

**MODENA CENTRO PROVE s.r.l.**

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C.C.I.A.A. Modena n. 228587 - Tribunale di Modena n° 2231 - C.F. e P. IVA n. 01592020364

MECCANICA

ECOLOGIA

CERAMICA

AUTOMOTIVE

Modena, 21/05/20

To **BRETON SPA**
VIA GARIBALDI 27
31030 CASTELLO DI GODEGO TV

Attn. **SIG. CARRON**

MATERIAL and/or SAMPLE to be tested	Denomination of the Sample	Client Reference – Your delivery	date
sintered stone	LUX	-	06/05/2020

Here attached, you will receive the Test Report of Serial No. **20202644**/n, which shows the results of tests required.

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Director
Sant'Unione dr. Giuseppe

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TEST REPORT: 20202644/1

Modena, 21/05/20

CUSTOMER

BRETON SPA - - VIA GARIBALDI 27 - 31030 - CASTELLO DI GODEGO - TV

MATERIAL and/o SAMPLE to be tested

sintered stone;

Denomination

LUX;

Date of sample reception

06/05/2020;

Kind of test executed

Determination of Dynamic Coefficient of Friction (DCOF)

Referring standards

ANSI A326.3-2017

Shifting from standards

No one

Equipment

Tribometer BOT3000E cod. MCP C143 (Cert. n. MO28252219M of 22/05/2019)

Subcontracted phases

No one

Sampling made by

Customer

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The times of retain of the samples was indicated in the offer related to the test report.*

Examiner

p.i. Bortolai Alberto

MODENA CENTRO PROVE

Ceramic Dept. Responsible
P.I. De Pasquale Roberto

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DETERMINATION OF DYNAMIC COEFFICIENT OF FRICTION

Beginning date : 08/05/2020

Analysis ending date : 08/05/2020

SAMPLE : Ceramic tiles, marked « **LUX** »

The test has been carried out using the instrument BOT 3000, tribometer of the coefficient of dynamic friction (DCOF) between a sliding SBR sensor and the surface of test.

WET OPERATING CONDITION

Wet the path that the sensor will follow with 0,05% SLS (*Sodium-Lauryl Sulfate*) water.

SAMPLE CLEANING

The sample has been clean with: **RENOVATOR 120**

SENSOR VERIFICATION

Values of DCOF on standard tile before testing test specimens	0,29
Values of DCOF on standard tile after testing test specimens	0,28

RESULTS

Test Condition	Measure 1	Measure 2	Measure 3	Measure 4	Average
Wet DCOF - tile 1	0,25	0,26	0,26	0,26	0,26
Wet DCOF - tile 2	0,24	0,25	0,24	0,26	0,25
Wet DCOF - tile 3	0,25	0,26	0,24	0,24	0,25

REFERENCE VALUES

ANSI A137.1:2017 prescribe a minimum threshold of 0,42 for level interior spaces expected to be walked upon when wet.

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TEST REPORT: 20202644/2

Modena, 21/05/20

CUSTOMER

BRETON SPA - - VIA GARIBALDI 27 - 31030 - CASTELLO DI GODEGO - TV

MATERIAL and/o SAMPLE to be tested

sintered stone;

Denomination

LUX;

Date of sample reception

06/05/2020;

Kind of test executed

Determination of Slip Resistance

Referring standards

UNI EN 14231:2004

Shifting from standards

None

Equipment

Pendulum cod. MCP C163

Subcontracted phases

None

Sampling made by

Customer

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DETERMINATION OF SLIP RESISTANCE

Beginning date : 05/15/2020

Analysis ending date : 05/15/2020

SAMPLE : sintered stone sample marked " LUX "
SPECIMEN :

The test was performed measuring friction resistance between standard rubber surface and the upper side of test specimens.

RESULTS

dry slipping element and samples used.

Sample N°	Single values(USRV) two directions average
1	32
2	32
3	32
4	32
5	32
6	32
Average	32

Wet slipping element and samples used.

Sample N°	Single values(USRV) two directions average
1	25
2	25
3	25
4	25
5	25
6	25
Average	25

REQUIREMENTS

(Norm EN 1341)

Safety surface with USRV values > 35

Examiner
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TEST REPORT: 20202644/3

Modena, 21/05/20

CUSTOMER

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MATERIAL and/o SAMPLE to be tested

sintered stone;

Denomination

LUX;

Date of sample reception

06/05/2020;

Kind of test executed

Determination of Unpolished and Polished slip/skip Resistance Value

Referring standards

UNE 41901:2017 EX

Shifting from standards

None

Equipment

Pendulum cod. MCP C163

Subcontracted phases

None

Sampling made by

Customer

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DETERMINATION OF UNPOLISHED AND POLISHED SLIP\SKIP RESISTANCE VALUE

Beginning date : 05/15/2020

Analysis ending date : 05/15/2020

SAMPLE : sintered stone marked « LUX »

The friction characteristics of each specimen shall be assessed by determining the wet dynamic friction between the specimen and the slider of a pendulum swinging in a vertical plane.

RESULTS

Sample	Average value (USRV)
1	25
2	25
3	25
4	25

- Average value (USRV) : 25 (Class 1)

CLASSIFICATION

(Supplemento del SUA Dicembre 2019 Sezione SUA 1 p.to 1)

RESISTANCE VALUE Rd	CLASS
$Rd \leq 15$	0
$15 < Rd \leq 35$	1
$35 < Rd \leq 45$	2
$Rd > 45$	3

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TEST REPORT: 20202644/4

Modena, 21/05/20

CUSTOMER

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MATERIAL and/o SAMPLE to be tested

sintered stone;

Denomination

LUX;

Date of sample reception

06/05/2020;

Kind of test executed

Slip resistance of pedestrian surfaces with Pendulum Testers

Referring standards

BS 7976-2:2002+A1:2013

Shifting from standards

No one

Equipment

Pendulum cod. MCP C163

Subcontracted phases

No one

Sampling made by

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SLIP RESISTANCE OF PEDESTRIAN SURFACES WITH PENDULUM TESTERS

Beginning date : 15/05/2020

Analysis ending date : 15/05/2020

SAMPLE : sample marked " LUX "

The test was performed using the pendulum device, consisting of a normalized rubber slider, connected to the end of the pendulum itself. During the oscillation, the frictional force is measured between the test surface, fixed on a sample holder table, and the saucer, using a calibrated scale to evaluate the frictional properties of the specimen.

RESULTS

Rubber used

(hardness): 4S(96)

PTV - DRY TEST

SAMPLE	1	2	3	4	5	Average value
1	40	40	40	40	40	40
2	35	35	35	35	35	35
3	40	40	40	40	40	40
4	40	40	40	40	40	40
5	35	35	35	35	35	35
					PTV average value	38

PTV - WET TEST

SAMPLE	1	2	3	4	5	Average value
1	15	15	15	15	15	15
2	20	20	20	20	20	20
3	15	15	15	15	15	15
4	15	15	15	15	15	15
5	15	15	15	15	15	15
					PTV average value	16

NOTE: in the case of rubber TRL (55) type, the average PTV value is corrected according to the temperature of the test surface.

REFERENCE VALUES – UK Slip Resistance Group Guidelines Issue 5 2016

Classe	PTV (pendulum test value)
High slip potential	0 ÷ 24
Moderate slip potential	25 ÷ 35
Low slip potential	≥ 36

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