

Customer:

SL Protection OÜ

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07.11.2022

Experimental Report N° 923/22

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Assignment: Testing of admixture for concrete.

Product designation: Admixture for concrete, marked as **ConProtect SR (WP 1)**, ~ 1 l (~ 1.2 kg).
Forwarded to the laboratory by customer on 28.09.2022.

Test method: EVS-EN 480* Admixtures for concrete, mortar and grout. Test methods.
Part 1: Reference concrete and reference mortar for testing.
EVS-EN 934 Admixtures for concrete, mortar and grout.
Part 2: Concrete admixtures – Definitions, requirements, conformity, marking and labelling (Table 2)
EVS-EN 12350 Testing fresh concrete. Part 2: Slump test. Part 6: Density.
Part 7: Air content. Pressure methods.
EVS-EN 12390 Testing hardened concrete.
Part 2: Making and curing specimens for strength tests.
Part 3: Compressive strength of test specimens.

Reference concrete for comparative tests were prepared in accordance with requirements of EN 480-1, EN 12390 and recommendations of customer.

The composition of reference concrete:

Cement	350 kg/m ³ CEM II/A-M (T-L) 42,5 R
Aggregate	crushed granite with fraction size 5 / 16 and sand - 0 / 4, corresponding to EVS-EN 480-1 p.3.2.1
Water	content adjusted to give a consistence (70±10) mm
Admixture	content determined by customer 1,0 % cement mass

The consistence (slump), bulk density and the air content of fresh concrete were determined in accordance with EN 12350.

The test specimens were made and stored in accordance with EN 12390-2.

The compressive strength of hardened concrete were determined in accordance with EN 12390-3. The test results are given in tables 1 - 2.

* This test method does not belong to the accreditation scope of laboratory.

Test results:

Table 1: Compressive strength of control mix I – concrete I without admixture, required slump (70±10) mm

Water 200 kg/m³ (w = 0.57)
 Aggregate 1930 kg/m³
 Fresh concrete consistence (slump) 80 mm
 bulk density 2480 kg/m³
 air content 1.4 %
 Date of preparing specimens 04.10.2022

Specimen designation	Testing date	Age, days	Dimensions,mm			A, cm ²	Mass, kg	Density kg/m ³	F, kN	Compressive strength, N/mm ²	
			a	b	h					individual	mean
Control mix I	11.10.22	7	100.0	100.0	100.5	100.0	2.506	2490	424	42.4	42.2
			100.0	101.0	101.0	101.0	2.527	2480	416	41.2	
			100.0	100.0	100.5	100.0	2.505	2490	430	43.0	
Control mix I	01.11.22	28	100.0	101.5	100.5	101.5	2.500	2450	525	51.7	51.7
			100.0	101.5	100.0	101.5	2.494	2460	527	51.9	
			100.5	102.5	100.0	103.0	2.525	2450	531	51.6	

Table 2: Compressive strength of test mix – concrete I with admixture WP 1 required slump (70±10) mm

Water 182 kg/m³ (w = 0.52)
 Aggregate 1930 kg/m³
 Admixture WP 1 3.5 kg/m³
 Fresh concrete consistence (slump) 80 mm
 bulk density 2470 kg/m³
 air content 1.7 %
 Date of preparing specimens 04.10.2022

Specimen designation	Testing date	Age, days	Dimensions,mm			A, cm ²	Mass, kg	Density kg/m ³	F, kN	Compressive strength, N/mm ²	
			a	b	h					individual	mean
Admixture WP 1	11.10.22	7	100.0	101.0	100.0	101.0	2.461	2440	499	49.4	49.0
			100.0	100.0	100.0	100.0	2.455	2460	484	48.4	
			100.0	101.0	101.0	101.0	2.501	2450	497	49.2	
Admixture WP 1	01.11.22	28	100.0	100.0	101.5	100.0	2.468	2430	586	58.6	58.7
			100.0	101.0	101.5	101.0	2.512	2450	589	58.3	
			100.0	101.5	101.0	101.5	2.521	2460	602	59.3	

The test results are valid to the described test samples only.

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