	b*	6.8	3.9	3.9	3.9	-
Change in colour ΔE^*_{ab}		3.1	3.7	3.7	3.8	3.7
Mould growth [2)]		-	1(q1)1	1(q1)1	1(q1)1	1.0
Alge growth [2)]		-	0	0	0	0.0
Adhesion		0.0	0.0	0.0	0.0	0.0
General appearance		-	2	2	2	2.0
Air inclusions/microfoam		0 / 0 / 0				0

[1)] Average is calculated for exposed test panels. [2)] Average is calculated for the Intensity. [3)] Microscope magnification of 200 X

Detailed results

WRM on test system substrate:

Treatment:

Coat	Trade name	Type	Application method and date	Recommended amount [g/m²]
1	TEKNOL AQUA 1410-01	Impregnation	Dipping 07-02-2024	80-100
2	ANTISTAIN AQUA 5200-00	Intermediate	Spraying 30-04-2024	158-193
3	AQUATOP 2600-82 white	Topcoat	Spraying 07-05-2024	180-220

Results:

Test panels		Un-exposed	Exposed			Average
Panel no.		401	402	403	404	
Application data						
Coat 1 [g/m²]		90	93	91	89	91
Coat 2 [g/m²]		169	178	163	187	174
Coat 3 [g/m²]		205	203	207	207	206
Inspection before exposure						
Film thickness [µm][3)]		128				128
Gloss		20.2	20.1	19.9	19.9	-
Colour	L*	92.6	92.7	92.6	92.6	-
	a*	-0.7	-0.8	-0.8	-0.8	-
	b*	6.0	6.0	6.0	6.0	-
Initial defects		-				-
Inspection after exposure [1)]						
Blistering		-	0	0	0	0.0
Flaking		-	0	0	0	0.0
Cracking		-	0	0	0	0.0
Chalking		-	0	0	0	0.0
Mould growth [2)]		-	2(q2)1	2(q2)1	3(q2)1	2.3
Alge growth [2)]		-	1(q1)1	0	0	0.3
General appearance		-	3	3	3	3.0
Inspection after exposure and washing [1)]						
Gloss		19.7	14.2	13.2	13.1	-
Change of gloss		-0.5	-5.9	-6.7	-6.8	-6.5
Colour	L*	92.3	91.6	91.7	91.6	-
	a*	-0.6	-0.5	-0.6	-0.5	-
	b*	7.3	5.9	5.9	5.9	-
Change in colour ΔE^*_{ab}		1.4	1.1	0.9	1.1	1.1
Mould growth [2)]		-	0	0	0	0.0
Alge growth [2)]		-	0	0	0	0.0
Adhesion		0.0	0.0	0.0	0.0	0.0
General appearance		-	2	2	2	2.0
Air inclusions/microfoam		0 / 0 / 0				0

[1)] Average is calculated for exposed test panels. [2)] Average is calculated for the Intensity. [3)] Microscope magnification of 200 X

Detailed results

WRM on Scotch pine, sapwood:

Treatment:

Coat	Trade name	Type	Application method and date	Recommended amount [g/m²]
1	TEKNOL AQUA 1410-01	Impregnation	Dipping 07-02-2024	80-100
2	ANTISTAIN AQUA 5200-00	Intermediate	Spraying 01-05-2024	158-193
3	AQUATOP 2600-22 BASE 1	Topcoat	Spraying 08-05-2024	180-220

Results:

Test panels		Un-exposed	Exposed			Average
Panel no.		901	902	903	904	
Application data						
Coat 1 [g/m²]		88	85	85	99	89
Coat 2 [g/m²]		162	181	187	166	174
Coat 3 [g/m²]		197	182	196	188	191
Inspection before exposure						
Film thickness [µm][3)]		130				130
Gloss		21.1	20.5	20.5	20.7	-
Colour	L*	96.2	96.2	96.2	96.2	-
	a*	-0.6	-0.6	-0.6	-0.6	-
	b*	4.4	4.3	4.5	4.4	-
Initial defects		-				-
Inspection after exposure [1)]						
Blistering		-	0	0	0	0.0
Flaking		-	0	0	0	0.0
Cracking		-	0	0	0	0.0
Chalking		-	0	0	0	0.0
Mould growth [2)]		-	1(q1)1	1(q1)1	1(q1)1	1.0
Alge growth [2)]		-	0	0	0	0.0
General appearance		-	3	3	3	3.0
Inspection after exposure and washing [1)]						
Gloss		20.2	17.4	18.3	18.8	-
Change of gloss		-0.9	-3.1	-2.2	-1.9	-2.4
Colour	L*	95.8	93.8	94.1	94.1	-
	a*	-0.5	-0.4	-0.4	-0.4	-
	b*	6.2	3.6	3.5	3.5	-
Change in colour ΔE^*_{ab}		1.8	2.5	2.3	2.3	2.4
Mould growth [2)]		-	1(q1)1	1(q1)1	1(q1)1	1.0
Alge growth [2)]		-	0	0	0	0.0
Adhesion		0.0	0.0	0.0	0.0	0.0
General appearance		-	2	2	2	2.0
Air inclusions/microfoam		0 / 0 / 0				0

[1)] Average is calculated for exposed test panels. [2)] Average is calculated for the Intensity. [3)] Microscope magnification of 200 X