

ASSESSOR'S REPORT

(1st copy)

Assessment code: **72/0011/11**

Client: **Hahn Kunststoffe GmbH**
Building 1027

55483 Hahn-Airport

Subject matter of the order: **Testing of open mesh flooring**
Determination of the failure load and deflection with a
point load

Description of sample: **Open mesh flooring of recycled plastic**
Nominal dimensions: 1000x500x80 mm

Event no./Date: **10218 from 05.01.2011**

Samples received: **12.01.2011 / Receipt no. 2011-606028**

Text pages: **12**

1. Subject matter of the order

On 12.01.2011, 16 test pieces were delivered to the Material Inspection and Testing Centre Neuwied pursuant to the aforementioned order in accordance with the foregoing sample description.

The aforementioned test was to be performed in accordance with the order.

2. Tests and test results

2.1 General

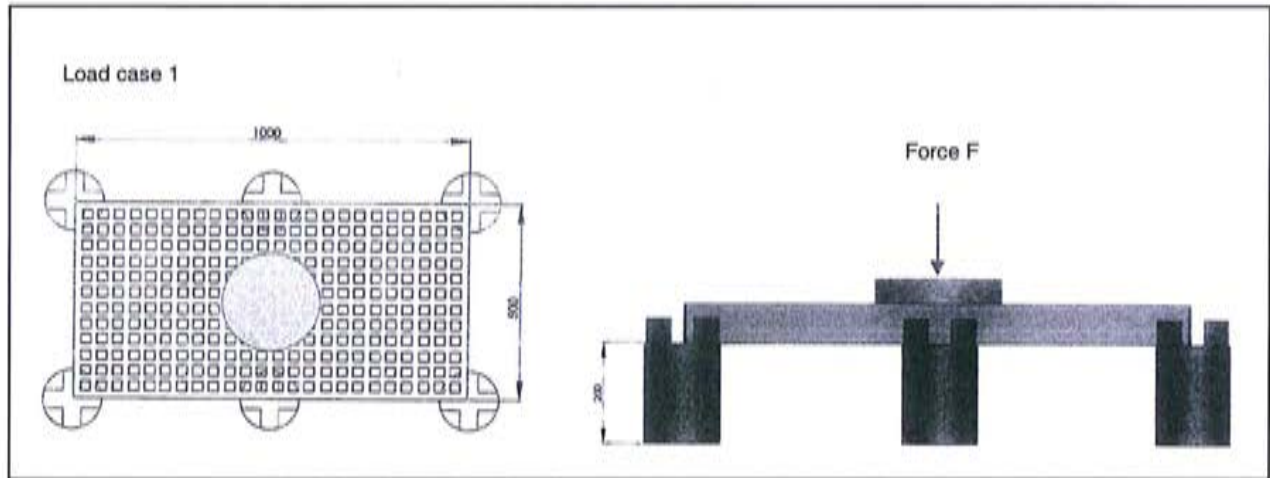
The samples submitted and the tests carried out on them are shown in Table 1.

Sketches of the different test set-ups are shown in Figure 1, Figure 2 and Figure 3.

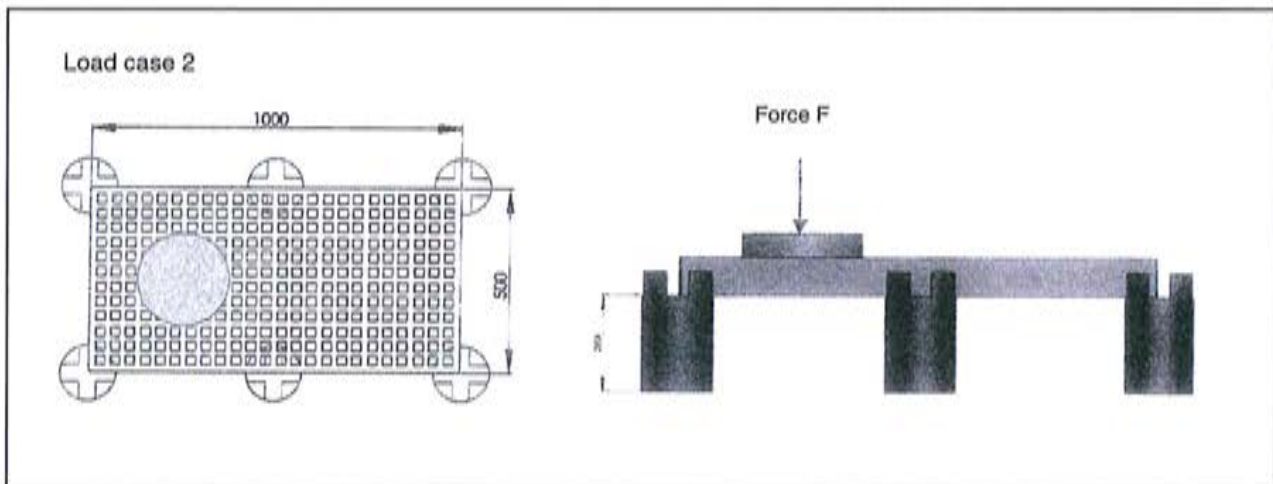
Table 1: Collection of samples

Designation	Sample description (sizes in mm)	Test carried out		
		Deflection load case 1	Deflection load case 2	Deflection load case 3
Series 1	Open mesh flooring Dimensions: 100 x 500 x 80 mm	x		
Series 2			x	
Series 3				x

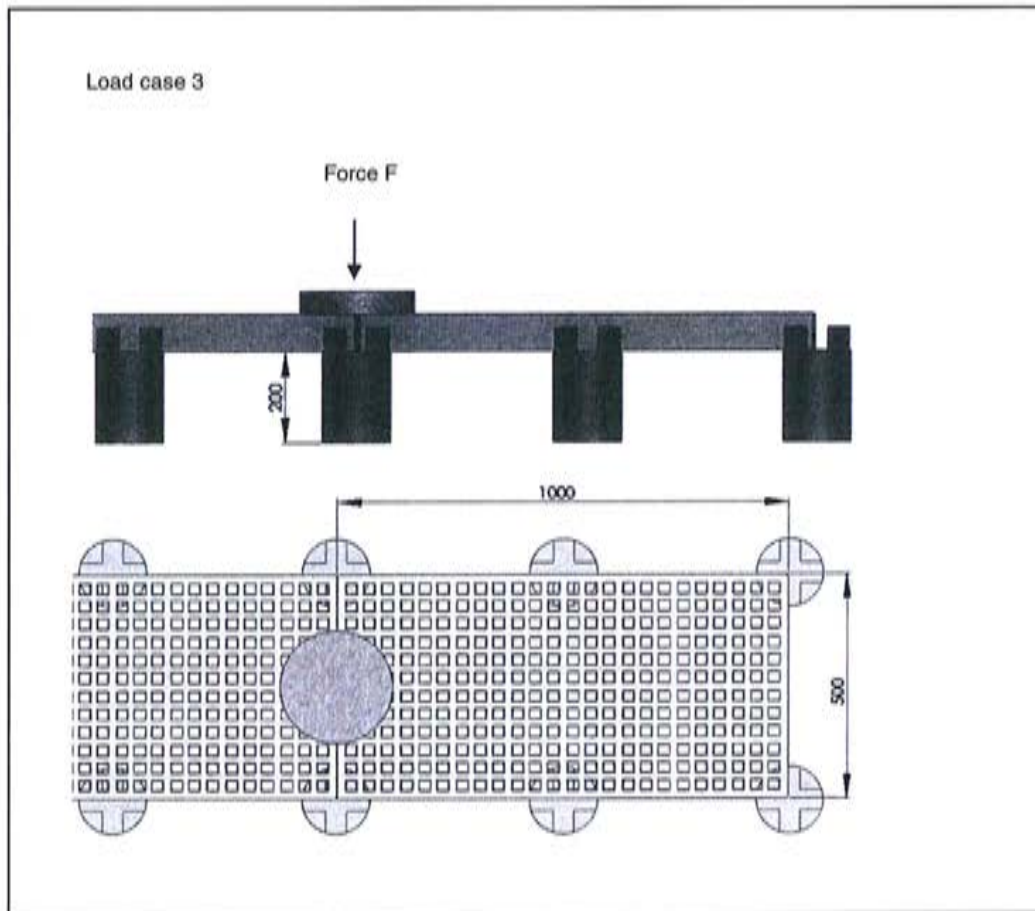
**Figure 1: Open mesh flooring of recycled plastic
Load case 1**



**Figure 2: Open mesh flooring of recycled plastic
Load case 2**



**Figure 3: Open mesh flooring of recycled plastic
Load case 3**



2.2 Load at rupture and deflection

The tests were performed with the universal testing machine, type Zwick Z 100/TL3A. The test machine has been examined by MPA Darmstadt and corresponds to class 1 pursuant to DIN EN ISO 7500-1 in terms of the force measuring device. The deflection was determined in the middle of a field by means of a separate incremental displacement transducer type MT60, accuracy class 0.5, made by Heidenhain.

The load was introduced by a test stamp with a diameter of 250 mm acc. to the sketch "Load case 1, 2 and 3". The load was applied up until the initial failure of the sample. The temperature at which the test was performed was a standard 21°C, the test velocity was a standard 100 N/sec.

The test results are shown in Table 2, Table 3 and Table 4. The force-displacement diagrams for the tests can be found in Figure 4, Figure 6 and Figure 9.

Figure 4: Load test, load case 1



Table 2: Results for load case 1

Sample no.	Initial crack load	Deflection
	[kN]	[mm]
1	28.83	27.02
2	28.13	18.35
3	28.34	19.49
4	30.00	26.77
5	29.58	21.32
Mean	28.98	22.59

Figure 5: Force-displacement diagram for load case 1

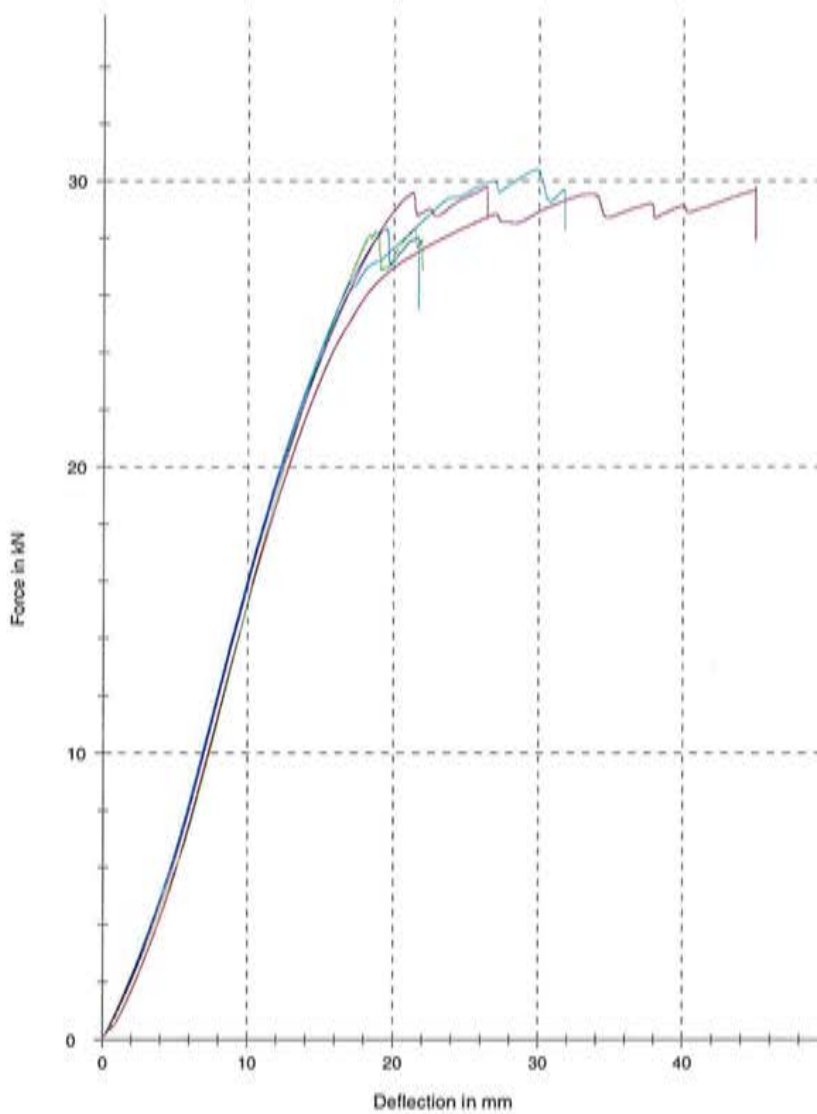


Figure 6: Load test, load case 2

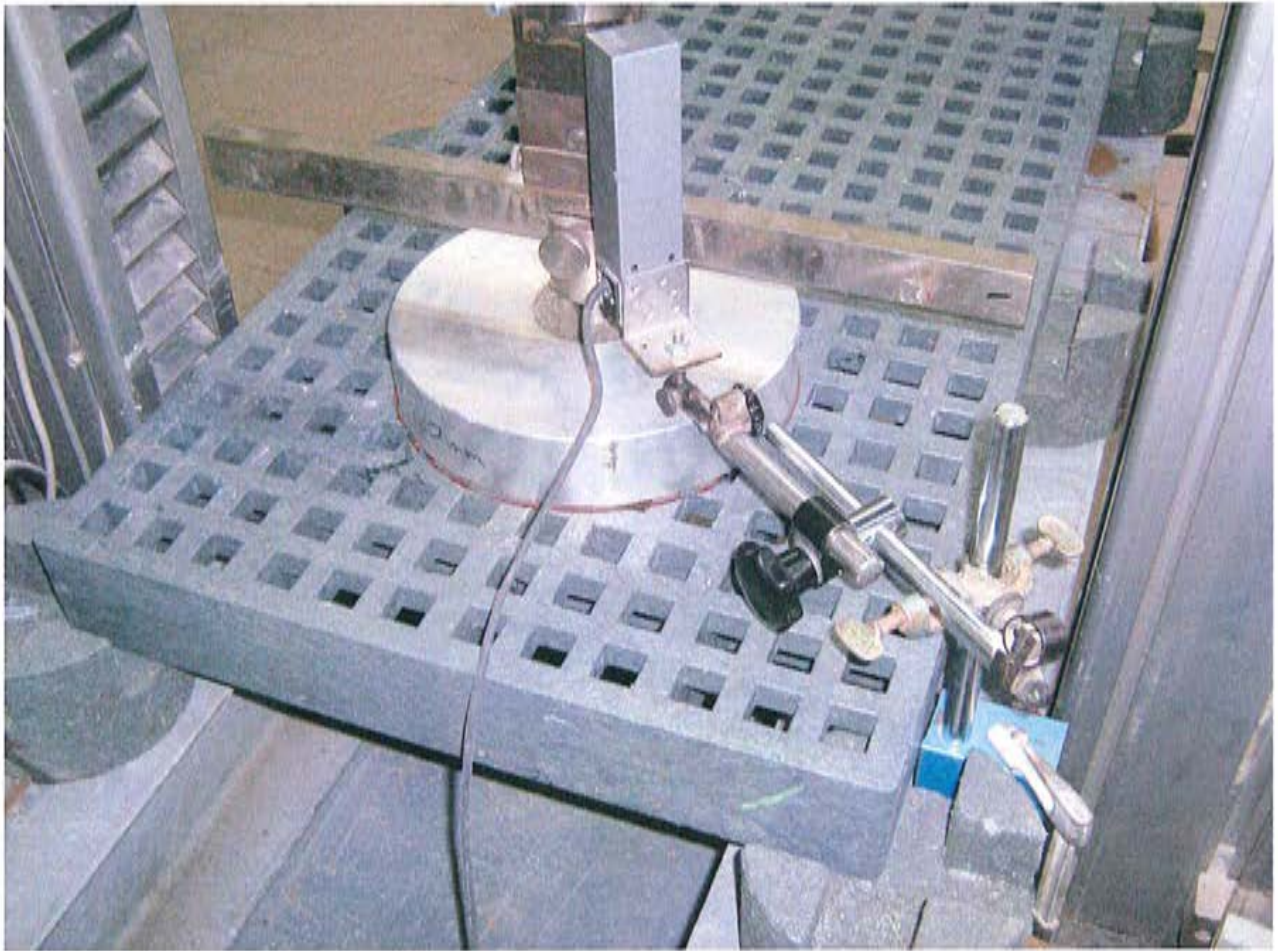


Table 3: Results for load case 2

Sample no.	Initial crack load	Deflection
	[kN]	[mm]
1	18.90	19.27
2	20.64	20.27
3	20.02	18.00
4	16.97	19.75
5	16.91	16.00
Mean	18.69	18.66

Figure 7: Force-displacement diagram for load case 2

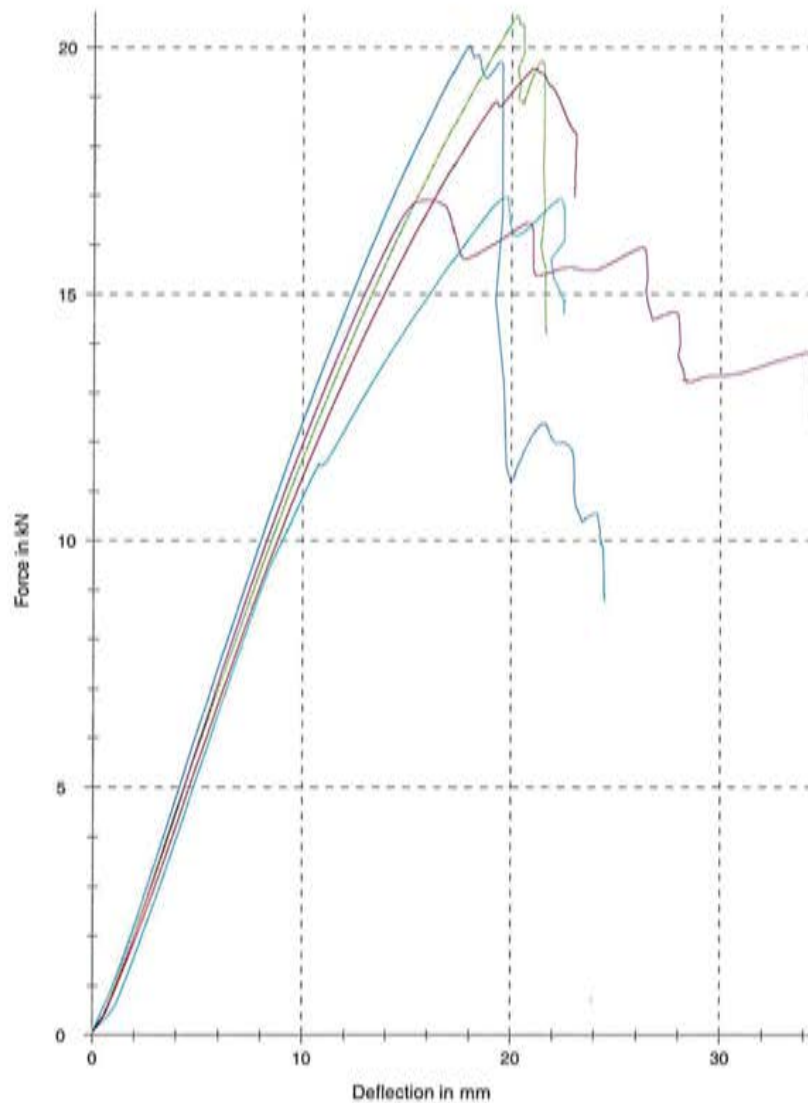


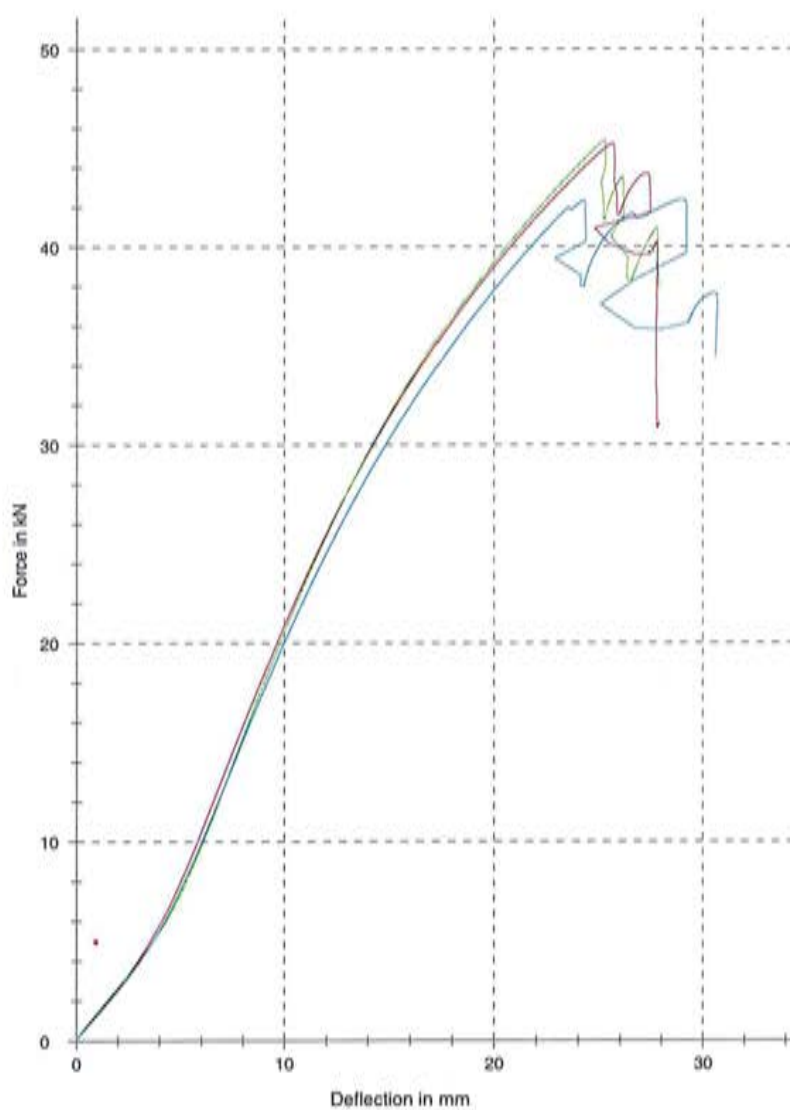
Figure 8: Load test, load case 3



Table 4: Results for load case 3

Sample no.	Initial crack load	Deflection
	[kN]	[mm]
1	45.20	25.64
2	45.36	25.25
3	42.37	28.96
Mean	44.31	26.62

Figure 9: Force-displacement diagram for load case 3



3.0 Summary

The test results are summarised in the following table.

Table 5: Summary of test results

Sample name	Initial crack load ¹⁾	Deflection ¹⁾
	[mm]	[mm]
Load case 1	28.98	22.59
Load case 2	18.69	18.66
Load case 3	44.31	26.62
¹⁾ Average values		


Neuwied, 18.01.2011/KI/Ro

Assessor


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