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## Test report P 5247-1-E

Testing order:

**Test of the waterproofing system**

**ELASTOPAZ**

**as a liquid applied roof waterproofing kit  
based on polymer modified bitumen  
emulsion**

Customer:

**Pazkar LTD.  
Alon Tavor  
Industrial Zone  
AFULA 18000  
Israel**

Persons in charge:

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Date of the test report:

**2008-09-20**

This test report comprises:

**6 pages**

The test results exclusively refer to the tested materials.

The publication of the test report in extracts and references to tests for advertising purposes require our written agreement in each individual case.

## C O N T E N T S

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## 1 SUBJECT

Polymer Institut has been charged by Pazkar Ltd, IL-Afula, to test the waterproofing system based on

### **ELASTOPAZ**

according to series of testing procedures for roof waterproofing systems described in:

*ETAG 005*      *Guideline for European Approval of liquid applied roof waterproofing kit*  
*part 1:*        *General-revised version 03/04*  
*part 2:*        *Specific stipulations for kits based on polymer modified bitumen*  
                         *emulsions and solutions - revised version 03/04*

According to the manufacturers description Elastopaz is a one component water based bituminous liquid membrane for high speed spraying applications.

## 2 WATERPROOFING SYSTEM

The presented waterproofing kit consists of the following products / steps:

- **Liquid membrane, 1<sup>st</sup> layer - Elastopaz**
- **Polyester geotextile**
- **Liquid membrane, 2<sup>nd</sup> layer - Elastopaz**

remark:

a closer description of the type of the materials is given in 'Section One, Chapter 3 – Terminology' of the a.m. part 2 of ETAG 005.

## 3 PREPARATION OF THE SPECIMENS

On the manufacturers production site the specimens for the tests were produced by the commissioner under the surveillance of a member of Polymer Institut.

Several types of samples have been manufactured:

- free films of the waterproofing kit of Elastopaz including reinforcement
- concrete slabs with the waterproofing system, partially including all steps
- expanded plastic slabs with the waterproofing system, partially including all steps

### **'Free films'**

Free films of the waterproofing layer Elastopaz were produced with a brush / roller on silicone paper at laboratory climate at 23°C.

consumption: 2,0 kg/m<sup>2</sup>

Directly afterwards a polyester geotextile ( 200 g/m<sup>2</sup>) was laid in the fresh emulsion and laminated by a special roller until the geotextile was totally soaked in.

After a drying process of 24 h at laboratory climate a final layer of Elastopaz was brushed, consumption: 2,0 kg/m<sup>2</sup>

total thickness: 1,8 mm

### **Combined specimen**

For the combined specimen the waterproofing system was applied on concrete slabs and expanded plastic slabs in the above mentioned procedure.

All test specimens were stored at laboratory climate for at least 14 days before the start of the tests.

## **4 TEST SCHEME / RESULTS**

The following table gives an overview of the executed tests to which the specimens of Elastopaz were subjected and the results.

<b>No.</b>	<b>item</b>	<b>chapter</b>	<b>normative reference</b>	<b>result</b>
1	Resistance to water vapour	5.3.3.1	EN 1931	S <sub>d</sub> value: 2.0 m μ value: 1150
2	Water tightness	5.3.1.2	TR 003	dense: 0,1 atm over 24 h
3	Resistance to wind loads <i>fully bonded assembled system, : ii)</i>	5.3.3.1	TR-004	>80 kPa on concrete
4	Resistance to dynamic indentation	5.3.3.2.1	TR-006	dense on concrete: category I 2 on expanded plastic slab: category I 1



5	Resistance to static indentation	5.3.3.2.2	TR-007	dense on concrete: category L 2 on expanded plastic slab: category L 1
4/5	user load category			on concrete P2 : I 2 / L 2 on expanded plastic slab: P1 : I 1 / L 1
6	Resistance to fatigue movement - Multiple crack bridging	5.3.3.3	TR-008; 1000 cycles	W 3 1000 cycles / - 10 °C dense
7	Resistance to low temperatures	5.3.3.4.1 i)	TR-006 at -20 °C	TL 3 - dense after dyn. / stat. indentation
		<i>add</i> 5.3.3.4.1 ii)	EN 1109-2	- 10 °C
8	Resistance to high temperatures	5.3.3.4.3	TR-004 +40 °C	adhesion: > 50 kPa
			TR-007 +90 °C	TH 4 - dense after stat. indentation: category L 2
			TR-009	Roof slope : S 1 to S 4
9	Resistance to heat ageing	5.3.3.5.1 i)	TR-011: 70 °C	climatic zone category: S severe; working life category: W 3 (400 days) dense after dyn. indentation category I 2
		<i>add</i> 5.3.3.5.1 ii)	TR-008 50 cycles at -10 °C	dense, no crack, no delamination
10	UV-radiation in the presence of moisture	5.3.3.5.2	TR-010 exposure: 1000 MJ/m <sup>2</sup> (W 3)	dense, category: I 2  -10°C
		5.3.3.5.2 i)	TR-006 -10 °C	
		<i>add.</i>	EN 1109	
11	Resistance to water ageing	5.3.3.5.3 i)	TR-012 60°C	exposure time 60 days (W 3), dense category L 2
12	Resistance to plant roots *	5.3.3.6	DIN 4062	proof in comparison with bitumen

*legend:*

<i>EN</i>	<i>European norm</i>
<i>TR</i>	<i>EOTA Technical Report</i>
<i>DIN</i>	<i>Deutsche Industrie Norm</i>
<i>add</i>	<i>additional specific method for verification acc. to part 2 of ETAG 005</i>
<i>**</i>	<i>with 2% of Additive</i>

## 5 SUMMARY

On behalf of Pazkar Ltd, IL-Afula, Polymer Institut has tested the waterproofing roof system

### ELASTOPAZ

according to series of testing procedures for roof waterproofing systems described in

<i>ETAG 005</i>	<i>Guideline for European Approval of liquid applied roof waterproofing kit</i>
<i>part 1:</i>	<i>General-revised version 03/04</i>
<i>part 2:</i>	<i>Specific stipulations for kits based on polymer modified bitumen emulsions and solutions - revised version 03/04</i>

**The tested roof waterproofing system Elastopaz shows sufficient results and meets the specified requirements.**

Flörsheim-Wicker 2008-09-20

The head of the testing department



Jürgen Magner

