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TESTING LABORATORY

Husova 121
281 26 Týnec nad Labem

Test report no.: K-K-25-11741

Number of pages:	8
Order No.:	K-K-25-11741
Contracting authority:	ALPHA CZECH s.r.o. Mr. Pyšný U plynárny 348/83 CZ 10100 Prague 10 - Michle
Laboratory – location testing:	GRADUS, a.s.
Address:	Husova 121 CZ 281 26 Týnec nad Labem
Protocol prepared by:	Ing. Marek Schiller
Subject of testing:	**Your order e-mail dated 23.05.25 based on our price quote no. 4123 dated 13.05.25 Part*: Alpha Flexible 4 pcs**
Test name:	**Determination of resistance under UV lamps**
Test according to:	AZP-13 (ČSN EN ISO 4892-3)
Test name:	**Determination of mirror gloss of coatings**
Test according to:	ČSN ISO 2813
Test name:	**Colorimetric determination of color** differences
Test according to:	AZP-11 (ČSN EN ISO/CIE 11664-4)
Base material*:	fiber cement board
Coating characteristics*:	roller coating, Waterproofing and flexible insulating roof coating.
Sampling method:	samples taken by the client, testing concerns samples supplied by the customer, samples were tested as received
Sample preparation:	stored under laboratory conditions
Coating thickness (DFT):	according to ČSN EN ISO 2808 – method 4B – determination by depth measurement – type 2 dial gauge (non-accredited test procedure)
Testing equipment:	QUV/SPRAY/RP chamber – Q-lab corporation, USA,
Test lamps used:	fluorescent UV lamps type 1A – UVA 340
Test cycle:	method A test cycle 1

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	8 hours of exposure at a temperature of (60 ± 3) °C, radiation intensity 0.76 Wm^{-2} x nm^{-1}
	4 hours of condensation without exposure at a temperature of (50 ±
3) °C Test equipment:	BYK micro tri gloss gloss meter, Byk – Gardner GmbH Test
equipment:	BYK-mac i23 colorimeter, Byk Gardner GmbH Measurement
conditions:	D65/10° illumination, without included gloss

Date of sample collection: May 23
Test date: 09 06.25 – 31.08.25

Test results

Determination of dry film thickness

Sample of sample	Sample Sample	ø DFT	Minimum value	Maximum value	Expanded uncertainty U
11741-1	-	**430**	415	450	-
11741-2	-	**452**	440	465	-
11741-3	-	**440**	430	450	-
11741-4	-	**429**	420	445	-

Measured thickness values for individual samples

11741-1	450	440	420	430	415	420	430	425	440	430
11741-2	450	445	460	455	460	450	445	465	440	450
11741-3	430	445	440	445	440	435	430	450	445	440
11741-4	430	425	420	420	435	430	440	445	420	425

Coating gloss measurement

Sample	Gloss before exposure [GU]		
	20	60	85
11741-1	1.2	1.7	0.1
11741-2	1.3	1.7	0.1
11741-3	1.3	1.7	0.1
11741-4	1.3	1.7	0.1

Sample	Gloss after 500 h exposure according to ČSN EN ISO 4892-3 [GU]		
	20	60	85
11741-3	1.3	1.7	0.1
11741-4	1.3	1.8	0.1

Sample	Gloss after 1000 h exposure according to ČSN EN ISO 4892-3 [GU]		
	20	60	85
11741-3	1.3	1.7	0.1
11741-4	1.3	1.8	0.1

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Sample	Gloss after 1500 hours of exposure according to ČSN EN ISO 4892-3 [GU]		
	20	60	85
11741-3	1.3	1.6	0.1
11741-4	1.3	1.7	0.1

Sample	Gloss after 2000 hours of exposure according to ČSN EN ISO 4892-3 [GU]		
	20	60	85
11741-3	1.3	1.6	0.1
11741-4	1.3	1.6	0.1

Color coordinate measurement

Sample	Color coordinates			Color deviation
	L	a	b	ΔE
11741	96.18	-0.64	1.64	-

Sample	Deviations in color coordinates after 500 hours of exposure according to ČSN EN ISO 4892-3			Color deviation
	ΔL	Δa	Δb	ΔE
11741-3	-0.40	-0.01	0.34	**0.52**
11741-4	-0.33	-0.02	0.35	**0.48**

Sample	Deviations in color coordinates after 1000 hours of exposure according to ČSN EN ISO 4892-3			Color deviation
	ΔL	Δa	Δb	ΔE
11741-3	0.01	-0.01	0.59	**0.59**
11741-4	0.04	0.02	0.65	**0.65**

Sample	Deviations in color coordinates after 1500 hours of exposure according to ČSN EN ISO 4892-3			Color deviation
	ΔL	Δa	Δb	ΔE
11741-3	-0.06	0	0.77	**0.78**
11741-4	-0.09	0.01	0.81	**0.82**

Sample	Deviations in color coordinates after 2000 hours of exposure according to ČSN EN ISO 4892-3			Color deviation
	ΔL	Δa	Δb	ΔE
11741-3	-0.24	-0.01	0.92	**0.95**
11741-4	-0.21	0.00	0.85	**0.88**

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Photos of samples No. 3, 4 500 hours of exposure under UV lamps

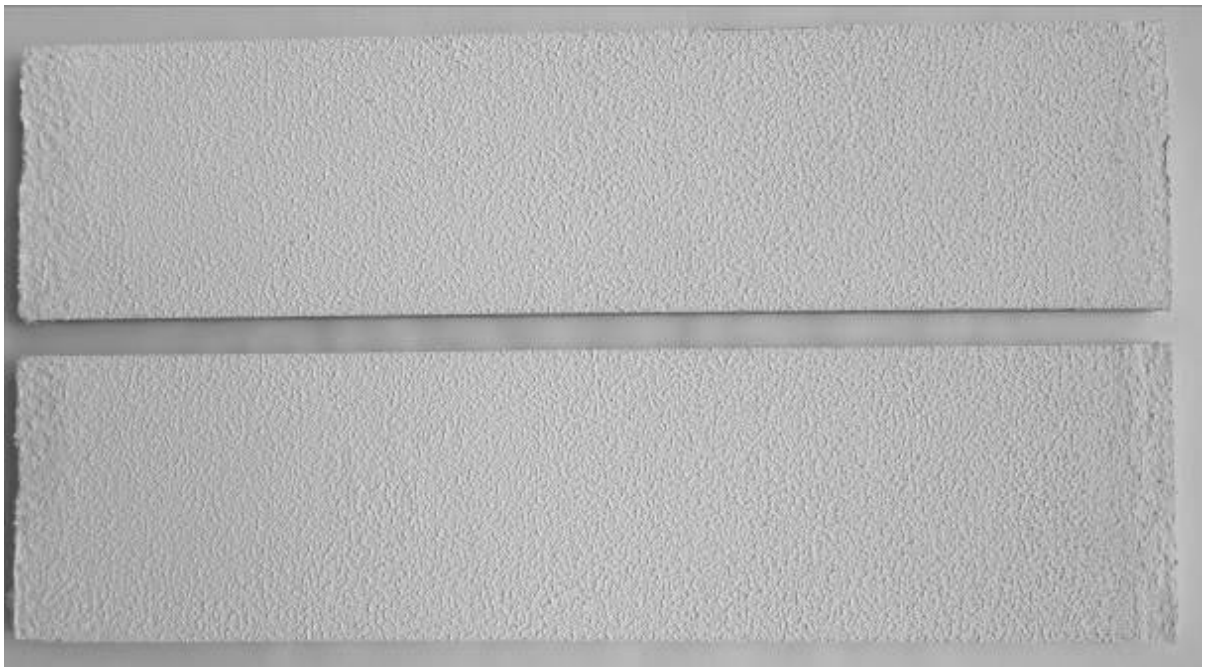

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Photo of samples no. 3, 4 **1000 hours of exposure under UV lamps**

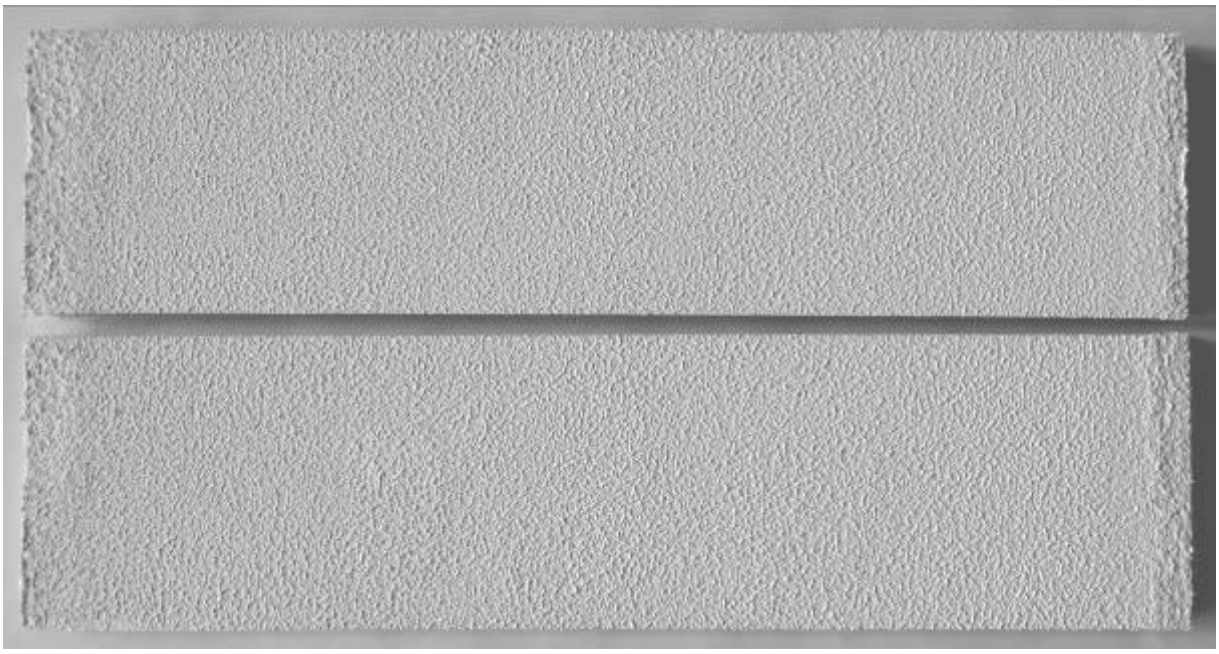
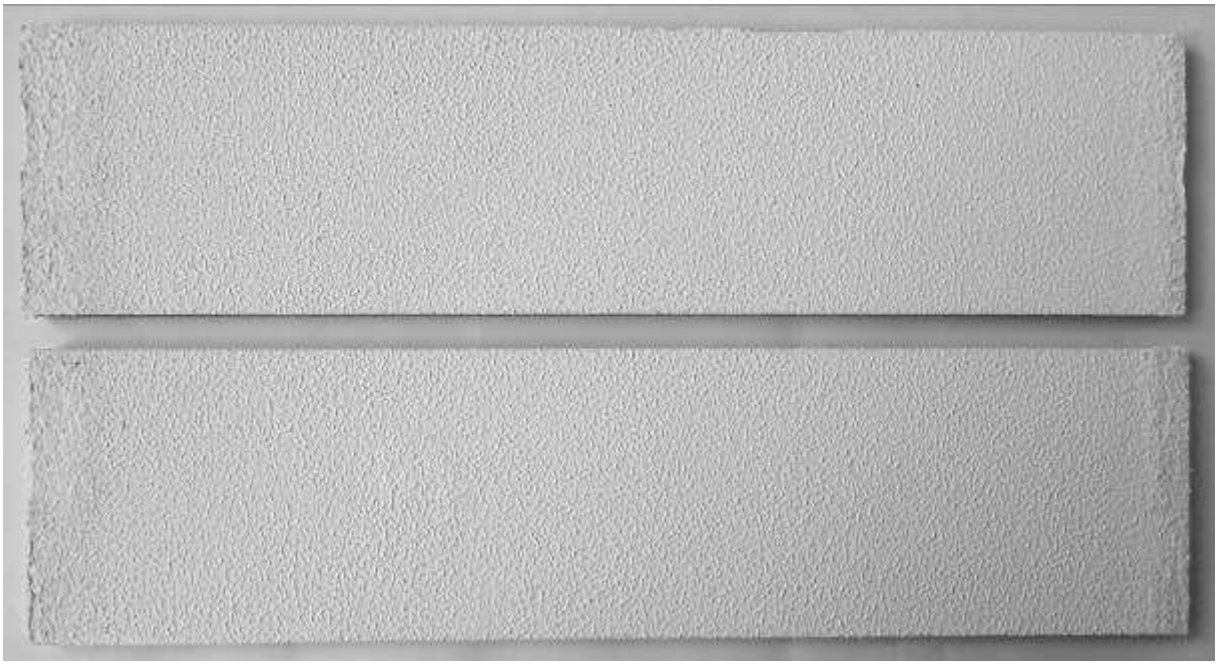


Photo of samples no. 3, 4 **1500 hours of exposure under UV lamps**



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Photos of samples no. 3, 4 **Exposure to UV lamps for 2000 hours**

Nametests:	**Tear test – Adhesion test surface treatments of building structures for substrate**
Test according to:	ČSN 73 2577
Testing equipment:	AMB 10 pull-off device, Roklan electronic, Czech Republic Test
conditions:	The test was performed in a laboratory at (23 ± 2)°C and (50 ± 5) % humidity
Reference test:	samples in the delivered state were conditioned conditioned for more than 24 hours under laboratory conditions
Samples after exposure:	Samples after testing according to ČSN EN ISO 4892-3 exposure 2000 hours, stored in laboratory conditions for 168 hours prior to the tear test
Test specimens:	aluminum test specimens with a diameter of 50 mm
Adhesive used:	Bison two-component epoxy adhesive Adhesive drying
time:	24 hours at laboratory temperature
Cutting of test	with a core drill with a diameter of 56 mm

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Particles: Unusual phenomena and anomalies: Test results

No anomalies were observed during the test.

Tear test – reference test Samples without exposure, only conditioned under laboratory conditions.
Samples 11741-1, 11741-2

Tear strength [MPa]	1.	2.	3.	4.	5.	6.	Average
	0.48	0.47	0.55	0.57	0.62	0.60	**0.55 ± 0.06**
Refractive index	A	A	A	A	A	A	-

Tear test – test after 2000 hours of exposure Test according to ČSN EN ISO 4892-3 Samples 11741-3, 11741-4

Tear strength [MPa]	1.	2.	3.	4.	5.	6.	Average
	0.40	0.45	0.50	0.59	0.61	0.55	**0.52 ± 0.08**
Refractive index	A	A	A	A	A	A	-

Photo of parts no. 1, 2 after tear test - without exposure

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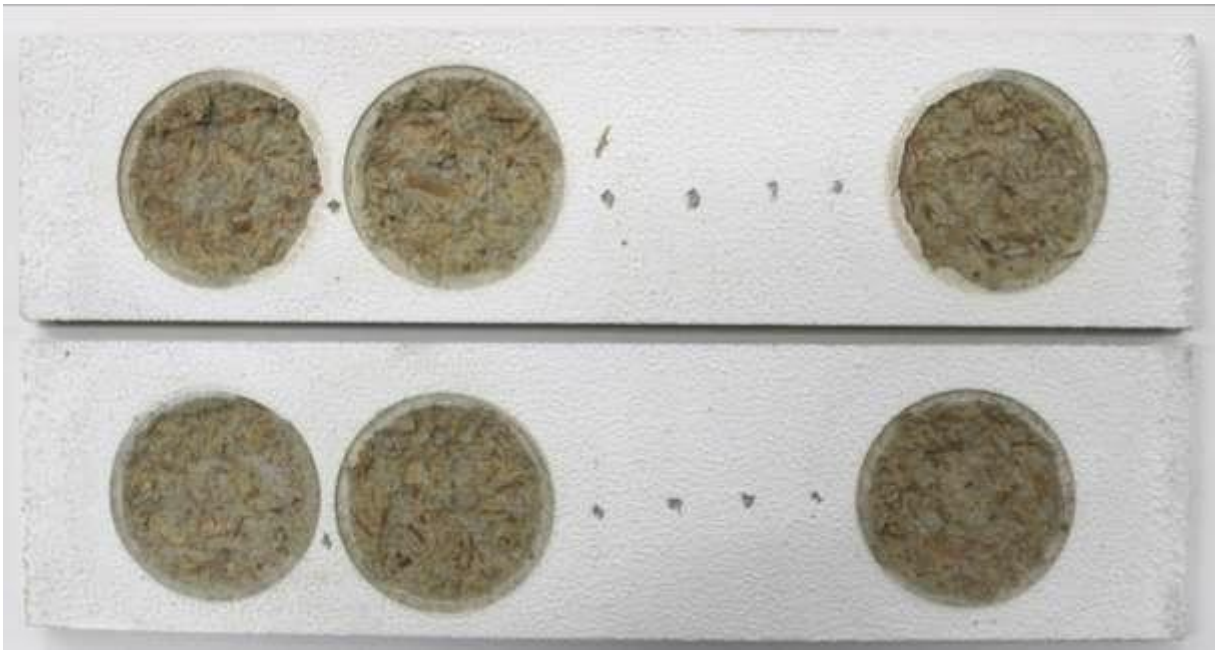
Photo of parts no. 3, 4 after tear test – exposure 2000 h under UV lamps



*Information provided by the customer.

Date of report issue: 11/03/25
Approved by: Ing. Martin Kaška, Ph.D., Head of Laboratory