

RN 21228888

Zagreb, 2008-12-22

TESTING REPORT No. 2122-02-PS/003/08

Client: **BENING d.o.o.**
Pavlovec Zabočki 121, Zabok

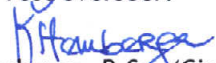
Contract/order: Order No. 01/2008-EB dated 2008-01-03

Construction product: Product **VETROFLUID**

Tested properties: Depth of penetration according to HRN EN 1504-2, Table 3
Determination of water absorption coefficient by partial immersion according to HRN EN ISO 15148
Bond strength by pull-off according to HRN EN 1542
Measurement of abrasion resistance according to HRN EN 1339, annex G and annex H
Chemical resistance according to HRN EN 13529
Depth of penetration of water under pressure according to HRN EN 12390-8
Compatibility on wet concrete according to HRN EN 13578
Determination of permeability to gases according to EN 993-4

Testing purpose: Testing of product **VETROFLUID** according to IGH offer No. 2122-0-0641/07

Test overseer:


Karla Štemberga, B.Sc. (Civ.Eng.)

Head of the Laboratory for Concrete, Mortar and
Repair Materials:


Emilija Barišić, B.Sc. (Civ.Eng.)

Head of the Concrete and Brick Laboratory:


Ph.D. Ružica Rosković, B.Sc. (Chem.)

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4.6 TEST RESULTS OF COMPATIBILITY ON WET CONCRETE

Tested property:	Compatibility on wet concrete
Testing carried out according to:	HRN EN 13587
Substrate type/test specimens:	4 referent slabs (300 x 300 x 60) mm, concrete type MC(0,40) according to HRN EN 1766, label (LB14/08) Specimens marks: PS 003-8/1, PS 003-8/2 - treated stored in water PS 003-8/3, PS 003-8/4 - treated referent
Substrate preparation:	Grit-blasted surface
Roughness index:	Tested according to HRN EN 1766, subparagraph 7; roughness index: 0,31
Treatment procedure:	The treatment was carried out according to client recommendation. Product is applied in two layers with brush. Producer recommendation for product consumption is 345-460 g/m ² . Product consumption for testing is given in Table 15.
Minimum permitted application temperature (MAT):	5 °C
Test date:	2008-04-10 until 2008-06-16
Date of treatment:	2008-04-17
Test location:	Laboratory for concrete, mortar and repair materials 2 2122
Equipment used:	Climatic chamber Hereaus (a.c. 315); Grinding equipment (a.c. 1138); Pull-off apparatus (a.c. 1987); Vernier claiper, (a.c. 2281)
Deviation from standard method of testing:	None
Note:	None

Table 15 Product consumption during treatment

SAMPLE	LAYER	C _{mi} (g/m ²)	Total consumption of 1 st and 2 nd layer (g/m ²)
YOUNG CONCRETE			
PS 003-8/1	I	264,89	532,00
	II	267,11	
PS 003-8/2	I	274,78	530,67
	II	255,89	
PS 003-8/3	I	242,39	510,24
	II	267,85	
PS 003-8/4	I	259,11	521,40
	II	265,29	

Table 16 Visual assessment of surface (in cycles of 7 days)

Deviation of surface	Specimens stored in water on 5 °C	Referent specimens stored in condition 5 °C and (75 ± 10) % r.h.
Colour change according to HRN EN ISO 4628-1	no changes	no changes
Degree of blistering according to HRN EN ISO 4628-2	no changes	no changes
Degree of flaking according to HRN EN ISO 4628-5	no changes	no changes

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Table 17 Bond strength after conditioning according to HRN EN 1542

SPECIMEN	FAILURE LOAD (kN)	MEAN DIAMETER TESTED SPECIMEN (mm)	BOND STRENGTH (MPa)		TYPE OF FAILURE
			single	mean value	
SPECIMENS STORED IN WATER AND ON 5 °C					
PS003-8/1-1	7,40	50,2	3,75	3,8	100 % A
PS003-8/1-2	8,27	50,1	4,19		100 % A
PS003-8/1-3	6,81	50,2	3,44		100 % A
PS003-8/1-4	6,54	50,2	3,30		100 % A
PS003-8/1-5	8,11	50,2	4,10		100 % A
PS003-8/2-1	8,72	50,2	4,40	4,1	100 % A
PS003-8/2-2	8,50	50,2	4,30		100 % A
PS003-8/2-3	7,21	50,3	3,63		100 % A
PS003-8/2-4	7,26	50,3	3,66		100 % A
PS003-8/2-5	8,80	50,2	4,45		100 % A
REFERENT SPECIMENS STORED IN CONDITIONS 5 °C AND (75 ± 10) % r.h.					
PS003-8/3-1	7,76	50,2	3,92	4,1	100 % A
PS003-8/3-2	8,50	50,2	4,30		100 % A
PS003-8/3-3	8,93	50,3	4,50		100 % A
PS003-8/3-4	7,91	50,2	4,00		100 % A
PS003-8/3-5	7,80	50,2	3,94		100 % A
PS003-8/4-1	8,15	50,1	4,13	4,1	100 % A
PS003-8/4-2	8,89	50,2	4,49		100 % A
PS003-8/4-3	7,13	50,2	3,60		100 % A
PS003-8/4-4	8,52	50,2	4,31		100 % A
PS003-8/4-5	7,78	50,2	3,93		100 % A

Statement: Testing was carried out in according with standard, except as detailed from given in „Deviation from standard method of testing“.

ANNEXES:

Testing report No. 2752-397/08 (abrasion, annex H)

Testing report No. 2752-398/08 (abrasion, annex H)

Testing report No. 2122-01-V 006/08 (depth of penetration of water under pressure)

Testing report No. 2122-03-PP 001/08 (permeability to gases)