

**Bellaterra** : 31<sup>th</sup> May, 2016  
**Report N°** : 16/31704100  
**Petitioner's reference** : **MARIS POLYMERS S.A.**  
Industrial Area of Inofita  
32011- INOFITA( GREECE)

## TEST REPORT

### MATERIAL RECEIVED

Sample of the sheet is received on 07<sup>th</sup> March, 2016, referenced by the Petitioner as:

DESCRIPTION	REFERENCE
<i>Liquid- applied polyurethane waterproofing membrane, one components.</i>	<b>MARISEAL 670</b>

Remarks: The sampling of the material received was performed by the petitioner

### TESTS REQUESTED BY THE PETITIONER

- *Geosynthetic barriers. Test method for determining the resistance to roots according to Standard s/n CEN/TS 14416 EX: 2014.*

**DATE OF TESTS PERFORMANCE:** From 09.03.16 to 30.05.16

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**PROCEDURES AND RESULTS**

**DETERMINATION THE RESISTANCE TO ROOTS**

Test method according to standard CEN/TS 14416 EX: 2014.

- *Geosynthetic barriers. Test method for determining the resistance to roots*

**Test conditions:**

- Test specimen: Circular approx. 20 cm diameter.
- Number of test specimens: 3
- Test period: 8 weeks
- Seeds: *Lupinus Albus*.

Note: To ensure rapid growth of plants, seeds were germinated before being planted

**Test Procedure:**

According to the indications of the standard, emptying and inspection after 8 weeks according to section 5 CEN/TS 14416 EX:2014 and prior verification that the roots penetrated the sample of bitumen.

**Results:**

After the test, upper and lower surface of the test sheet are inspected.

**No roots penetration into or through of the sheet is observed in either of the 3 test specimens.**

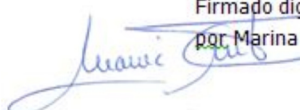
*Upper surface of the test specimen **MARISEAL 670***



*Lower surface of the test specimen **MARISEAL 670***



Firmado digitalmente  
por Marina Curto Diego



IPE Technical Manager  
Materials & Process

**LGAI Technological Center S.A**

The results refer exclusively to the sample, product or materials delivered to the laboratory, as indicated in the section pertaining to the description of the material received, and tested under the conditions stated in this test report.

**Applus+** guarantees that this task has been carried out in compliance with the requirements of our Quality and Sustainability System, and furthermore, that the contractual terms and legal regulations have been complied with.

In the framework of our improvement programme, we would appreciate any comments you may deem appropriate. These should be addressed to the manager who signs this document, or to the Quality Director of Applus+ at the following address: [satisfaccion.cliente@applus.com](mailto:satisfaccion.cliente@applus.com).