INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s.
třída Tomáše Bati 299, Louky, 763 02 Zlín
CSI Division – Centre of Civil Engineering
Construction Testing Laboratory Zlín, K Cihelně 304, Louky 763 02 Zlín

TEST REPORT
ref. No. 415601601-01

Client:	VIRGO LAMINATES LIMITED VAT: 24AABCK4043R1ZB
Address:	Block No – 342/P1, 347, 349, 352, 353, 363/4, 381 N.H No. 48, Ahmedabad – Nadiad Road, Taluka: Matar, District: Kheda Gujarat – India: 387570
Subject of the test:	Compact laminates, Grade EDF
Sample received on:	8. 1. 2025
Tested:	From March 3, 2025 to June 5, 2025
Report elaborated by:	Ing. Radim Mikač
Place and date of issue:	Zlín, June 23, 2025
Annex:	-

ZKUŠEBNÍ LABORATOŘ Institut pro testování a certifikaci, a.s.

Ing. Jiří Růžička
Head of Construction Testing Laboratory Zlín

Ing. Petra Hrdinová
Head of Testing Laboratory

Subject of the test:

Table No. I – Description and identification of the test Subject

ITC's identification number	Identification of the test Subject/sample by client	Description
415601601/1	Compact laminates, Grade EDF	Pieces of Thin Laminates

Fig. 1: Compact laminates, Grade EDF, ref. No. 415601601/1

Sampling method used:
The test sample was collected and supplied to the laboratory by the client. The laboratory is not responsible for this way of sampling. The results refer to the sample as received.

Work requested:
Determination of the resistance to UV light, artificial weathering, bending characteristics, tensile strength, density, impact by large diameter ball, wet conditions, dimensional stability at elevated temperature and climatic shock

Testing method used:
1. Determination of the resistance to UV light according to ČSN EN 438-2, test method no. 28
2. Artificial weathering test according to ČSN EN 438-2, test method no. 29
3. Determination of bending characteristics according to ČSN EN ISO 178
4. Determination of stress-strain properties according to ČSN EN 527-2
5. Determination of the density according to ČSN EN ISO 1183-1
6. Determination of the resistance to impact by large diameter ball according to ČSN EN 438-2, test method no. 21
7. Determination of the resistance to wet conditions according to ČSN EN 438-2, test method no.15
8. Determination of the dimensional stability at elevated temperature according to ČSN EN 438-2, test method no. 17
9. Determination of the resistance to climatic shock according to ČSN EN 438-2, test method no. 19

Test conditions:
1. The nominal thickness of the product 6 mm, 2 test specimens with dimensions (300 x 100) mm, Accelerated Weathering Tester model QUV/Spray, as a source used ultraviolet lamps type UV - B with power consumption 40 W, emission maximum 313 nm, total irradiation time 1500 hours, one cycle: 4 hours irradiation at a black standard temperature (60 ± 3) °C and 4 hours condensation phase at a black standard temperature (50 ± 3) °C, tested on April 28, 2025

2. Black standard temperature: (65 ± 3) °C, (65 ± 10) % RH, irradiation intensity: (60 ± 3) W/m², spraying cycle 102 min (dry period): 18 min (spraying), continual irradiation, testing time period: 3000 hours (650 MJ/m²). Number of the test specimens used: 2; dimension of the test specimens: (135 x 45 x 6) mm. After the artificial weathering test the samples were conditioned 24h/23°C/50%RV in the dark and then evaluated in light box (illuminant type Home – 2856 Kelvin).
3. 5 test specimens with dimensions (80 x 10 x 6) mm in the longitudinal direction and 5 test specimens with dimensions (80 x 10 x 6) mm in the transverse direction, test specimens prepared by the customer, conditioning prior to testing for 24 hours at (23 ± 2) °C and (50 ± 5) % relative humidity, nominal span of supports 64 mm, method A, test speed 2 mm/min, the degree of accuracy of the testing machine 1%, tested on April 14, 2025
4. 5 test specimens type 1B, accuracy degree of the testing machine 1 %, type of extension indicator - video extensometer, clamping jaws mechanical, distance between jaws 115 mm, initial measured length (50,0 ± 0,5) mm, testing speed 20 mm/min, tested on June 5, 2025
5. method A - immersion method, immersion liquid - distilled water, test temperature 23 °C, no buoyancy correction, tested on March 3, 2025
6. The nominal thickness of the product 6 mm, test specimens stored for 72 hours in a climatic chamber at (23 ± 2) °C and (50 ± 5) % relative humidity, tested on April 23, 2025
7. The nominal thickness of the product 6 mm, test specimens stored for 72 hours in a climatic chamber at (23 ± 2) °C and (50 ± 5) % relative humidity, tested from April 14, 2025 to April 16, 2025
8. The nominal thickness of the product 6 mm, tested from April 24, 2025 to April 28, 2025
9. The nominal thickness of the product 6 mm, tested from April 14, 2025 to April 29, 2025

The laboratory is not responsible for information received from customer, which could have influence on the validity of the results. Further information required by the standard/standards and not given in this Test Report are available at a request at the Laboratory.

Testing laboratory:
The tests were performed in the workplace no.2: Třída Tomáše Bati 5264, areal Svit, Building No. 113, 760 01 Zlín

Test results:
The test results are given in the following table:

Table No. II – Compact laminates, Grade EDF, ref. No. 415601601/1

Test No.	Characteristics measured	Unit	Separate values	Test results	Uncertainty 1)
1	Resistance to UV light after 1500 hours	Grey scale rating	Contrast: Degree 5: No visible change Appearance: Degree 5: No visible change	-	-
2	Artificial weathering test after 3000 hrs Visual evaluation of surface	Grey scale rating	Contrast: Degree 5: No visible change Appearance: Degree 5: No visible change	-	-

Table No. II – Compact laminates, Grade EDF, ref. No. 415601601/1

Test No.	Characteristics measured	Unit	Separate values	Test results	Uncertainty [1)]
3	Flexural strength at failure in the longitudinal direction	MPa	129; 113; 143; 148; 132	133	13
	Flexural strength at failure in the transverse direction	MPa	154; 149; 127; 134; 128	138	12
	Flexural modulus in the longitudinal direction	MPa	15381; 15061; 15510; 15012; 15274	15248	359
	Flexural modulus in the transverse direction	MPa	15593; 15770; 15237; 14602; 15109	15262	509
4	Tensile strength	MPa	73.9; 79.0; 79.9; 68.8; 70.0	74.3	4.8
	Elongation	%	2.6; 3.2; 3.3; 2.9; 2.7	2.9	0.3
5	Density	$g.cm^{-3}$	1.40; 1.40; 1.41	1.40	0.02
6	Resistance to impact	cm	250	-	-
	Impression diameter	mm	9	-	-
7	Resistance to wet conditions - Weight increase	%	1.79; 1.87; 1.95 surface evaluation – Degree 5: No visible change edge evaluation - Degree 5: No visible change	1.87	0.15
8	Cumulative dimensional change in the longitudinal direction	%	0.22	-	-
	Cumulative dimensional change in the transverse direction	%	0,23	-	-
9	Flexural strength at failure in the transverse direction after climatic shock	MPa	127; 119; 123; 116 Change of appearance: Degree 5: No visible change	121	6
	Flexural modulus in the transverse direction after climatic shock	MPa	13762; 13969; 14023; 13823 Change of appearance: Degree 5: No visible change	13894	304
	Change in flexural strength D_s		0.88	-	-
	Change in flexural modulus D_m	-	0.91	-	-

[1)] expanded uncertainty for coverage factor k = 2, which for a normal distribution corresponds to a coverage probability of approximately 95%

..... End of the test report.....