

Slip resistance testing

Object:	EDGARDO POLLINI & FIGLIO SA
Client:	EDGARDO POLLINI & FIGLIO SA Via Onsernone 7 CH - 6654 Cavigliano Svizzera
Test date:	01. Dezember 2022
Execution by:	Dionys Marty MT-Qualitest GmbH
Test Report No.:	P22-0891 E
Testing centres:	Granito Onsernone polished C220
Producer:	EDGARDO POLLINI & FIGLIO SA
Test standard:	bfu-test regulations 2018 SIA 252:2002, appendix G.2 SN EN 51130
Tester:	Gliding measuring device FSC 3 of Sellmaier Elektronik Last calibration April 2022
Information on implementation:	A self-propelled measuring device determines the frictional resistance between the glider and the surface while driving via three gliders.
Length of the measuring section:	60 cm
Glider:	SBR 302 Nora
Lubricant:	Water with 0,5 % sodium lauryl sulphate
Temperature:	7 ± 2°C
Relative humidity:	55%

Summary of results

The Granito Onsernone sanded with C220 achieved an average value of μ 0.49 with (SBR 302 Nora).

This corresponds to a GS3 according to Bfu/EMPA and an R 11 according to DIN 51130.

Comparison of the evaluation groups Swiss standard / DIN standard

<u>Bfu/EMPA</u>		<u>DIN 51130 and DIN 51097</u>		<u>Angle of inclination</u>
$\mu < 0.20$		R 9		> 6° - 10°
$\mu > 0.20 - 0.30$	= GS1	R 10 A	= > 0.18 - 0.33	> 10° - 19°
$\mu > 0.30 - 0.45$	= GS2/GB1	R 11 B	= > 0.34 - 0.50	> 19° - 27°
$\mu > 0.45 - 0.60$	= GS3/GB2	R 12 C	= > 0.51 - 0.70	> 27° - 35°
$\mu > 0.60$	= GS4/GB3	R 13 C	= > 0.71	> 35°

Minimum requirements for footwear floor coverings

For the classification of the skid resistance of a floor covering for the shoe sector, the sliding friction coefficient mean values from the tests with standard shoes, which were carried out with the intermediate media water with 0.5 % wetting agent, are decisive. The minimum values listed in the following table must be met.

DIN 51131 auto:

Simplified DIN measurement: The FSC 3 independently performs 5 measurements consecutively, of which an average value is calculated from the 3rd to 5th measurement. Measurements 1 + 2 are sample measurements.

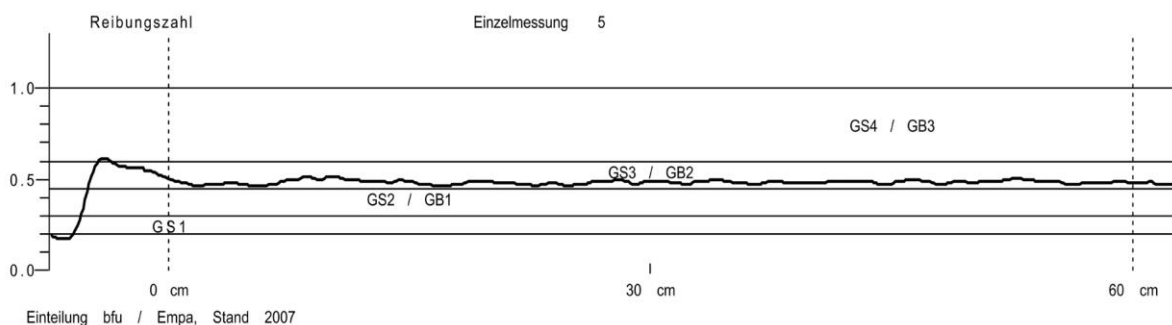
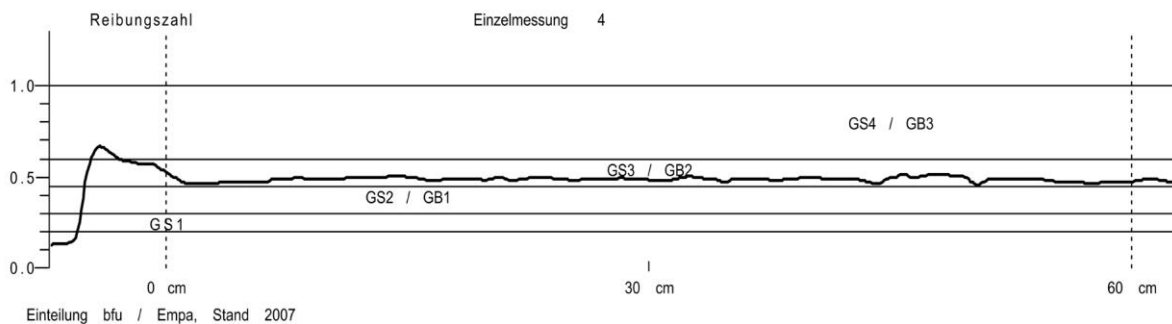
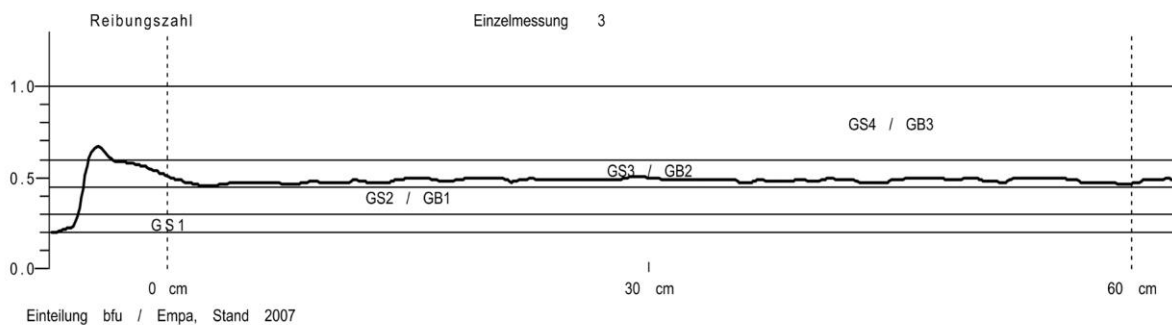
Measurement 1.1

Granito Onsernone sanded C220

Gerät: FSC3-3058 MT-Qualitest
Firmware: 2055
Letzte Kalibrierung: Fr 04.02.22

Gleiter: 10581 (SBR 302 Noratest)
Hergestellt: So 01.09.13
Strecke gesamt: 3975 m (1364 Messungen)

Messreihe: 91
Methode: BFU-Messung
Datum: Do 01.12.22 09:11:54
Projektnummer: ---
Einzelmessung 1: $\mu = 0.48$
Einzelmessung 2: $\mu = 0.48$
Einzelmessung 3: $\mu = 0.49$
Einzelmessung 4: $\mu = 0.49$
Einzelmessung 5: $\mu = 0.48$
Ergebnis (min / mittel / max): 0.45 / 0.49 / 0.53



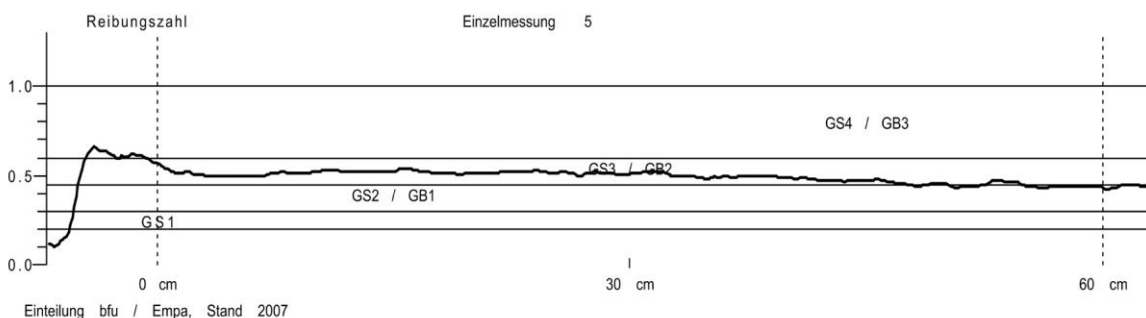
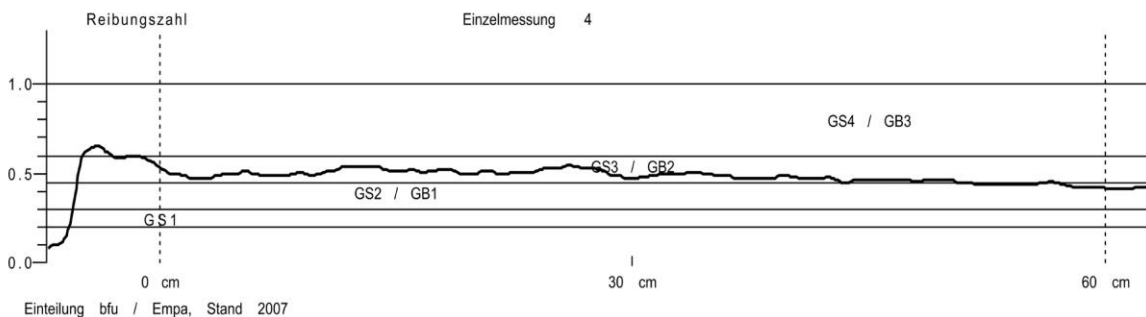
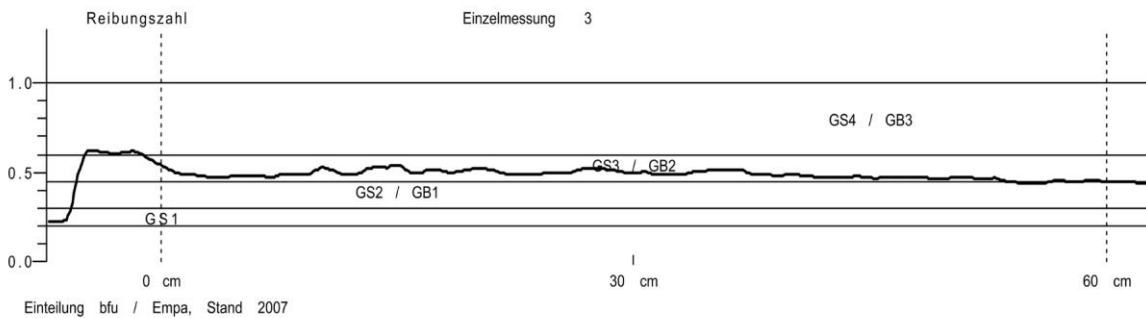
Measurement 1.2

Granito Onsernone sanded C220

Gerät: FSC3-3058 MT-Qualitest
Firmware: 2055
Letzte Kalibrierung: Fr 04.02.22

Gleiter: 10581 (SBR 302 Noratest)
Hergestellt: So 01.09.13
Strecke gesamt: 3978 m (1365 Messungen)

Messreihe: 92
Methode: BFU-Messung
Datum: Do 01.12.22 09:14:41
Projektnummer: ---
Einzelmessung 1: $\mu = 0.49$
Einzelmessung 2: $\mu = 0.47$
Einzelmessung 3: $\mu = 0.49$
Einzelmessung 4: $\mu = 0.49$
Einzelmessung 5: $\mu = 0.50$
Ergebnis (min / mittel / max): 0.43 / 0.49 / 0.57



Measurement and test certificate



Measurement results

The floor covering systems were tested in accordance with the bfu test regulations for floor coverings with increased skid resistance from January 2018, as well as according to DIN 51130/51097 (determination of skid resistance on the structure).

Sample area	Texture	Mean Value	Sliding friction class
1.1	Granito Onsernone sanded with C220	μ 0.49	GS3 / R11
1.2	Granito Onsernone sanded with C220	μ 0.49	GS3 / R11

We thank you for your trust and will be happy to answer any question you may have.

St. Gallenkappel, 16. December 2022
MT-Qualitest GmbH



F. Marty
Test engineer

Disclaimer:

The test and measurement results refer exclusively to the agreed tests and measurements, the samples used for this purpose and the test sites selected for this purpose. This test certificate is based on the state of the art and the condition of the object at the time of the test or measurement. The entire order processing was carried out under the exclusive validity of our General Terms and Conditions.