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## Prüfbericht

### P 5345-1

Commission:

**Testing of the  
root resistance  
in accordance with DIN 4062, chapter 5.7 of  
Rapidflex RT**

Customer:

**Pazkar Ltd.  
Alon Tavor Industrial Zone  
P.O. Box 2030  
Afula, Israel 18000**

Persons in charge:

**J. Magner  
D. Thron**

Date of the test report:

**2008-03-31**

This test report comprises:

**4 Pages**

The test results refer exclusively to the materials tested.  
The publication of test reports, also in extracts, and references to tests for advertising purposes require our written agreement in each individual case.

## 1 INTRODUCTION

The Polymer Institut was commissioned by Pazkar Ltd., Afula/Israel, to carry out the testing of the root resistance of the material

### **Rapidflex RT**

in accordance with DIN 4062, chapter 5.7.:

*cold processable plastic jointing materials for sewerdrains; jointing materials for prefabricated parts of concrete; requirements, testing and processing.*

*Rapidflex RT* is a two component water based bitumen-polymer waterproofing material designed for high-speed spraying applications.

The material is according to the manufacturers explanation based on a unique bituminous emulsion, featuring outstanding flexibility properties and excellent adhesion to concrete and to metal inserts.

With this test report the proof should be furnished that the sealing component prevents the growing through of roots.

## 2 SAMPLES

On 2007-12-12 6 bituminous membranes (30 cm x 20 cm x 5 mm) of the material *Rapidflex RT* were delivered to Polymer Institut by mail. The membranes of *Rapidflex RT* were manufactured at the production unit in the presence of a member of the testing institute.

The samples were obtained by spraying the liquid material of *Rapidflex RT* on a not adherent foil in a wet film thickness of more than 5mm. The films of *Rapidflex RT* were taken off the foil 1 day after and subsequently stored under laboratory conditions of about 23 °C until expedition to the test institute.

## 3 TEST

The test of the root resistance was carried out in accordance with DIN 4062, chapter 5.7., by standard atmosphere over a period of 8 weeks (January – March 2008). At the beginning of the tests the samples were 12 weeks old.

Deviant from DIN 4062, Abs. 5.7, the test plates were 4 mm thick (DIN 4062, chapter 5.7: 10 mm).

The 'lupine test' serves to determine the root resistance of bitumen roof sheeting and bituminous sealants, as well as the root-repelling effect of substances.

The material sample was embedded between two layers of soil in a clay pot, tight against the wall of the pot by a glue of Epoxy resin in that may to avoid any growth of lupine roots at the joint of the pot wall and the sample.

As reference test a sample with bitumen of quality 85/40 in 20 mm thickness was manufactured in the same way .

Lupines seeds were sown on the upper layer of the soil. The soil was wetted consequently and the pots were deposited at a dry place in near of a window with south exposition at temperature conditions of about 15 °C.

After 8 weeks the pot was examined to determine whether the material sample was penetrated by the roots or resistant to them. At this stadium the roots had an altitude of more than 35 cm in every pot. The pots were destroyed and the soil was inspected visually on both sides of the tested film to find out if roots can grow through. The film were inspected too if the roots grow into the film of the testing material respectively in the reference bitumen.

The requirements are fulfilled in the moment when the film is not hit by the root growth and the parallel failure of the resistance character in case of bitumen as a testing reagent.

#### **4 RESULTS**

- **Rapidflex RT**

all 6 samples of *Rapidflex RT* are:

- free of penetration,
- free of growth into the surface.

all requirements for the characterization 'root resistant' acc. to the o.m. norm are fulfilled.

- **Reference specimen: bitumen of quality 85/40**

Deep penetration of all roots through the test bitumen.

## 5 SUMMARY

The Polymer Institut was commissioned by Pazkar Ltd., Afula/ Israel, to carry out the testing of the root resistance of the material


### **Rapidflex RT**

in accordance with DIN 4062, chapter 5.7. with the conclusion:

**Rapidflex RT is found to be root resistant in  
accordance with DIN 4062 chapter 5.7**


Flörsheim-Wicker, 2008-03-31

The Director

  
J. Magner



The person in charge

  
D. Thron