

Condry Construction Improvement AB
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Testing of Condry NT50 impregnation product on concrete

1 Assignment

Testing of Condry NT50 impregnation product on concrete. Tests carried out in accordance with the directions of EN 1504-2:2004 *Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – Part 2: Surface protection systems for concrete.*

2 Test schedule

The test objects and scope of the test are shown in table 1. The tests were carried out between May and August 2012.

Table 1. Test schedule for treated and untreated concrete samples

Nr	Property	Method SS-EN 1504-2, table 3, 4	Test object	
			Measurements (mm)	Number
4	Abrasion resistance	EN 5470-1	100x100x10	3 treated 3 untreated
8	Capillary absorption and permeability to water	EN 1062-3	250x120x30	3 treated
14	Impact resistance	EN ISO 6272-1	250x250x100	1 treated
15	Adhesion strength by pull-off test	EN 1542	250x250x100	1 treated
19	Depth of penetration	EN 14630	100x100x100	3 treated
24	Drying rate for hydrophobic impregnation	EN 13579	100x100x100	3 treated 3 untreated

The concrete and the test samples were produced and stored at CBI Swedish Institute for Concrete Technology in Borås in accordance with the directions of EN 1766.

Condry NT50 which arrived at CBI on 28 May 2012, was applied by CBI in accordance with the manufacturer's recommendations. The amount of finish applied was checked by weighing. CBI has no other information relating to the substance and sampling.

3 Comments

The tested impregnation product Condry NT50 meets the requirements of EN 1504-2:2004 *Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity –Part 2: Surface protection systems for concrete.*

Nr	Property	Method	Result	SS-EN 1504-2, table 3, 4	Requirements meets
4	Abrasion resistance	EN 5470-1	35,2 %	At least 30 % improvement in abrasion resistance in comparison with a non impregnated sample	Yes
8	Capillary absorption and permeability to water	EN 1062-3	0,01 kg/m ² h ^{0,5}	$w < 0,1 \text{ kg/m}^2\text{h}^{0,5}$	Yes
14	Impact resistance	EN ISO 6272-1	Class I	Class I: $\geq 4 \text{ Nm}$ Class II: $\geq 10 \text{ Nm}$ Class III: $\geq 20 \text{ Nm}$	Yes
15	Adhesion strength by pull-off test	EN 1542	1,9 N/mm ²	Horizontal without trafficking $\geq 1,0$ Horizontal with trafficking $\geq 1,5$	Yes
19	Depth of penetration	EN 14630		$\geq 5 \text{ mm}$	xx
24	Drying rate for hydrophobic impregnation	EN 13579	49 %	Class I: $> 30 \%$ Class II: $> 10 \%$	Yes

CBI Swedish Institute for Concrete Technology Renovation

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