




# TEST REPORT

| SQM\_003\_2020 |

**DETERMINATION OF SLIP RESISTANCE (DIN 51130) OF A PRODUCT NAMED "PLATIO SOLAR PAVER WITH OPAL SURFACE", OF THE COMPANY "INNOVATÍV TÉRBUKOLATFEJLESZTŐ KFT."**

PLACE AND DATE OF ISSUE:	Faenza, 03/02/2020
COMPANY:	<b>Innovatív Térburkolatfejlesztő Kft.</b>
ADDRESS:	4080 Hajdúnánás, Jókai utca 64 - Hungary
TYPE OF PRODUCT:	<i>Paving integrated systems for external uses</i>
STANDARD APPLIED:	DIN 51130:2014
DATE OF RECEIPT IN LABORATORY:	22/01/2020
TESTS EXECUTED:	January 2020
TEST EXECUTED BY:	CertiMaC, Faenza

*NOTE: Results contained in the present test report are exclusively referred to the samples subjected to the tests described hereafter. Moreover, this report is for the exclusive use of the Customer, within the limits set by mandatory legislation and cannot be reproduced, totally or partially (in digital or paper form), without a written approval of the Laboratory.*

Test executed	Written	Approved
<u>_I.E. Germano Pederzoli_</u> 	<u>_Eng. Simone Bandini_</u> 	<u>_Eng. Luca Laghi_</u> 
Revision -		Page 1 of 4

## 1 Introduction

This test report describes:

- Determination of slip resistance (DIN 51130)

executed on a kind of product sent to the CertiMaC Laboratory in Faenza, by the company Innovatív Térburkolatfejlesztő Kft (Ref. 2-a, 2-b).

## 2 References

- Estimate: ref. n. 20009/lab on 16/01/2020.
- Order confirmation: e-mail on 17/01/2020.
- DIN 51130:2014. Testing of floor coverings. Determination of the anti-slip property. Workrooms and fields of activities with slip danger. Walking method. Ramp test.

## 3 Test object

Test has been executed on 6 surface layers [Figure 1] from 6 corresponding paving blocks with an integrated photovoltaic system, named:

- PLATIO SOLAR PAVER WITH "OPAL" SURFACE

with size approximately of 34 x 34 x 1 cm<sup>3</sup>. The specimens were selected from a sampling sent to the laboratory by the Customer on 22/01/2020.

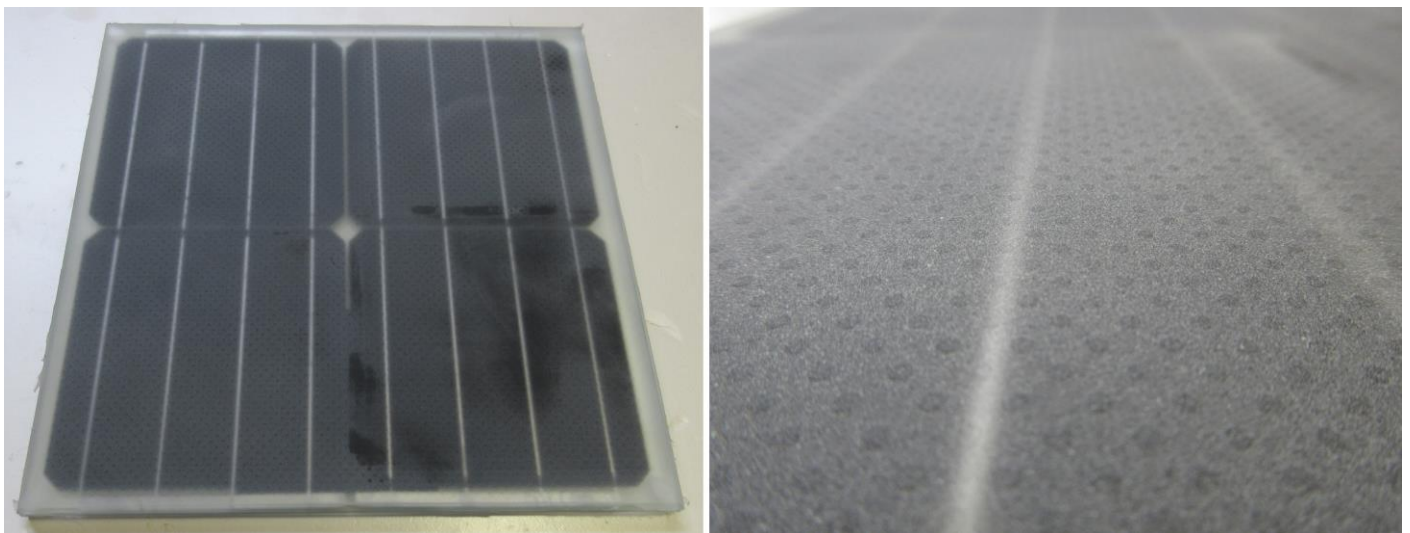


Figure 1 Platio solar paver with "Opal" surface

Rev. --	Test Executed	Written	Approved	Page 2 of 4
	_I.E. Germano Pederzoli_	_Eng. Simone Bandini_	_Eng. Luca Laghi_	SQM_003_2020

#### 4 Determination of slip resistance: DIN 51130

Walking test method described by the German standard on Ref. 2-c is applicable in workrooms and fields of activities with slip danger.

According to standard on Ref.2-c, test has been executed by an operator, walking on a ramp test made by a panel of size 120 x 60 cm with attached tiles of the product to test. Before testing, mechanical oil has been poured both on ramp test and on the rubble sole of the operator's working shoes.

The slope of the ramp is increased during test with constant speed (1°/second) until the operator start to slip. Then, the angle of inclination of ramp test is recorded. Test has been repeated several times, in order to define, with the maximum accuracy, the value of the slipping angle.

##### 4.1 Results

Table 1 shows the results achieved.

Product	Average Slipping Angle	R belonging group
Platio solar paver with "Opal" surface	29°	R12

**Table 1. Slip resistance (DIN 51130): Average slipping angle and R belonging group.**

##### 4.2 Analysis of results

According to standard on Ref. 2-c, product are classified on the basis of the value of the minimum slipping angle, as showed in table below.

The "R" classifications required by standard on Ref. 2-c are indicated for the different workrooms: in case of public spaces, standard requires the minimum class of R9.

R Belonging group	Average Slipping Angle
R9	$\geq 6^\circ \leq 10^\circ$
R10	$> 10^\circ \leq 19^\circ$
R11	$> 19^\circ \leq 27^\circ$
R12	$> 27^\circ \leq 35^\circ$
R13	$> 35^\circ$

**Table 2 classification on the basis of the slipping angle (Ref. 2c)**

The product named "**Platio solar paver with Opal surface**" has an average slipping angle of **29°** and it is than classifiable in **class R12** according to Ref. 2-c.

Rev. --	Test Executed	Written	Approved	Page 3 of 4
	_I.E. Germano Pederzoli_	_Eng. Simone Bandini_	_Eng. Luca Laghi_	SQM_003_2020

## 5 Distribution List

<b>ENEA</b>	Archives	1 copy
<b>CertiMaC</b>	Archives	1 copy
<b>Customer</b>	Innovatív Térburkolatfejlesztő Kft	1 copy

Rev. --	Test Executed	Written	Approved	Page 4 of 4
	_I.E. Germano Pederzoli_	_Eng. Simone Bandini_	_Eng. Luca Laghi_	SQM_003_2020