TEST REPORT

ABETON - VIACOLOR TÉRKŐ Zrt.
KÖZPONTI LABORATÓRIUM
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Testing laboratory accredited by NAH under number NAH-1-1115/2019.

The test report contains 1 numbered page.

Examination of hardened concrete, Frost resistance test MSZ CEN/TS 12390-9:2018 Chapter 5 Surface testing (reference method)

Costumer: **EN-CO Lab Kft. (VPI Kft.)**
address: 1119 Budapest, Andor u. 60.
Contractor (entrepreneur):
Identification **OTB-B-001-211118**
Place of installation or origin: **VPI Kft. Concrete factory**

Sample Number **2949**
Reg.Number: A/2022/01/2949.111
Work Number:

Identifiers of related documents:
Sampling protocol: 22/01/2949. b
Measuring sheets: **22/01/2949.111b**

Sampling date: **2021.11.18**
Sampling method: **Standard**
Date of arrival: **2021.11.18**
Examination completion date: **2022.02.11.**

1. SAMPLING DATA

Delivery note number.:
SAMPLER: Zoltán Szabó
SAMPLING PLACE: Laboratory
NUMBER OF TEST ITEMS: 3 SIGN: **150x150x150 cube**
PURPOSE OF INVESTIGATION: type test
REQUESTED DATE OF THE EXAMINATION: 2022.02.11. 2022.02.11. AGE: 85 days

2. TECHNOLOGICAL DATA:

PLACE OF MIXING, TYPE OF MIXER: **VPI Kft. Concrete factory**

DESIGNED QUALITY: C40/50-XC4-XV3(H)-XF4-8--SCC-

COMPOSITION:	Designation	Place of origin	Quantity	W/C
Recipe number:	CEMENT:		kg/m³	
	ADDITIVE:			
	CHEMICAL:			
	ADDITIONAL MATERIAL:		kg/m³	
			kg/m³	

AFTER TREATMENT: stored in water

3. INSTALLATION DATA:

PLACE OF INSTALLATION:
BUILDING NAME:
STRUCTURE NAME: stored in water SIGN: ITEM SIZE: m³

Concrete signal	Surface (mm2)	Total mass loss (kg/m2)			
		7	14	28	56
1	22500	0,004	0,027	0,031	0,040
2	22515	0,009	0,000	0,013	0,018
3	22485	0,009	0,036	0,040	0,049
	Average:	0,007	0,032	0,028	0,036

Text evaluation:

During the test, we did not deviate from the requirements of the standard, we did not experience any fluid loss or leakage.
After 56 cycles, the lower surfaces were not damaged.

At the customer's request, the laboratory provides all detailed measurement results to the customer.
Comment: The extended measurement uncertainty with a coverage probability of 95% for the Frost peeling test: U=+/-0.026kg/m2.

Device name (number): Crusher machine (2023.08.22) Libra Vibra 31001CE (2023.02.16) Gap measuring set (2024.02.20)
Device name (number): 612049 SHIFT GAUGE 5127 (2023.01.21) Right angle 121044028 (2024.02.25)

Stamp
Beton-Viacolor Térkő Zrt. KÖZPONTI LABORATÓRIUM Pécs

Pécs, 2022.02.11.

Hortobágyi Gergely laboratory assistant
carried out a measurement / examination

Norbert Kovács, laboratory manager
responsible for technical content

The test results in the test report only apply to the tested individuals.
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ABETON VIACOLOR TÉRKŐ ZRT.
CENTRAL LABORATORY

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Evaluation

to the Examination Report No. 2021/01/2949.113
based on version "B" of table 7 of NAD of MSZ 4798:2016

After 56 freezing cycles, the surface peeling allowed by the standard for environmental class XF4 is as follows:
average value: 1000 g/m²,
its highest individual value can be 1350 g/m².
Based on this, the tested samples can be classified in the XF4 frost resistance class.

After the 56 freezing cycles, the material peeled from the surface of the 3 specimens,
average: 36 g/m²,
the highest individual peeling: 49 g/m².

Based on this, the tested samples can be classified in the XF4 frost resistance class

XF4

FIT

Note:

In the frost resistance test, the extended measurement uncertainty with a 95% coverage probability is: U=+/-0.026 kg/mm2, taking this value into account, based on the results obtained, the samples meet the requirements of the nominal frost resistance class.
We evaluated the test results in a non-accredited status.

The appendix is only valid and can be copied together with the test report No. **2021/01/2949.113b**. The evaluation contains 1 numbered page.

Pécs, 2022.02.11.

A Beton-Viacolor Térkő Zrt. KÖZPONTI LABORATÓRIUM Pécs

Norbert Kovács
laboratory manager