

1. Determination of the anti-slip properties (prCEN/TS16165, annex and DIN 51130)

Testing of floor coverings - Determination of the anti-slip properties - workrooms and fields of activities with slip danger, walking method - Ramp test in accordance with prCEN/TS 16165, annex B and DIN 51130.

TCKI order number : 12.05.01122
Sample test number : Castle stones

Type of floor covering material:
See cover page

Description of the surface characteristics of the floor covering:
Structured

Contaminant: SAE motor oil, viscosity category 10W-30L 1

Footwear: Uvex safety shoes Athletic

Test results:

Maximum angle of inclination in degrees	
Test walker 1	Test walker 2
12.9	13.4
12.8	12.6
12.9	11.5
Average maximum angle of inclination: 12.7	
Category assessment: R10	

Assessment table for slip resistance characteristics:

Average maximum angle of inclination	Slip resistance category
6° tot 10°	R9
meer dan 10° tot 19°	R10
meer dan 19° tot 27°	R11
meer dan 27° tot 35°	R12
meer dan 35°	R13

2. Determination of the anti-slip properties (prCEN/TS16165, annex A and DIN 51097)

Testing of floor coverings - Determination of the anti-slip properties - wet loaded barefoot areas; walking method - Ramp test in accordance with prCEN/TS 16165, annex A and DIN 51097

TCKI order number : 12.05.01122
Sample test number : Castle stones

Type of floor covering material:
See cover page

Description of the surface characteristics of the floor covering:
Structured

Contaminant: Water / 0.1 % soap solution

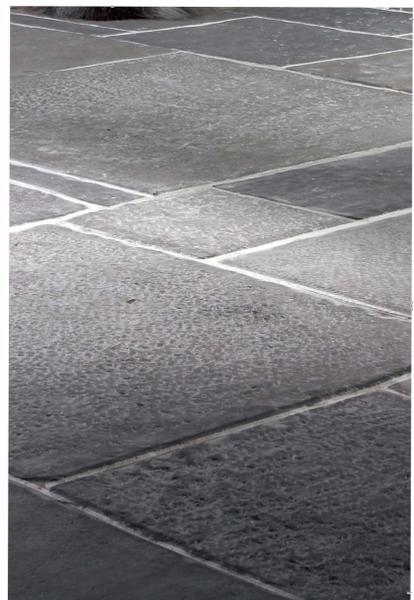
Type of test: barefoot

Test results:

Maximum angle of inclination in degrees:	
Test walker 1	Test walker 2
33.0	33.0
33.0	33.0
33.0	33.0
33.0	33.0
Average maximum angle of indication: 33.0	
Category assessment: C	

Assessment table for slip resistance characteristics:

Average maximum angle of inclination	Slip resistance category
≥ 12°	A
≥ 18°	B
≥ 24°	C





Q' 1. Water absorption, apparent porosity, apparent relative density and bulk density (EN-ISO10545-3)

TCKI order number: 12.06.01007
Sample test number: Castle Stones

Sample number	Dry mass (g)	Water absorption by boiling (mass %)	Water absorption by vacuum (mass %)	apparent porosity (volume %)	apparent relative density (g/cm3)	Bulk density (g/cm3)
1	236.50	17.0	11.9	21.2	2.27	1.79
2	309.05	17.5	11.2	20.1	2.23	1.78
Number	2	2	2	2	2	2
Minimum	236.50	17.0	11.2	20.1	2.23	1.78
Maximum	309.05	17.5	11.9	21.2	2.27	1.79
Mean	272.80	17.2	11.6	20.6	2.25	1.78

Q' 2. Modules of rupture and breaking strength (EN-ISO 10545-4)

TCKI order number: 12.06.01007
Sample test number: Castle Stones

Rod diameter (mm) : 20
Thickness of rubber (mm) : 5
Overlap of tile beyond the edge support (mm) : 10
Span beyond support rods (mm) : 182
Work size (mm) :
Tile with relief : No

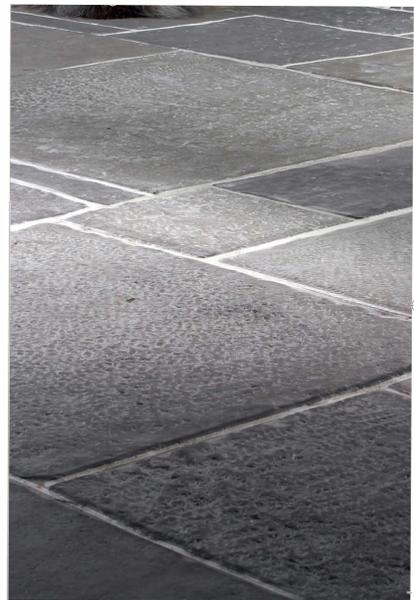
Sample number	Breaking load (N)	Minimum thickness (mm)	Breaking strength (N)	Modules of rupture (N/mm ²)
1	300	2.8	300	53.2
2	500	3.7	500	50.7
Number	2	2	2	2
Minimum	300	2.8	300	50.7
Maximum	500	3.7	500	53.2
Mean	400	3.2	400	52.0

TCKI result (tested according to EN 14411):
Meets the requirements.

Remarks

TCKI order number: 12.05.01123
Sample test number: Castle Stones

To determine the bending strength, an unimpregnated sheet was sawn into pieces measuring 200x200mm. An attempt was also made to determine the bending strength of pieces measuring 200x200mm that were sawn from an impregnated sheet. However, these pieces were so flexible that, within the range of movement provided by our testing machine, they did not break but simply bend.

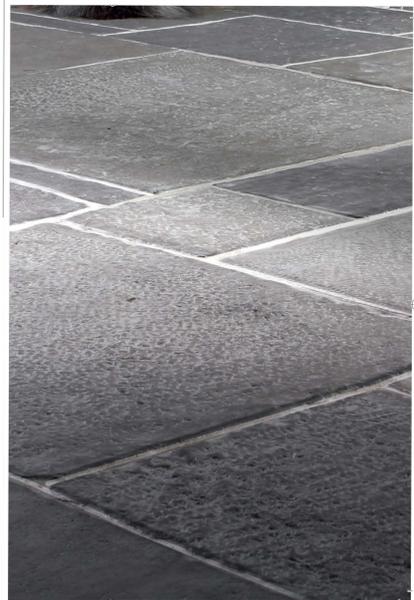




Q' 3. Resistance to deep abrasion, unglazed tiles (EN-ISO 10545-6)

TCKI order number : 12.05.01123
Sample test number : Castle Stones

Sample number	Chord length groove 1 (mm)	Chord length groove 2 (mm)	Volume groove 1 (mm ³)	Volume groove 2 (mm ³)
O17	41.0	41.0	577	573
O18	41.5	40.0	612	532
I17	41.5	41.5	599	599
I18	40.5	40.0	561	548
I19	39.5	41.5	524	608
Mean volume (mm ³) :			574	



Q' 4. Chemical resistance (EN-ISO 10545-13)

TCKI order number : 12.05.01123
Sample test number : Castle Stones
Sample number: 33 - 34 - 35 - 36 and 37

Resistance to	Test solution	Concentration	Classification
Household chemicals	Ammoniumchloride	100 g/l	UA
Swimming pool salts	Sodium hypochlorite	20 mg/l	UA
Low concentration acids and alkalis	Hydrochloric acid	3 vol. %	ULC
	Citric acid	100 g/l	ULA
	Potassium hydroxide	30 g/l	ULA
High concentration acids and alkalis	Hydrochloric acid	18 vol. %	UHC
	Lactic acid	5 vol. %	UHC
	Potassium hydroxide	100 g/l	UHA

TCKI result (tested according to EN 14411):
Does not meet the requirements

Q' 5. Resistance to stains (EN-ISO 10545-14)

TCKI order number: : 12.05.01123
Sample test number : : Castle Stones
Sample number:

Staining agent	Successful cleaning procedure 1)					Classification
	Product 1	Product 2	Product 3	Product 4	Product 5	
Green staining agent	B	B	B	B	B	4
Red staining agent	-	-	-	-	-	-
Iodine	B	B	B	B	B	4
Olive oil	A	B	B	B	B	4
General classification:		Class 4				

1) Procedure A: Pouring hot water
Procedure B: Weak cleaning agent, sponge and pouring hot water
Procedure C: Mechanical cleaning with a brush and powerful cleaning agent
Procedure D: Appropriate solvent (acid, alkalis and acetone)

TCKI result (tested according to EN 14411): Meets the requirements

