

Assessment Report

- Translation -

Document No.: (5241/978/14a) – Pan of 03/11/2014

Client: Bekina Compounds NV
Berchemstraat 124
B 9690 KLUISBERGEN

Order date: 01/07/2014

Subject: Reaction of the "BeSealed Polybar Quellband SW" swelling
tape when stored in 1-percent / 4-percent saline water

Test material received: 26/06/2014

Sampling: Made by the client

Assessment period: July until October 2014

This Assessment Report consists of 2 pages and 1 annex.



This Assessment Report may not be circulated unless as a complete text without any alterations. Excerpts and abridged versions of this document are subject to approval in writing of MPA Braunschweig. Documents that do not carry a signature and the official stamp are invalid. The first sheet of this document and the page carrying the signatures bear the official stamp of MPA Braunschweig. The test material has been fully used.

1 Background

Bekina Compounds NV commissioned the Braunschweig Civil Engineering Materials Testing Institute (MPA) to test the swelling behaviour of the "BeSealed Polybar Quellband SW" swelling tape for joints when stored in 1-percent / 4-percent saline water.

The "BeSealed Polybar Quellband SW" swelling tape for joints is a synthetic rubber material with water-swelling components dyed yellow. It has the dimensions 25 mm x 20 mm (width x height).

2 Test results

Three samples each of the joint swelling tape (approx. 100 mm) long were stored for 48 hours in a 1-percent / 4-percent brine solution until a change in weight of $\Delta m_{48} \leq 2 \%$ was observed. After that, the samples were dried in a standard 23/50-2 climate, until again a change in weight of $\Delta m_{48} \leq 2 \%$ was observed. This cycle was repeated three times.

Table 1 below shows the mean values of the test results. The changes in weight are shown as a function of time in the graph in annex 1.

Table 1: Swelling behaviour when stored in saline water

Test liquid	Change in weight in % after					
	1st storage in saline water	1st drying phase	2nd storage in saline water	2nd drying phase	3rd storage in saline water	3rd drying phase
1-percent saline water	336	7.8	330	8.2	335	7.2
4-percent saline water	207	16.4	213	15.3	222	14.9

During and after storage apparent changes were controlled. The specimens did not show any cracks, blister or other damages.

3 Assessment

In view of the reaction that the sample showed when stored in the brine solutions it can be safely assumed that construction joints sealed with the "BeSealed Polybar Quellband SW" swelling tape meet the basic conditions for water tightness when exposed to 1-percent to 4-percent saline water.

This document is the translated version of Assessment Report No. 5241/978/14a – Pan dated 03/11/2014. The legally binding text is the aforementioned German Assessment Report.

i.A.



Dr.-Ing. K. Herrmann
Head of Department



i.A.



M. Pankalla
Engineer/official in charge

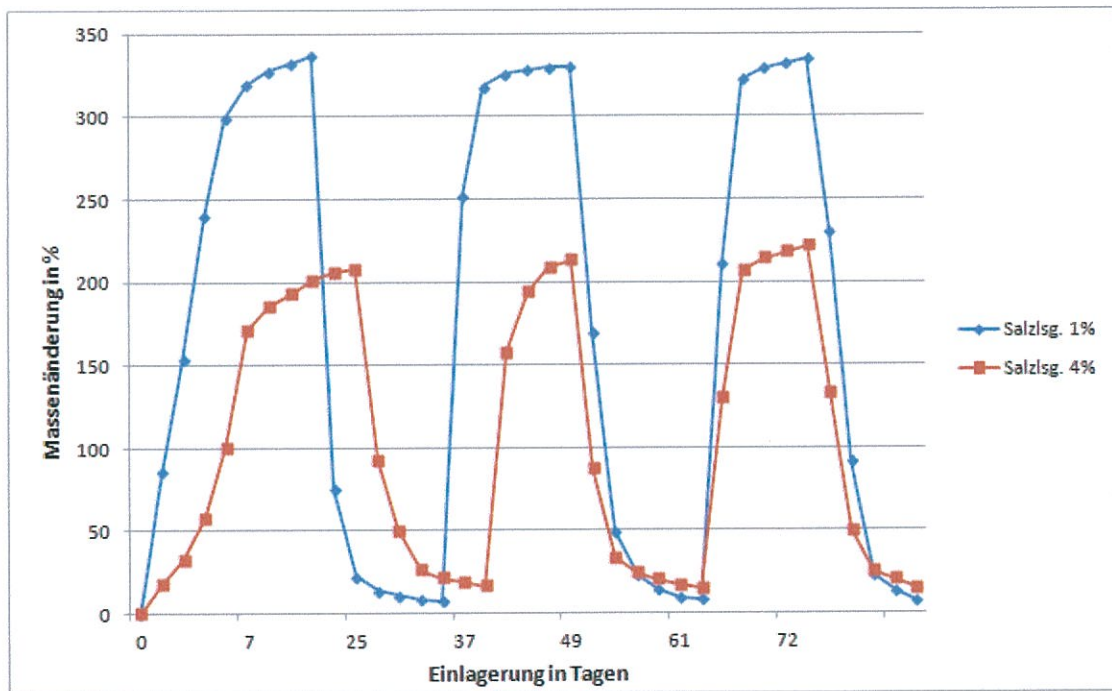


Fig. A1: Change in weight of the swelling tape when stored in 1-percent / 4-percent brine solution