

LABORATORY REPORT:

**Assessment of Ikadan, IKA Floor Sports, to the
Performance Requirements of EN 14877 (2006):
Multi-sports**

Report Number **LSUK.12-0256**

Client **Ikadan
Højris Alle 89
7430 Ikast**

Date(s) **17/09/2012**

This report contains 8 pages.

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SUMMARY

A programme of testing has been carried out on a polymeric prefabricated tile sports flooring system manufactured by Ikadan.

The product was tested to the method given in EN 14877 “Synthetic surfaces for outdoor sports areas - Specifications” multi-sports. The method of tests employed is described and the results obtained are given.

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1. INTRODUCTION

A programme of testing has been carried out on a prefabricated modular polymeric flooring system supplied by Ikadan.

The product was tested to the methods given in EN 14877 (2006) Synthetic surfaces for outdoor sports areas — Specification". The method of test employed is described and the results obtained are given.

2. PRODUCT DETAILS & DESCRIPTION

Name	Nominal Thickness (mm)	Measured Thickness (mm)
IKA Floor Sports	35	35.1

The sample of sports surface consisting was supplied direct to Labosport by the manufacturer Ikadan.

Note: the system tested conforms to the scope of EN 14877 as a prefabricated system.

TEST PROCEDURE

The product was tested to the methods given in EN 14877 (2006) Synthetic surfaces for outdoor sports areas — Specification". The method of test employed is described and the results obtained are given.

The samples were tested at 23 °C and 50 % relative humidity (unless explicitly stated for specific test methods/conditioning) and were conditioned for a period of 24hrs prior to the test being undertaken.

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The following test methods have been conducted within the scope of EN 14877 for multi-sports and athletics applications:

- a) slip resistance of the surface (wet and dry),
- b) shock absorption of the surface (new and UV aged),
- c) deformation of the surface (new and UV aged),
- d) tensile properties of the surface (new and UV aged),
- e) vertical ball behaviour,
- f) water permeability,
- g) resistance to wear (new and UV aged), and
- h) colour change.

The samples were prepared and conditioned in accordance with the relevant standards prior to the testing begin undertaken.

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TEST RESULTS

4.1 Slip resistance of the material

Sample Condition	Units	Slip resistance	Pass / Fail
Wet	μ	56 (min 55, max 57)	Pass
Dry	μ	89 (min 86, max 91)	Pass
EN 14877 requirements	μ	55 to 110	

4.2 Shock absorption and deformation

Property	Units	Results	EN 14877 range/requirement	Pass / Fail
Force Reduction	%	26.1	SA 25 to SA 34	Pass
Vertical Deformation	mm	0.87	≤ 3 mm (athletics/tennis) ≤ 6 mm (multi-sports)	Pass
Property	Units	Results	EN 14877 range/requirement	Pass / Fail
Force Reduction after weathering	%	25.4	SA 25 to SA 34	Pass

Note: the sample was tested at specific locations to include joints these results are the mean for all relevant test locations.

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4.3 Tensile properties

New Sample				
Property	Units	Results	EN 14877 requirements	Pass / Fail
Tensile strength	MPa	> 1.5	≥ 0.40	Pass
Elongation at break	%	-	≥ 40	n/a
After Artificial Weather				
Property	Units	Results	EN 14877 requirements	Pass / Fail
Tensile strength	MPa	> 1.5	≥ 0.40	Pass
Elongation at break	%	-	≥ 40	n/a

The system is semi-rigid and slips from the tensile claps prior to brakeage hence a value for elongation can't be determined.

The system is non-uniform in thickness and was cut to shape in order to test, it slipped from the tensile claps prior to brakeage with a value greater than 1.5 hence the result is presented in this manner.

4.4 Vertical Ball Rebound

Property	Units	Results	EN 14877 range/requirement	Pass / Fail
Vertical Ball Rebound	%	96.8	≥ 80	Pass

4.6 Water Permeability

Property	Units	Results	EN 14877 range/requirement	Pass / Fail
Water Permeability	mm/h	> 3,000	≥ 150	Pass

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4.7 Resistance to Wear

Property	Units	Results	EN 14877 range/requirement	Pass / Fail
Resistance to Wear (new)	loss in grams	0.1	≤ 4.0	Pass
Resistance to Wear (after weathering)		0.1		Pass

4.8 Colour Change

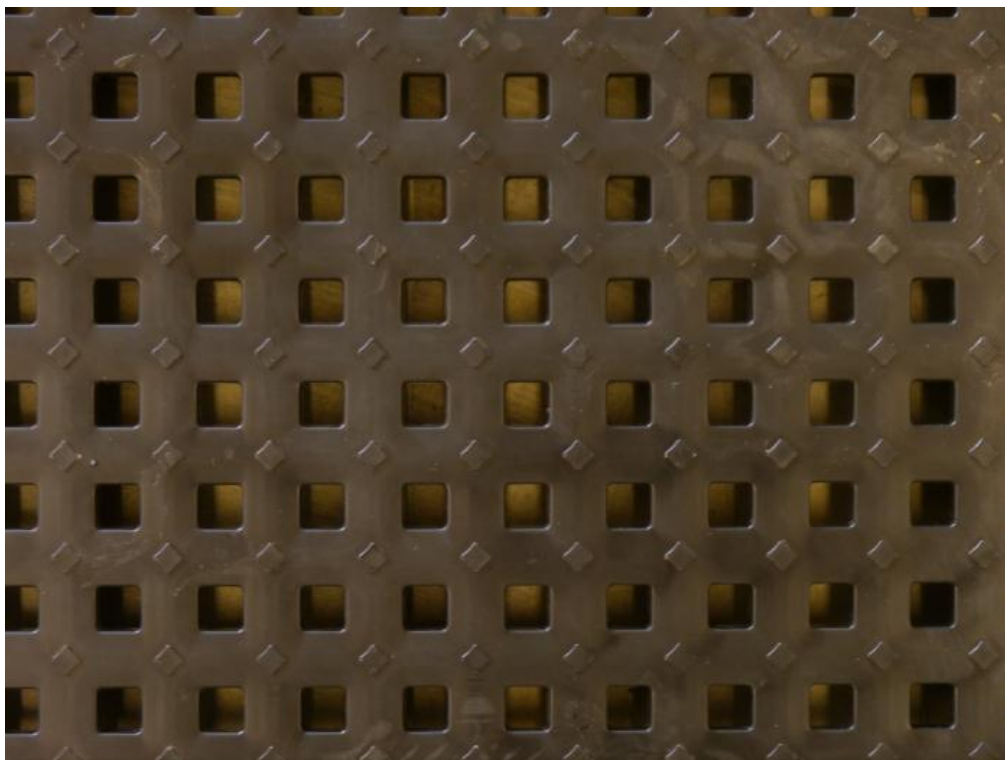
Property	Units	Results	EN 14877 range/requirement	Pass / Fail
Colour Change	-	3 / 4	3	Pass

CONCLUSIONS

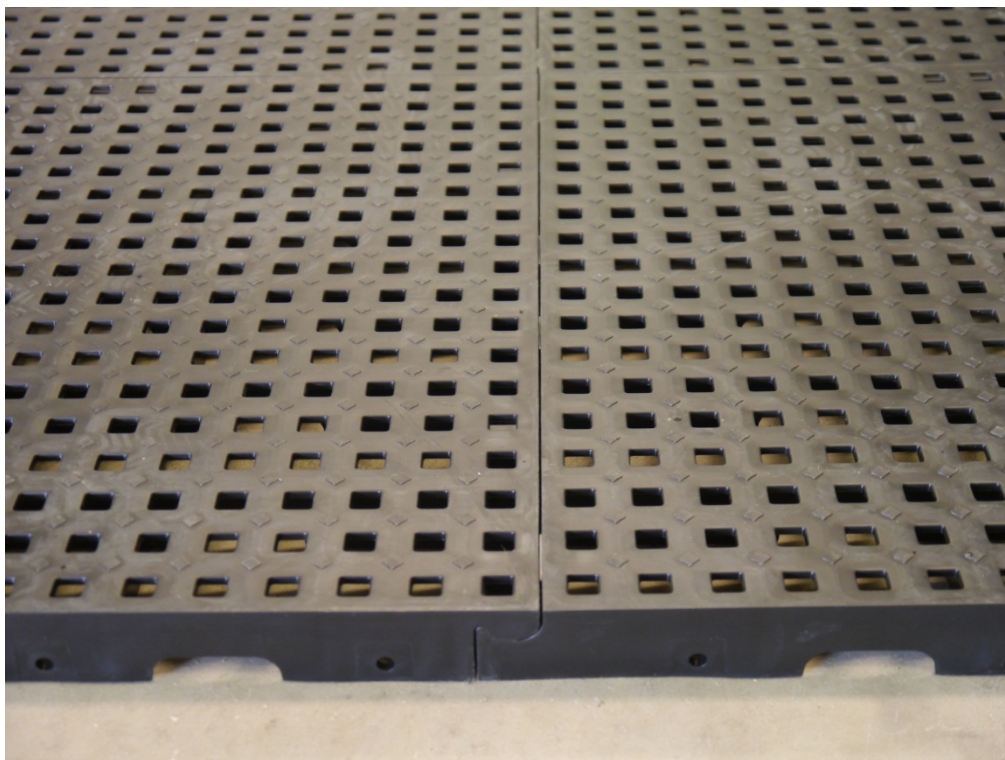
The Ikadan IKA Floor Sports was found to satisfy the requirements of EN 14877 (2006) Synthetic surfaces for outdoor sports areas — specification” for multi-sport use.

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SAMPLE PHOTOGRAPHS



Overview



Side view

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