

Test Report

BTW 20V30024-01

Date: 06.03.2020

Client: Finalit Komplett-Steinpflege GmbH
Erzherzog Wilhelm-Ring 7
A-2500 Baden

Austria

Assignment: of 14.01.2020 submitted on 20.01.2020

Content of the assignment: Determination of the water vapour permeability of untreated and various treated dimension stone in accordance with DIN EN ISO 12572

Sample material: A - 3 slabs 40 cm x 40 cm x 30 cm untreated
B - 3 slabs 40 cm x 40 cm x 30 cm treated with 21S
C - 3 slabs 40 cm x 40 cm x 30 cm treated with 21S / 22
Surfaces: Sandblasted and brushed

Samples: 9 prisms 100 mm x 100 mm x 30 mm
9 cylinders diameter 200 mm, thickness 30 mm

Delivered: on 20.01.2020

Sampling: no information

Designation: A/B 21S/C 21S/22
internal laboratory no. 024

Information provided by the client on the stone:

Typical stone designation Kanfanar Giallo d'Istria

Petrographic designation Limestone

Origin: Croatia

LGA Bautechnik GmbH
Tillystraße 2
90431 Nuremberg, Germany

Tel: +49 911 81771-406
Fax: +49 911 81771-419
Email: andreas.klarmann@lga.de

Management
Hans-Peter Trinkl
Thomas Weierganz

Nuremberg HRB 20586,
Germany
Tax no. 241/115/90733
VAT no. DE813835574

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This Test Report comprises 4 pages of text and 3 appendices.

The test results are based exclusively on the sample material(s)/sample(s) stated in the Test Report.

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In order to perform the assignment, we have stored important data and your address. Data protection is guaranteed.

Water vapour permeability

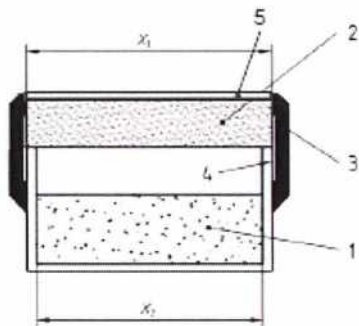
Testing was performed in accordance with DIN EN ISO 12572: 2001-09
Temperature- and moisture-related behaviour of construction materials and products - determination of water vapour permeability

Samples: 3 cylinders each (diameter 200 mm, thickness 30 mm) of sample materials A, B and C

Sorbent used:	Ammonium dihydrogen phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$)
Air humidity in test vessel:	93% relative air humidity (moist side)
Air humidity in climatized room:	50% relative air humidity (dry side)
Temperature in climatized room:	23 °C
Placed in test vessel:	29.01.2020
Test start date (0-measurement):	31.01.2020
Test end date after 28 days:	28.02.2020

The processed and untreated or treated surfaces were placed on the dry side.

Figure 1 Test setup



- 1 Ammonium dihydrogen phosphate
- 2 Natural stone
- 3 Seal
- 4 Sealing tape
- 5 Untreated / treated natural stone surface

Test results

A - untreated samples

Sample	Water vapour diffusion resistance factor μ	equivalent air layer thickness s_d [m]
A 1/024	392	11.95
A 2/024	370	11.17
A 3/024	296	8.96
Mean	353	10.69

B - sample treated with 21S

Sample	Water vapour diffusion resistance factor μ	equivalent air layer thickness s_d [m]
B 1/024 21S	256	7.82
B 2/024 21S	328	9.96
B 3/024 21S	397	11.91
Mean	327	9.90

C - Sample treated with 21S/22

Sample	Water vapour diffusion resistance factor μ	equivalent air layer thickness s_d [m]
C 1/024 21S/22	292	8.94
C 2/024 21S/22	399	11.91
C 3/024 21S/22	290	8.51
Mean	327	9.79

LGA Bautechnik GmbH
Material testing institute



Dipl.-Ing. (FH) Deppisch



Processed by
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A. Klarmann, Stone Technician