



# Test Report

Determination of sports surface properties

Report-No.: 904 4016 05

Client: Berger-Seidle GmbH  
Maybachstr. 2  
D - 67269 Grünstadt / Weinstr.

Order-No. (Client):

Order-No. (MPA): **904 4016 000 /Scz**

Test Item: **Sealing for sports floors “AquaSeal SmartStar” on a parquet surface**

Test Specification with Date of Issue: [1] DIN EN 14904:2006-06 Surfaces for sports areas – Indoor surfaces for multi-sports use – Specification

Date of Receipt of Test Item / Date of Sampling: 15.10.2024

Date of Test: 16.10.2024

Date of Report: 19.12.2024

Page 1 of 5 text pages

Enclosures :

Supplements:

Total Number of Pages: 5

Number of Copies: 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.

In compliance with DIN EN ISO/IEC 17025 accredited Testing Laboratory recognized by Deutsche Akkreditierungsstelle (DAkkS).  
Accreditation valid for testing methods listed in the certificates.

## 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 parquet surface samples (size approx. 20 cm x 70 cm) labeled as follows:

**Sample 1:** sealing for sports floors "AquaSeal SmartStar" on a parquet surface, application of one coat of AquaSeal FlexPrimer and two coats of AquaSeal SmartStar with 100ml/m<sup>2</sup> each

**Sample 2:** sealing for sports floors "AquaSeal SmartStar" on a parquet surface, application of one coat of AquaSeal FlexPrimer and two coats of AquaSeal SmartStar with 100ml/m<sup>2</sup> each

## 2 Tests and Analyses Performed

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

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

The friction test was carried out in accordance with the procedure described in DIN EN 14904 [1]. The tests performed are accredited tests according to DIN EN ISO/IEC 17025; see DAkkS-certificate (D-PL-11027-04-02). Conformity is assessed without taking the measurement uncertainty into account.

The tests were carried out according to the procedures mentioned in DIN EN 14904 [1].

The test climate was 21°C and 51% relative humidity.

### 3 Results of Investigation

The following test results were obtained.

**Table 1: test results of linear friction of sample 1: "AquaSeal SmartStar"**

Test spot	Linear friction	
	along	across
1	100	100
2	101	100
3	101	101
4	102	102
5	103	102
along/across Ø	101	101
Total Ø	101	

**Table 2: test results of specular gloss of sample 2: "AquaSeal SmartStar"**

Test spot	specular gloss	
	along [%]	across [%]
1	31,5	30,6
2	31,9	30,2
3	32,0	31,6
4	31,6	30,4
5	32,9	31,7
6	32,3	31,0
Ø	32,0	30,9

**Table 3: test results of specular reflectance of sample 2: "AquaSeal SmartStar"**

testing spot no.	reflectometer value, angle of incidence 85 °	
	along [%]	across [%]
1	34,27	32,79
2	33,78	32,94
3	33,22	33,21
along/across Ø	33,8	33,0
Total Ø	33,4	

**Tabelle 5: test results of resistance to wear of sample 2: "AquaSeal SmartStar"**

testing spot no.	mass loss [mg]
1	71,6
2	43,6
3	58,0
4	69,8
5	65,2
6	55,4
Ø	60,6

#### 4 Interpretation of Results and Recommendations<sup>1</sup>

According to EN 14904 [1] the following requirements are valid: -linear friction- mean value (80 – 110), range (+/- 4 units).

According to EN 14904 [1] the following requirements are valid: -specular gloss- At an angle of incidence of 85°, the specular gloss must be  $\leq 30\%$  for matt sports floor coverings and  $\leq 45\%$  for lacquered sports floor coverings.

According to EN 14904 [1] the following requirements are valid: -specular reflectance- To be determined at an angle of incidence of 85°, the mean value is to be specified.

According to EN 14904 [1] the following requirements are valid: -resistance to wear- After testing with CS10 wheels with a load of 500 g, the maximum mass loss after 1,000 cycles is 80 mg.

This requirement was fulfilled by the tested parquet sample coated with “**AquaSeal SmartStar**”.

Prepared by



**Konrad**  
**Testing Engineer**



Approved and released by



**Schulz**  
**Deputy Head of Unit**

---

<sup>1</sup> Opinions and interpretations are not subject to accreditation