MATERIALPRÜFANSTALT FÜR DAS BAUWESEN
INSTITUT FÜR BAUSTOFFE, MASSIVBAU UND BRANDSCHUTZ
Direktoren: Prof. Dr.-Ing. H. Falkner, Prof. Dr.-Ing. F. S. Rostásy

iBMB

TU BRAUNSCHWEIG

Abteilung
Polymerwerkstoffe
und Umweltanalytik

Allgemeines bauaufsichtliches Prüfzeugnis

Für den

Gegenstand: Kunststoff-Dachdichtungsbahn „Sure-Weld GS"

wird hiermit ein allgemeines bauaufsichtliches Prüfzeugnis erteilt.

Antragsteller: Carlisle SynTec
Brusselsesteenweg 623
1731 Zellik-Asse
Belgium

Ausstellungsdatum: 05. Januar 1998

Geltungsdauer bis: 04. Januar 2003

Prüfzeugnis Nummer: **P-6323/4826**

Dieses allgemeine bauaufsichtliche Prüfzeugnis umfaßt **7** Blatt und **9** Anlagen.

Prüfung/Prüfbedingungen n. DIN 16 726 Abschnitt	Eigenschaften	Anforderungen	Prüfergebnisse
5.14 DIN 53 361	**Verhalten beim Falzen in der Kälte bei -20°C**		
	längs quer	keine Risse keine Risse	keine Risse keine Risse
Ergänzungsprüfung	**Verhalten beim Falzen in der Kälte bei -30°C**		
	längs quer	- -	keine Risse keine Risse
5.15 DIN 53 122 T1 Trocknbereichsverfahren 23-85/0	**Wasserdampf-Diffusionswiderstandszahl** μ	-	μ = 103150 [-]
	Wasserdampf-Diffusionsstromdichte	-	WDD = 0,31 g/m²d
	Wasserdampf-diffusionsäquivalente Luftschichtdicke	-	S_d = 131 m
5.16 DIN 4062	**Wurzelfestigkeit**	wurzelfest	wurzelfest

Prüfbericht

Nr. 6323/4826-He/Lau
(12.12.1997)

1. Ausfertigung

Antragsteller:

Carlisle SynTec
Brusselsesteenweg 623
1731 Zellik-Asse
Belgium

Antrag vom: 08.05.1996 **Zeichen:** - **Eingang:** 08.05.1996

Inhalt des Antrages:

Prüfungen an einer Dachdichtungsbahn mit der Produktbezeichnung

„Sure-Weld GS“

Eingang des Versuchsmaterials: 05.06.1996

Probenahme: durch Antragsteller

Kennzeichnung: siehe Abschnitt 1

Der Prüfbericht umfaßt **5** Blatt und **27** Anlagen.

Prüfung/Prüf-bedingungen n. DIN 16 726 Abschnitt	Eigenschaft	Prüfergebnis
5.16 DIN 4062 Probekörperanzahl: 3 Probekörper: [1] Prüfdauer: 07.06 - 05.08.1996	**Wurzelfestigkeit**	Gemäß den Anforderungen nach DIN 4062 sind die T-Nahtproben der Dachdichtungsbahn wurzelfest

[1] Die Prüfung der Wurzelfestigkeit erfolgte an Proben mit einem Durchmesser von 175 mm, die aus der Mitte von jeweils 400 x 400 mm² großen Bahnenstücken mit Fügenähten die ein „T" (T-Stoß) bilden entnommen wurden

DIN 16726 5.16: Impermeability to roots
Impermeability to roots shall be determined on a sheet with a T-Butt joint according to DIN 4062, September 1978 edition, paragraphs 4.7 and 5.7.

Gemäß den Anforderungen nach DIN 4062 sind die T-Nahtproben der Dachdichtungsbahn wurzelfest.

Loosely translated:

Gemäß; the requirements according to the test method DIN 4062 for the sheet seam (T-joint) is root impermeable.

If WVT is less than 0.5 g/(m².d), the test may be carried out in accordance with DIN 53122 Part 2.

5.16 Impermeability to roots

Impermeability to roots shall be determined on a sheet with a T-butt joint according to DIN 4062, September 1978 edition, paragraphs 4.7 and 5.7.

5.17 Behaviour after weathering in apparatus

For weathering, samples (sheet sections) shall be used the number and dimensions of which are appropriate for the subsequent tests provided for in the corresponding materials standards and the dimensions of the sample-holders in the weathering apparatus. If the sheets have plies or are reinforced, the cut edges of the samples shall be sealed prior to weathering.

Weathering shall be carried out in accordance with DIN 53387, Cycle B (wetting period 3 minutes, drying period 17 minutes) with an irradiation of 1100 MJ/m² in the case of waterproofing sheets and 4500 MJ/m² in the case of roofing sheets. Test pieces for the tests to be carried out in accordance with the relevant materials standards shall be taken from the weathered samples after a further 7 days' storage in standard atmosphere DIN 50014 - 23/50-2. A comparison shall be made of the values obtained for weathered test pieces and test pieces as delivered in accordance with 5.6.

5.18 Behaviour after storage in aqueous solutions

For storage in aqueous solutions, samples (sheet sections) shall be used the number and dimensions of which are appropriate for the tests provided for in the relevant materials standards. In the case fo sheets with a ply of reinforcement, the cut edges of the samples shall be sealed before storage. The samples shall be stored for 28 days at (23 ± 2)°C as specified in the materials standard in one of the test liquids according to Table 2.

Joe
UK

G.C. LIEGE a.s.b.l.

UNIVERSITE DE LIEGE - Institut du Génie Civil

LABORATOIRE DES MATERIAUX DE CONSTRUCTION

Quai Banning, 6, 4000 LIEGE
Tél. 041/66.92.52 - 66.92.03 - FAX 041/66.93.30

Number of pages : 3
Number of plates : -

Liège, le 16 novembre 1992

REPORT OF THE TEST 5/CHA Nr 52.526/1

Ordered by : CARLISLE SYNTHETIC SYSTEMS BNL S.A.
Rue du Patinage, 30 1190 BRUXELLES

For : Idem

Letter of advice : Ref. TE-193 of 07/04/92 of M. VERTOCKT

Nature of material : CARLISLE non reinforced EPDM membrane
CARLISLE reinforced EPDM membrane

Origin : CARLISLE

Received on : 14/04/92

Test requested : Resistance to roots

Responsable Engineer : J. WIERTZ - L. COURARD
Responsable technician : F. LIBIOULLE
Professor : J.M. RIGO - R. DEGEIMBRE

Responsable of laboratory

The Professor - Director
of the laboratory

The laboratory received samples of CARLISLE membrane referred :

Sample nr 1 : Carlisle non reinforced EPDM membrane
Sample nr 2 : Carlisle reinforced EPDM membrane

TEST

Resistance to roots

DESCRIPTION AND RESULTS OF THE TEST

The test is realized according to the standard DIN 4062.

A. OPERATING CONDITIONS

Three pots are filled with burial soil to the half-height. In each pot a sample having a diameter corresponding to the one of the pot is disposed.
The joint between the sample border and the pot is realized by means of a silicone resin.

The samples are recovered with about 90 cm soil.
The seeds of "lupinus albus" are then regulary shared on the soil recevered with 10 cm soil. Because the test is realized during winter season, the pots are placed in a hot-house and are submitted to an additional lighting.
The soil over an under the sample is regulary humidified.

B. CONCLUSIONS

After 8 weeks, the pots are emptied and the underface of the samples is observed. At the same time, the vitality of the seeds is verified. It is the reason why a pot, prepared in the same conditions but with a sample of bitumen 85/40 of 20 mm thick, is used.

C. RESULTS

The tests have been realized on :

- reference sample (2 cm bitumen)
- nr 1 : CARLISLE non reinforced EPDM membrane
- nr 2 : CARLISLE reinforced EPDM membrane

Photos nr 1, 2, 3 and 4

These photos show the results obtained for reference tests with a bitumen sample of 2 cm thick and confirm the vitality of the seeds because the roots went through the sample.

Photo nr 1 and 2

The soil is filled out and the lupin roots are hanging up to the bitumen sample.

Photo nr 3 and 4

The over and under surfaces of the bitumen sample are shown. The roots went through the sample.

Photos nr 5,6,7 and 8

They show the results for samples nr 1 and 2.

Photo nr 5

This photo shows the results for sample nr 1. The roots are absolutly not hanging up to the membrane.

Photo nr 6

We see the under and over surface of the membrane; there is no alteration, or penetration of the roots through the membrane.

Photo nr 7

This photo shows the results for sample nr 2. The roots are absolutly not hanging up to the membrane.

Photo nr 8

We see the under and over surface of the sample. We observe no alteration or penetration of the membrane by the roots.