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TEST REPORT № 612-22-235-1/16

TESTING THE GRAVEL TRACK PAVING GRID  
**TRUE PAVE 330/40**

**ORDERER:** «TRUE PRODUCTS» D. O. O.  
Rudarska 12  
16000 Leskovac

**Sample data:** Paving grid samples provided by the customer  
**Name:** Paving grid for trails  
**Year of manufacture:** 2016

**TECHNICAL CHARACTERISTICS**

Dimensions: 338 x 338 mm  
Height: 40mm


**TESTING METHOD**

- Pressure test
- Freeze and heat testing
- Shock resistance test
- Resistance to oils, salts, acids and agricultural fertilizers
- Water flow through the grid


The test results refer only to the test samples This test report can be copied exclusively as a whole.

Nish, November 29<sup>th</sup>, 2016

HEAD OF JOB

  
Goran Radenković, assoc. prof.

HEAD OF INSTITUTE

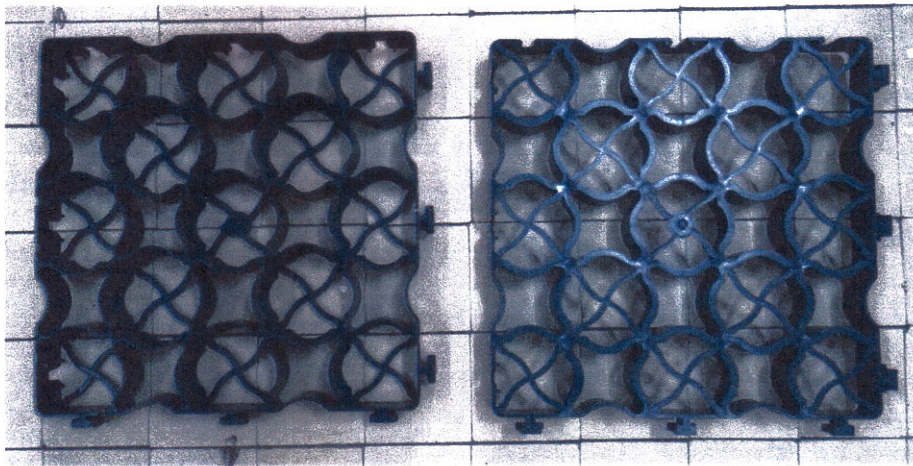
  
Predrag Janković, PhD, assoc.prof.

## TEST REPORT № 612–22-235-1/15

### TESTING THE GRAVEL TRACK PAVING GRID TRUE PAVE 330/40

#### 1. Subject of testing

Based on the request of the customer, a grid TRUE PAVE 330/40 gravel matting was submitted by the customer. The appearance of the delivered samples is shown in Figure 1.



*Fig 1. Appearance of the testing samples*

The dimensions of the delivered samples were measured with a tap band 0-5m with accuracy of 1mm.

Table 1. **Dimensions of TRUE PAVE 330/40 gravel matting**

| Name           | Measured mm |
|----------------|-------------|
| Width          | 338         |
| Length         | 338         |
| Height         | 40          |
| Wall thickness | 2.7         |

#### 2. Performed testing

Were carried out the following tests:

- Bearing capacity test
- Thermal stability test
- Oil, salt, acid and agricultural fertilizer resistance test
- Shock resistance
- Flow of water trough the grid filled with gravel

### 3. Test Results

#### 3.1. Bearing capacity test

Testing of pressure on the grid is performed on the machine for the tension, pressure and bending testing. The part of the grid has been cut on size of 5 fields, Figure 2. The grid has been placed between two flat plates and pressed by force of 100kN.

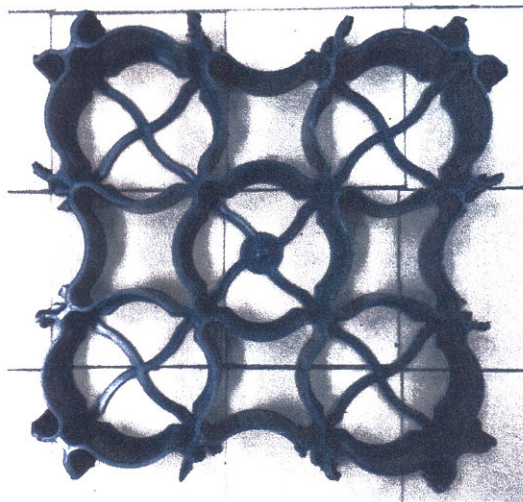


Fig 2. Appearance of samples for preassure testing

Two samples were tested, one in the state of delivery and the other after heating and cooling. Pressure test results are shown in Table 2.

Table 2. Results of pressure testing

| Sample                    | Cross-section dimensions, mm | Pressing force, kN | Reduction, mm |
|---------------------------|------------------------------|--------------------|---------------|
| Delivery state            | 230x230                      | 98                 | 1.03          |
| After heating and cooling | 230x230                      | 98                 | 0.96          |

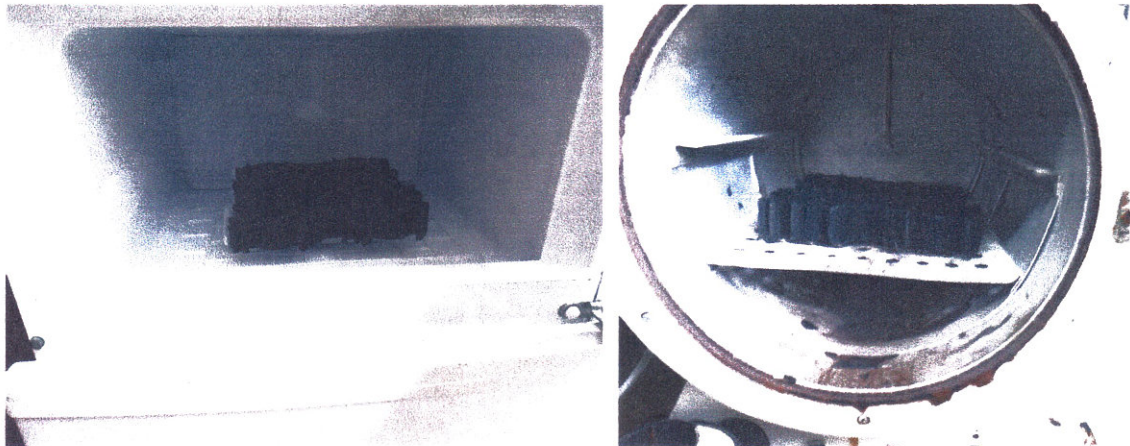
On the basis of the testing, it is concluded that the force of about 100 kN on a sample of 5 fields causes deformation of 2.5% of shrinkage.

The applied loads are made an elastic deformation, but upon release not other permanent deformation scaffold remains.

#### 3.2 Thermal stability test

Test was conducted on a sample of five fields, the type shown in Figure 3.

The sample was cooled 5 times to the temperature of -20°C, hold at this temperature 1 h, and then heat to 60°C, Figure 3.



*Fig 3. Cooling-heating testing*

Above mentioned heating and cooling did not cause a form change, the occurrence of cracks or other changes in the test sample.

### 3.3 Oil, salt, acid and agricultural fertilizer resistance test

One sample was submerged into SUS mineral oil, the other in 1 M NaCl solution, the third in 10% HCL solution and the fourth in NPK 15-15-15 fertilizer solution. Samples were left to stand for 24 hours and then washed with water. The effect of the above mentioned solutions did not cause any change in the surface of the tested samples or any other damage.

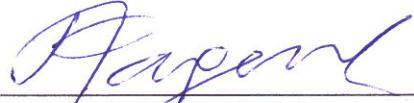
### 3.4 Shock resistance

The impact resistance test was carried out by throwing the gravel from a height of 1.5m on the grid. The amount of gravel was sufficient to fill 2 grids. The impact of rocks and gravel strikes did not lead to fracture or damage of the grid.

### 3.5 Flow of water trough the grid filled with gravel

The grid filled with gravel was placed over the vessel to measured passed water and then was poured 5l of water. The fabric was placed over the grid to prevent water from washing the sand. The weight of the gravel grid was measured before pouring water and 1 hour after pouring. The grate and gravel kept 0.075 liters of water (1.5%) and the rest of the water has passed trough the grid.

Tests performed by:

  
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