

K . U . LEUVEN

LABORATORIUM REYNTJENS

RESEARCH AND DEVELOPMENT

TENSILE STRENGTH
OF A CARBONATION-
RESISTANT
CONCRETE PAINT

de Croylaan 2
B-3001 Heverlee

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TREKPROEVEN OP CARBONATATIEREMMENDE BETONVERF

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Voor rekening van :

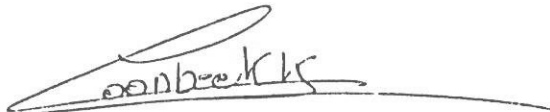
Werf :

Bestek :

Aannemer :

Materialen : 2 monsters:
- Indupact, acrylaatprimer
- Inducryl gevel, elastische acrylaatcoating

Proeven : Uitgevoerd volgens uw proefaanvraag


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TENSILE STRENGTH OF A CARBONATATIONRESISTANT CONCRETEPAINT

1.Materials

By Rewah NV, on 1992.12.02, 2 samples have been handled over to laboratorium Reyntjens.

It concerns the following products:

- Indupact, an acrylic primer
- Inducryl facade, an elastic acrylic coating

2.Tests

The tensile strength and the elongation at break have been determined.

3.Preparation of the samples

The test was realised corresponding to the norm ASTM D2370-82 "Tensile properties of organic coatings"

The samples were prepared following the prescriptions par.8.2.1 of this norm.

The acrylic coating was applied on a thin tinfoil

The layer is realised as follows

- layer 1: +/- 500 μm Inducryl facade
- layer 2: +/- 500 μm Inducryl facade

After drying out of the coating (7 days) the tinfoil is removed in a mercury bath.

The acrylic film has been stored during 28 days at 20 °C and 60 % Relative Humidity.

After this period the film was cutted in samples of the ASTM C type.

The exact dimension of these samples are described in the norm ASTM D412.

4.Testcriteria

The tests have been realised in accordance to the prescriptions in par.11 of the ASTM D2370-82 norm on 6 samples.

The dimensions of the samples are given in tabel 1.

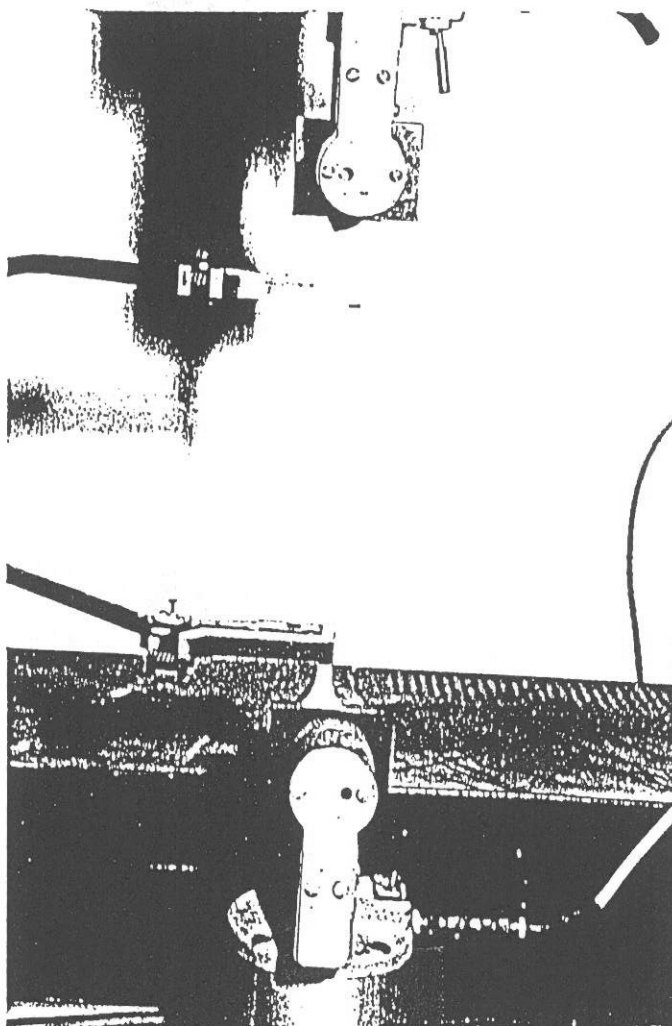


Fig.1: View on sample 1 after break

Sample nr.	Width mm	thickness mm	base mm
1	5,41	0,97	25
2	5,42	1,03	25
3	5,39	1,00	25
4	5,40	1,01	25
5	5,40	1,01	25
6	5,38	1,00	25

Tabel 1: Dimension of samples

The speed of traction was 50 mm/min. The elongation was measured with an accuracy of 2 mm. The results are noted in tabel 2.

Sample nr.	Section mm ²	Tensile strenght		Elongation at break	
		N	N/mm ²	mm	%
1	5,25	95	18,10	44	176
2	5,58	102	18,27	64	256
3	5,39	105	19,48	66	264
4	5,45	100	18,34	52	208
5	5,45	105	19,27	74	296
6	5,38	110	20,45	76	304
average value			18,98		251

Tabel 2: Results of the tractiontest (ASTM D2370-82)

Figure 2 shows 1 sample at break.
The breakline is in the middle of the sample