

Handled by

Pavlos Ollandezos  
Provning och kontroll, Borås  
+46 10 516 68 64, Pavlos.Ollandezos@cbi.se

SIKA Sverige AB  
Christer Gustavsson  
Flöjelbergsgatan 8A.1  
431 37 Mölndal

## Testing of Sikagard 706 Thixo for the protection of concrete structures – Chloride content (1 appendix)

### 1 Assignment

Testing of Sikagard 706 Thixo hydrophobic impregnation product on concrete with respect to chloride content. These test results have been published in report PX10706 A 2012-03-19 for the same product, under another product name. Tests carried out in accordance with the directions of “TRVAMA Anläggning 10” Swedish Transport Administration, Publication 2011:102.

### 2 Test schedule

The test objects and scope of the test are shown in table 1. The tests were carried out between August 2011 and Mars 2012.

*Tabel.1. Test schedule for treated and untreated concrete samples*

Property	Method	Test object		
		Measurements (mm)	Number	g/m <sup>2</sup> Sikagard 706 Thixo
Effect on concrete chloride content	TRVAMA Anläggning 10  EN 14 629:2007 Method B	100x100x20	3 treated	200
			3 treated	400
			3 untreated	-

The concrete and the test samples were produced and stored at CBI Swedish Cement and Concrete Research Institute in Borås in accordance with the directions of EN 1766. Test were carried out on “Type C (0.70)” concrete without air content.

Sikagard 706 Thixo, batch nr EB 19859, which arrived at CBI on 11 November 2011, was applied by CBI in accordance with the manufacturer’s recommendations. An amount equivalent to approximately 200 g/m<sup>2</sup> respective 400 g/m<sup>2</sup> was applied to the test surface of each test sample. The amount of finish applied was checked by weighing. CBI has no other information relating to the substance and sampling.

CBI Betonginstitutet AB

ingår i SP-koncernen 

Stockholm

100 44 Stockholm

Besök Drottning Kristinas väg 26  
Tel 08-696 11 00  
Fax 08-24 31 37

Borås

c/o SP  
Box 857  
501 15 Borås  
Tel 010-516 50 00  
Fax 033-13 45 16

Internet / e-post  
www.cbi.se  
cbi@cbi.se

Plusgiro  
454538-0  
Bankgiro  
243-9412  
Bank  
Svenska Handelsbanken

Org.nummer  
556352-5699  
VAT No.  
SE556352569901  
Säte: Stockholm



### 3 Result

Test samples measuring 100 x 100 x 20 mm<sup>3</sup> were cut from the central part of the cube, at right angles to the upper surface (3 treated and 3 untreated), and conditioned for 14 days at (21 ± 2) °C with a relative humidity of (60 ± 10) %. At the end of the conditioning period, the surface of the three test samples was treated, and the samples were then stored in the same conditions for a further 14 days. The treated and untreated test samples were stored in a 15% NaCl-solution in separate containers for a total storage period of 56 days.

At the end of the storage period, a cylinder with a diameter of 50 mm was drilled from the test sample. From the ends of the cylinder, that were in contact with NaCl-solution, a 2.5 mm surface layer was ground. The chloride content of the test sample was then determined as the Cl<sup>-</sup> level in % of the weight of the cement in accordance with EN 14 629. The result of the determination of the chloride content is shown in diagram 1, and the measurement data is reported in Appendix 1. The chloride content is stated as a percentage of the weight of the cement. The quantity of cement in the concrete is assumed to be 15 percent by weight.

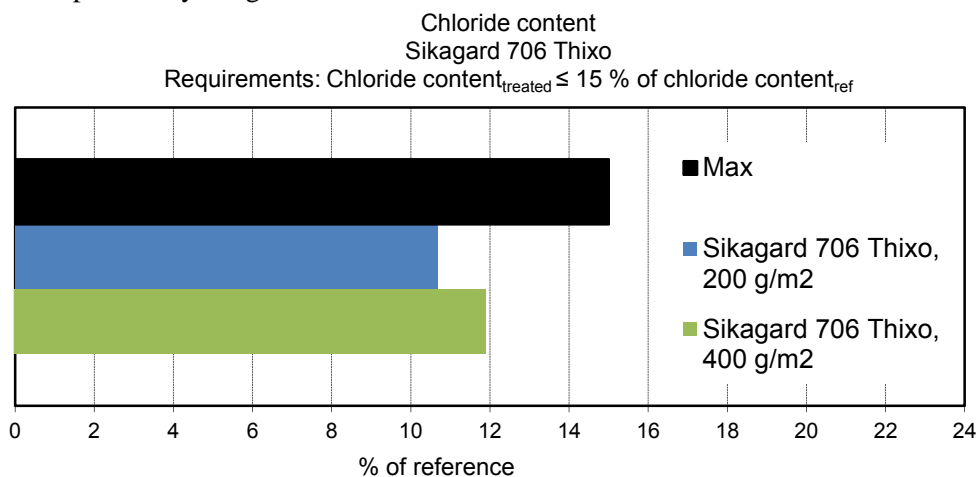


Diagram 1. Chloride content

### 4 Comments

The tested hydrophobic impregnation product, Sikagard 706 Thixo, meets the requirements of “TRVAMA Anläggning 10, Swedish Transport Administration, Publication 2011:102 .

**CBI Betonginstitutet**  
Provning och kontroll - Testing, Borås

Cathrine Ewertson  
Technical Manager

Pavlos Ollandezos  
Technical Officer

**Appendix:** Tests results

# TEST REPORT



Date  
2012-05-07  
Translation  
2012-05-07

Reference  
FX200788

Page  
1 (1)

## Appendix 1

### Test results

#### Chloride content , % of cement weight

200 g/m <sup>2</sup>	Ref	Treated	% of ref.
<b>C200-1</b>	3,33	0,41	12,23
<b>C200-2</b>	3,63	0,38	10,46
<b>C200-3</b>	3,50	0,33	9,34
<b>Medel</b>	<b>3,49</b>	<b>0,37</b>	<b>10,68</b>
<b>Stdav</b>	<b>0,15</b>	<b>0,04</b>	<b>1,46</b>
400 g/m <sup>2</sup>			
<b>C400-1</b>	3,33	0,47	14,04
<b>C400-2</b>	3,63	0,39	10,82
<b>C400-3</b>	3,50	0,38	10,86
<b>Medel</b>	<b>3,49</b>	<b>0,41</b>	<b>11,90</b>
<b>Stdav</b>	<b>0,15</b>	<b>0,05</b>	<b>1,85</b>