



INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a. s.
třída Tomáše Bati 299, Louky, 763 02 Zlín, Czech Republic
TESTING LABORATORY - TESTING DIVISION

issues

ATTEST
No. 472114967-01

On sample:

Utility ceramics - porcelain material Granit

Client:

G. Benedikt Karlovy Vary s.r.o.
1. máje 30, 360 06 Karlovy Vary, Czech Republic
ID: 497 11 989

Evaluation of the measured parameters:

The evaluated sample meets the required limit values for migration of lead and cadmium to 4% aqueous solution of acetic acid specified for category 1 (products that can not be filled) in § 19 of Health Ministry Decree No. 38/2001 Coll., relating to hygienic requirements for the articles intended to come into contact with foodstuffs, as amended and given by Council Directive 84/500/EEC of 15th October 1984, relating to ceramic articles intended to come into contact with foodstuffs, as amended.

The evaluated sample is resistant to mechanical dishwashing (125 test cycles) according to EN 12875-1 and EN 12875-2.

The evaluated sample resists short-term and long-term microwave heating according to EN 15284.

The evaluated sample resists temperatures up to 300°C and the thermal shock $t_1-t_2 = 280^\circ\text{C}$ according to EN 1183.

The evaluated sample is acid-resistant according to ČSN 72 5523.

This Attest was issued on the basis of the accredited test report Ref. No. 472114967-01 issued on March 3, 2022.

Issued on: March 3, 2022

Valid till: March 31, 2025



Dipl. Ing. Jiří Samsoněk, Ph.D.
Head of the testing laboratory

Conditions for use of the Attest and associated information:

1. The Attest applies only to the sample tested by our laboratory.
2. The Attest remains in effect until production technology, initial materials and standards or corresponding regulations are changed; however, its validity will extend beyond the period of its effect.
3. If further requirements of national or EU legal regulations apply to the product, the Attest does not replace procedures and documents necessary for assessment of compliance with these regulations.



ATTEST

No. 472114967-01

Utility ceramics - porcelain material Granit

Submitted sample:



Figure No. 1: Utility ceramics - porcelain material Granit



Conditions for use of the Attest and associated information:

- 1. The Attest applies only to the sample tested by our laboratory.*
- 2. The Attest remains in effect until production technology, initial materials and standards or corresponding regulations are changed; however, its validity will extend beyond the period of its effect.*
- 3. If further requirements of national or EU legal regulations apply to the product, the Attest does not replace procedures and documents necessary for assessment of compliance with these regulations.*

Page 2 (pages 5)



ATTEST
No. 472114967-01
Utility ceramics - porcelain material Granit
Values obtained:

Pb and Cd content in leachate

Parameter	Unit	Test result ¹⁾		Limit ²⁾
		Single results	Average	
Leachate: category 1 - articles that cannot be filled Migration ratio: 3.1 dm² / 200 ml of the test liquid				
Pb	mg/dm ²	< 0.01; < 0.01; < 0.01; < 0.01	< 0.01	max. 0.8
Cd	mg/dm ²	< 0.001; < 0.001; < 0.001; < 0.001	< 0.001	max. 0.07

Notes to the table:

- ¹⁾ Symbol „<“ means less than LOD (limit of detection) of the analytical method
- ²⁾ Limit values according to Czech Health Ministry Decree No. 38/2001 Coll., as amended and according to Council Directive 84/500/EEC.

Test results of acid-resistance determination according to ČSN 72 5523

Parameter	Test result	Requirement ¹⁾
Colour	without change	without change
Gloss	without change	without change
Surface appearance	without change	without change

Note to the table:

- ¹⁾ According to ČSN 72 5523 the tested product is considered acid-resistant, if there occur no change in its colour, gloss or surface appearance under the test conditions.

Evaluation of dishwasher resistance according to ČSN EN 12875-2
– 125 testing cycles

Sample No.	Unit	Test result ¹⁾			
		Colour	Glossy surface	Resistant deposits and iridescent layers	Other appearance
Utility ceramics - porcelain material Granit	degree	0	0	0	0

Notes to the table:

- ¹⁾ Evaluation according to ČSN EN 12875-2; the test results are the averages of all numerical values found by each of inspectors for three samples:
0 – no visible change
1 – just perceptible change
2 – clearly visible change

Conditions for use of the Attest and associated information:

- The Attest applies only to the sample tested by our laboratory.
- The Attest remains in effect until production technology, initial materials and standards or corresponding regulations are changed; however, its validity will extend beyond the period of its effect.
- If further requirements of national or EU legal regulations apply to the product, the Attest does not replace procedures and documents necessary for assessment of compliance with these regulations.





ATTEST No. 472114967-01

Evaluation of the resistance to microwave heating according to ČSN EN 15284

Short heating time – 650 W; 1 min, 59 s

Parameter	Test result	Requirement ¹⁾
Crack	without cracks	without cracks
Hairline cracks	without change	without hairline cracks in the glaze
Colour	without change	without change
Max. temperature of sample surface ²⁾	(27.5±1.9) °C	56 °C

Long heating time – 650 W; 12 min

Parameter	Test result	Requirement ¹⁾
Crack	without cracks	without cracks
Hairline cracks	without change	without hairline cracks in the glaze
Colour	without change	without change

Note to the tables:

- ¹⁾ According to ČSN EN 15284 – If there is any damage, the product is removed from the testing and is not suitable for use in microwave oven
- ²⁾ Temperature measuring point: 1 cm from the edge of the plate. The test result is expressed including the reported expanded uncertainty based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.



Conditions for use of the Attest and associated information:

- The Attest applies only to the sample tested by our laboratory.
- The Attest remains in effect until production technology, initial materials and standards or corresponding regulations are changed; however, its validity will extend beyond the period of its effect.
- If further requirements of national or EU legal regulations apply to the product, the Attest does not replace procedures and documents necessary for assessment of compliance with these regulations.



ATTEST No. 472114967-01

Test results of the thermal shock resistance according to ČSN EN 1183

upper temperature t_1 (°C)	lower temperature t_2 (°C)	temperature difference $t_1 - t_2$ (°C)	number of the damage samples at t_1	total number of the damage samples in %
100	20	80	0	0
110	20	90	0	0
120	20	100	0	0
140	20	120	0	0
160	20	140	0	0
180	20	160	0	0
200	20	180	0	0
220	20	200	0	0
240	20	220	0	0
260	20	240	0	0
280	20	260	0	0
300	20	280	0	0

Conclusion:

All 10 samples resisted temperatures up to $t_1 = 300$ °C and the thermal shock $t_1 - t_2 = 280$ °C.



Conditions for use of the Attest and associated information:

1. The Attest applies only to the sample tested by our laboratory.
2. The Attest remains in effect until production technology, initial materials and standards or corresponding regulations are changed; however, its validity will extend beyond the period of its effect.
3. If further requirements of national or EU legal regulations apply to the product, the Attest does not replace procedures and documents necessary for assessment of compliance with these regulations.