



Test Report

Determination of sports surface properties

Report-No.: 903 4594-04

Client: Dr. Schutz GmbH
Steinbrinksweg 30
D-31840 Hessisch Oldendorf

Order-No. (Client): 2154153

Order-No. (MPA): **903 4594 000 /Scz**

Test Item: **PVC surface treated with
„PU NEO satin“**

Specification Applied: [1] DIN EN 14904:2006-06
Surfaces for sports areas –Indoor surfaces for multi-sports use –
Specification

Date of Receipt of Test Item 23.11.2017

Date of Test: starting 23.11.2017

Date of Report: 04.12.2017

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Enclosures : 2

Supplements: -

Total Number of Pages: 5

Number of Reports: 1

The test results relate only to the items tested.

Publication of this report in full or partly is only allowed with written authorization by MPA University of Stuttgart.


1 Purpose of Investigation

You commissioned us with testing of technical properties of a surface for sports areas according to DIN EN 14904 [1]. Therefor we received two PVC surface samples (size approx. 20 cm x 70 cm) labeled as follows:

Sample 1: „**PU NEO satin**“

The treatment of the PVC sample with the surface sealant „**PU NEO satin**“ was done according to manufacturers' instructions (product specification sheet dated 20.09.2017) in two layers with 50 ml/m² for each layer.

2 Testing procedure

The tests were carried out according to the procedures mentioned in DIN EN 14904 [1]. The test marked with  is an accredited test according to DIN EN ISO/IEC 17025, see DAkkS-certificate D-PL-11027-04-07).

The following properties according to DIN EN 14904 [1] were determined:

Linear friction, specular reflectance, specular gloss, resistance to wear.

3 Results of Investigation

In the following table the test results obtained are tabulated and compared to the requirements of DIN EN 14904 [1].

The single test results can be found in tables 2-5, enclosures 1-2.

Table 1: Summary of the test results according to DIN EN 14904 [1], sample 1 “PU NEO satin”

| Test acc. to EN xx described in DIN EN 14904 [1] | Test results | | Requirements acc. to DIN EN 14904 [1] |
|---|--------------|---------------------------|---|
| Linear friction [■] (EN 13036-4:2011) | 82 | max. deviation -2 / +3 | 80 – 110 (max deviation of single value +/- 4 units of mean value) |
| Specular reflectance (EN 13745:2004) | 19,4 % | | - ¹⁾ |
| Specular gloss (EN ISO 2813:1999) | 35,5 % | | ≤ 45 % at 85° for painted sport floor coverings |
| Resistance to wear (EN ISO 5470-1:1999) | 248,2 mg | | ≤ 1000 mg (H18 wheel; 1000 cycles; load 1000g) |

-¹⁾ no requirements acc. to DIN EN 14904 [1] – result has to be reported

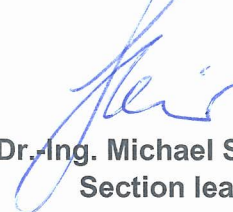
Prepared by



Norbert Schulz
Testing Engineer



Approved and released by



Dr.-Ing. Michael Stegmaier
Section leader

Table 2: test results of linear friction acc. to DIN EN 14904 [1]

| Test spot | Linear friction | |
|----------------|-----------------|--------|
| | along | across |
| 1 | 81 | 84 |
| 2 | 80 | 83 |
| 3 | 81 | 81 |
| 4 | 83 | 80 |
| 5 | 85 | 82 |
| along/across Ø | 82 | 82 |
| Total Ø | 82 | |

Table 3: test results of specular reflectance acc. to DIN EN 14904 [1]

| Test spot No. | Specular reflectance [%] | |
|----------------|--------------------------|--------|
| | along | across |
| 1 | 18,85 | 19,36 |
| 2 | 19,28 | 20,24 |
| 3 | 19,27 | 19,19 |
| Ø | 19,1 | 19,6 |
| Total Ø | 19,4 | |



Table 4: test results of specular gloss acc. to DIN EN 14904 [1]

| Test spot No. | Specular gloss [%] | |
|----------------|--------------------|--------|
| | along | across |
| 1 | 35,3 | 36,5 |
| 2 | 33,9 | 36,1 |
| 3 | 35,5 | 36,7 |
| 4 | 35,7 | 36,1 |
| 5 | 35,5 | 36,2 |
| 6 | 34,1 | 34,5 |
| Ø | 35,0 | 36,0 |
| Total Ø | 35,5 | |

Table 5: test results of resistance to wear acc. to DIN EN 14904 [1]

| Sample No. | Loss in mass [mg] |
|------------|-------------------|
| 1 | 208,8 |
| 2 | 295,5 |
| 3 | 256,5 |
| 4 | 231,2 |
| 5 | 259,4 |
| 6 | 237,6 |
| Ø | 248,2 |

