

EC Declaration of Conformity

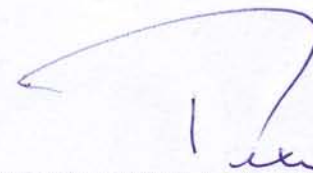
Producer:	ZORKA KERAMIKA D.O.O.
Address:	Jovana Đorđevića 2, 21000 Novi Sad , Serbia
Company ID:	17550829
Based in:	ZORKA KERAMIKA D.O.O. , Jovana Đorđevića 2, 21000 Novi Sad , Serbia
Product:	Ceramic tiles – dry - pressed wall tiles EN 14411 with water absorption (E > 10 %), , group B III, appendix L
A harmonized technical specifications survey which the product is conformed with	
Labeling	Name
EN 14411	Ceramic tiles – Definitions, classification, characteristics and marking
Notified person:	Technický a zkušební ústav stavební Praha, s.p., Notified person no.1020, Prosecká 811/76a, Praha, IČ: 00015679

The mentioned product conforms to the Appendix ZA.3 stated technical specifications. The appendixes with the CE specification are an integral part of this Declaration.

The authorized person to confirm the EU Declaration of Conformity

In _____ of the day

in Sabac 10th February 2020



General manager / authorized person





Corresponding standard: EN 14411, appendix L
Type of ceramic tiles: dry-pressed
 group BIII
Style to use: interior walls

Name and address of manufacturer: ZORKA KERAMIKA D.O.O.,
 Jovana Đorđevića 2, 21000 Novi Sad , Serbia

Summary of properties

Property	Declared value and or class	Number of protocol
Reaction to fire	class A1 _{fl} without testing	(resolution 96/603 EHS)
Breaking strength Modulus of rupture	-breaking strength: > 200 N(for thickness < 7,5 mm) >600 N(for thickness ≥7,5 mm) -modulus of rupture R average: min. 15 N/mm ² (for thickness < 7,5 mm) average:: min. 12 N/mm ² (for thickness ≥7,5 mm) EN ISO 10545-4	Protocol No. 1020-CPD-030042319
Release of regulated dangerous substances -release of cadmium - release of lead	max. 0,07 mg/dm ² max. 0,8 mg/dm ² EN ISO 10545-15 *	Protocol No. 1020-CPD-030042319
Bond strenght/adhesion	- for cementitious adhesives: ≥ 0,5 N/mm ² - for dispersion adhesives: ≥ 1,0 N/mm ² - for reaction resin adhesives: ≥ 2,0N/mm ²	Protokol 030_042320
Classification of capacity of natural radionuclides	max. index specific activity 1,0 Law Nr. 13/2002 a Notice SÚJB ČR Nr. 307/2002 **	Protocol No. 902224S3

Note:

* Decree 38/2001 Coll. Ministry of Health of the Czech Republic

** Act No. 13/2002 Coll. § 6 and detailed SONS Decree No. 307/2002 in § 96



TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.

Technical and Test Institute for Construction Prague

Akreditovaná zkušební laboratoř, Autorizovaná osoba, Notifikovaná osoba, Certifikační orgán, Inspekční orgán
Accredited Test Laboratory, Authorised Body, Notified Body, Certification Body, Inspection Body
Prosecká 811/76a, 190 00 Praha 9, Czech Republic

Authorised Body 204
Notified Body 1020
Branch 0300 – Plzeň

REPORT

on the initial type test

pursuant to Article 5 Clause 1 b) of the Czech Republic Government Decree No. 190/2002 Coll. (system of conformity assessment 3), and in compliance with Direction 89/106/EEC of the Council of the European Communities (Construction Products Direction-CPD), as amended by Direction 93/68/EEC of the Council of the European Communities

No. 1020 – CPD – 030042319

Trade name:

**Dry – pressed ceramic tiles with water absorption (E > 10,0 %)
declared according to
ČSN EN 14411, Group B III Annex L**

Manufacturer:

ZORKA KERAMIKA D.O.O.

IČ: –
address: Jovana Đorđevića 2, 21000 Novi Sad, Serbia

Production

plant: ZORKA KERAMIKA D.O.O.

IČ: –
address Hajduk Veljkova 1 Šabac, Serbia

Order no.: Z030100003

Number of pages of the Protocol incl. a title page: 3 Number of pages of Appendixes: 0

The person taking responsibility for the content of this report:

Ing. Hana Kotorová
Head Assessor

The person taking responsibility for correctness of this report:

Plzeň 5. February 2010

Stamp of Notified Body 1020

Ing. Alexander Trinner
Deputy Manager of Notified Body

Warning: Without written approval of Authorized Body Assistant Manager, this Protocol may be reproduced only as the entire document

Technický a zkušební ústav stavební Praha, s. p., Pobočka 0300 - Plzeň, Zahradní 15, 326 00 Plzeň, Česká republika
☎: 377 243 331, ☎: 377 430 345, Fax: +420 377 430 347, Internat.: +420 377 244 158, ✉ e-mail: tzus03@quick.cz, www.tzus.cz
Bankovní spojení (Bank): KB Praha 1 Czech Republic, ú.č.: 1501-931/0100 IČ: 000 15679 DIČ/VAT: CZ00015679

1 Specification of test sample

Specification of sample:	Dry – pressed ceramic tiles with low water absorption (E > 10,0 %) declared according EN 14411, Group B III Annex L
Technical specification	EN 14411 – Ceramic tiles – Definitions, classification, characteristics and marking
Producer:	ZORKA KERAMIKA D.O.O. Jovana Đorđevića 2, 21000 Novi Sad , Serbia
Production plant:	ZORKA KERAMIKA D.O.O. Hajduk Veljkova 1 Šabac, Serbia
Description and determination:	For interior use on walls
Date of test termination	2010-01-25

2 Sampling

Date of sampling::	2009-05-21
Place of sampling:	dispatch store of the delegate of producer
Sampled by:	the delegate of producer
Method of sampling:	random selection
Method of transport:	by a vehicle of the delegate of producer
Date of take-over:	2009-05-11
Date of test termination:	09-0534

3 Test Results

3.1 Determination of modulus of rupture and breaking strength

The determination was carried out in compliance with the following testing method:	EN ISO 10545-4 Ceramic tiles – Part 4: Determination of modulus of rupture and breaking strength
The test carried:	J. Parvonič
Other test data:	-



Test results:

no. sample 09-0535 representative: 40/25 cm

Determination of modulus of rupture and breaking strength					EN ISO 10545-4
Distance of support edges L [mm]:		380			
Mean of cutting edge d [mm]:		20			
Distance between edge of ceramic tiles and cutting edge l [mm]:		10			
Thickness of rubber t [mm]:		5,0			
no.	Width of test sample b [mm]	The least width h [mm]	Tensile strength F [N]	Modulus rupture S [N]	Breaking strength R [MPa]
1	249,9	7,7	670	1019	25,8
2	249,8	7,7	640	974	24,6
3	250,0	7,5	650	988	26,3
4	249,7	7,7	630	959	24,3
5	250,0	7,6	620	942	24,5
6	249,8	7,6	680	1034	26,9
7	249,9	7,7	670	1019	25,8
Average:				991	25,5

3.2 Determination of lead and cadmium given off by glazed tiles

The determination was carried out in compliance with the following testing method:	EN ISO 10545-15 Ceramic tiles. Determination of lead and cadmium given off by glazed tiles
The test carried:	ing. Vladimíra Štenglová
Other test data:	

Test results:

no. sample 09_0535

Determination of lead and cadmium given						EN ISO 10545-15
no.	Testing area [dm ²]	Volume acetatic acid [ml]	Fixed concentration		Surface concentration	
			Pb [mg/l]	Cd [mg/l]	Pb [mg/dm ²]	Cd [mg/dm ²]
1	10,00	150	0,220	0,001	0,0033	0,0000
2	10,00	150	0,170	0,000	0,0026	0,0000
3	10,00	150	0,200	0,001	0,0030	0,0000
Average			0,197	0,001	0,0030	0,0000

4 Appendixes

END OF THE PROTOCOL





PROTOCOL

no. 030 – 042320

on determination of tests according the annex ZA.3 ČSN EN 14411

of ceramic tiles dry – pressed

with water absorption ($E > 10\%$) declared according ČSN EN 14411, Group BIII Annex L

Order Party: ZORKA KERAMIKA D.O.O.

Jovana Đorđevića 2,
21000 Novi Sad , Serbia

Order no.: Application

dated March 12, 2009

Work no.: Z030100003

Appendixes: test of radioactivity, photo

This Report was drawn up in duplicate. The first original counterpart belongs to the Customer, the other one is filed along with other documents in TZÚS Plzeň.

Person responsible for the content of the Protocol:

Protocol drawn up by
ing. Hana Kotorová

Person responsible for the accuracy of the Protocol:

Plzeň January 25, 2010



Vít Ruml
Head of Testing Laboratory

Statement:

- 1) The test results apply to the test subjects (samples) only.
- 2) Without written approval of the Testing Laboratory, the Protocol may be reproduced only as the entire document.

Technical and Test Institute for Constructions Prague (Technický a zkušební ústav stavební Praha), s. p., Branch 0300 - Plzeň,
Zahradní 15, 326 00 Plzeň, Česká republika

☎: 019 724 33 31, ☎: 019 743 03 45, Fax: +420 19 743 03 47, Internat.: +420 19 724 41 58, ✉ e-mail: atrinner@tzus.cz, www.tzus.cz
Bankovní spojení (Bank): KB Praha 1 Czech Republic, Acc.no.: 1501-931/0100 IČ: 000 15679 DIČ: 009-00015679

1 Specification of test subject (sample)

- ◆ Execution of tests of product properties according the annex ZA.3 ČSN EN 14411.
- ◆ Specification of the sample: Ceramic tiles Dry – pressed ceramic tiles with water absorption ($E > 10\%$) declared according EN 14411, Group B III Annex L
- ◆ Tests were completed on January 25, 2010.

2 Sampling

Date of sampling: 2009-05-21
Place of sampling: dispatch store of the delegate of producer
Sampled by: the delegate of producer
Method of sampling: random selection
Method of transport: by a vehicle of the delegate of producer
Date of take-over: 2009-05-21
File no. of sample: 09_0534

3 Test Results

3.1 Determination of tensile adhesion strength

Determination of tensile adhesion strength for cementitious adhesives:

The determination was carried out in compliance with the following testing method:
ČSN EN 1348 Adhesives for tiles – Determination of tensile adhesion strength for cementitious adhesives

Requirement ČSN EN 12004 Adhesives for tiles – Definitions and specifications: opening of tensile adhesion strength opening $\geq 0,5 \text{ N/mm}^2$

cementitious adhesives: Kerabond s addition Isolastic
producer: Mapei
contact area: 2500 mm^2
placing time: 28 days



no. sample 09_0535

Sample no.	Tensile strength	Adhesion	Remark
	N	N/mm ²	
1	3780	1,5	separation in grout
2	3940	1,6	separation in grout
3	4270	1,7	separation in grout
4	3980	1,6	separation in grout
5	4630	1,9	separation in grout
6	4320	1,7	separation in grout
7	3750	1,5	separation in grout
8	3570	1,4	separation in grout
9	3880	1,6	separation in grout
10	>2370	>0,9	separation of metal plate
average		>1,5	

Determination of shear adhesion strength of dispersion adhesives:

The determination was carried out in compliance with the following testing method:

ČSN EN 1324 Adhesives for tiles – Determination of shear adhesion strength of dispersion adhesives

Requirement ČSN EN 12004 Adhesives for tiles – Definitions and specifications: opening of tensile adhesion strength opening $\geq 1,0$ N/mm²

Dispersion adhesives: Okamul NK

producer: Kiesel

placing time: 14 dní

contact area: 5480 mm²

no. sample 09-0553

Sample no.	shear strength	adhesion	Remark
	N	N/mm ²	
1	6148	1,1	shear
2	5979	1,1	shear
3	7560	1,4	shear
4	7870	1,4	shear
5	6895	1,3	shear
6	6955	1,3	shear
7	7120	1,3	shear
8	6980	1,3	shear
9	6230	1,1	shear
10	6910	1,3	shear
average		1,3	



Determination of shear strength of reaction resin adhesives

The determination was carried out in compliance with the following testing method:
ČSN EN 12003 – Determination of shear strength of reaction resin adhesives

Requirement ČSN EN 12004 Adhesives for tiles – Definitions and specifications: počáteční of
tensile adhesion strenght opening $\geq 2,0 \text{ N/mm}^2$

reaction resin adhesives: Okapox F/K

producer:Kiesel

contact area: 1660 mm²

placing time: 7 days

no. sample 09-0553

Sample no.	shear strength	adhesion	Remark
	N	N/mm ²	
1	13250	8,0	shear
2	15340	9,2	shear
3	12170	7,3	shear
4	12680	7,6	shear
5	13850	8,3	shear
6	12160	7,3	shear
7	12890	7,8	shear
8	13420	8,1	shear
9	15720	9,5	shear
10	14890	9,0	shear
average		8,2	

END OF THE PROTOCOL



NUKLID, sdružení podnikatelů

radonový průzkum, měření radioaktivity, výpočty veličin ionizujícího záření

Kralovická 59, 323 00 Plzeň, tel./fax: 377 527 073, mobil: 777 666 380

e-mail: nuklid@nuklid.cz, www.nuklid.cz

Měření obsahu přírodních radionuklidů ve stavebních materiálech protokol č. 90224S3

Zákazník: Technický a zkušební ústav stavební, Zahradní 15, 326 00 Plzeň

Vzorek: č. vzorku 09_0535 - keramické obkladové prvky reprezentant. 40/25 cm
EN 14411, BIII, příl. L, v expedičním skladu odebral 11.5.2009 výrobce

Výrobce: Zorka Keramika d.o.o., Novi Sad, Srbsko

Výsledky měření: V dodaném vzorku byla změřena hmotnostní aktivita radionuklidů K40 - a_K , Ra226 - a_{Ra} , Th228 - a_{Th} . V posledním sloupci je uveden index hmotnostní aktivity I, který je vypočten podle vztahu: $I = a_K / 3000 \text{ Bq.kg}^{-1} + a_{Ra} / 300 \text{ Bq.kg}^{-1} + a_{Th} / 200 \text{ Bq.kg}^{-1}$

Vzorek	a_K [Bq/kg]	a_{Ra} [Bq/kg]	a_{Th} [Bq/kg]	I
č. 09_0535	663 (67)	65 (7)	49 (5)	0,68 (0,04)

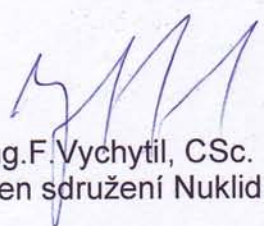
V závorce je uvedena kombinovaná standardní nejistota.

Měření bylo provedeno NaI(Tl) detektorem v detekční sondě NKG 312, výr.č.1103 a mnohokanálovým analyzátozem MC 2256, výr.č.9915, výpočet byl proveden metodou inverzní matice. Měření a výpočet provedl 3.6.2009 v Plzni, Kralovická 59 Ing. F.Vychytil, CSc.. Aparatura byla ověřena Českým metrologickým institutem v Praze. Ověřovací list z 2.1. 2008 má č. 9011-OL-U5599-08. Měření a vyhodnocení bylo provedeno podle metodiky schválené SÚJB. Pro uvedený druh měření získal Ing.F.Vychytil, CSc. na dobu neurčitou povolení SÚJB s č.j. 40587/2006 ze dne 11.5.2006.

Závěr, doporučení: Zákonem č.18/1997 Sb. §6 a prováděcí vyhláškou č.307/2002 Sb. §96 v platném znění je usměrňován obsah přírodních radionuklidů ve stavebních materiálech. Pro výše uvedený materiál (tzv. ostatní stavební materiál) určený k použití ve stavbách s obytnými nebo pobytovými místnostmi je stanovena směrná hodnota pro index hmotnostní aktivity 1,0. Při překročení směrné hodnoty lze stavební materiál uvádět do oběhu jen ve zdůvodněných případech, kdy náklady spojené se zásahem ke snížení obsahu radionuklidů (změna suroviny, změna původu surovin, třídění surovin, změna technologie, nebo jiný vhodný zásah), by byly prokazatelně vyšší než rizika zdravotní újmy. V materiálu reprezentovaném dodaným vzorkem je index hmotnostní aktivity nižší než 1,0. Materiál reprezentovaný dodaným vzorkem lze uvádět do oběhu bez omezení.

Příloha: Záznam o odběru vzorku

V Plzni 4.6.2009


Ing.F.Vychytil, CSc.
člen sdružení Nuklid

Ing. F. VYCHYTIL, CSc.
Měření a výpočty veličin
ionizujícího záření
IČO: 663 79 326

NUKLID, sdružení podnikatelů (NUKLID, business association)

(Subsoil radon exploration, radioactivity measurement, calculation of the characteristics relating to ionizing radiation)

Kralovická 59, 323 00 Plzeň; Phone/Fax: ++ 420 377 527 073; Mobile: ++420 777 666 380;
e-mail: nuklid@nuklid.cz, www.nuklid.cz

Measurement of the content of natural radioactive nuclides in construction materials

Report No. 902240S3

Customer: Technický a zkušební ústav stavební (*Technical and Testing Building Institute*),
Zahradní 15, 326 00 Plzeň

Sample: Z030100003, no. sample 09_0535 – ceramic tiles representative 40/25 cm,
EN 14411, BIII, appendix L
the sample was withdrawn by the producer's representative on 11 May 2009

Producer: ZORKA KERAMIKA D.O.O., Jovana Đorđevića 2, 21000 Novi Sad, Serbia

Measurement results: For the supplied sample, weight activity has been measured for the following radioactive nuclides: K40 – a_K ; Ra226 – a_{Ra} ; Th228 – a_{Th} . In the last column is included the weight activity index I, which has been calculated according to the following formula:

$$I = a_K/3000 \text{ Bq.kg}^{-1} + a_{Ra}/300 \text{ Bq.kg}^{-1} + a_{Th}/200 \text{ Bq.kg}^{-1}$$

Sample	a_K [Bq/kg]	a_{Ra} [Bq/kg]	a_{Th} [Bq/kg]	I
Z030100003, no. 09_0535	663 (67)	65 (7)	49 (5)	0,68 (0,04)

The combined standard uncertainty is included in the parentheses.

The measurement has been carried out by using the NaI(Tl) detector within the NKG 312 detection probe, serial number 1103, by means of the MC 2256 multichannel analyzer, serial number 9915. The calculation has been performed using the inverse matrix method. Both the measurement and the calculation were performed by Ing. F. Vychytil, CSc. (*Doctor of Engineering*) in Plzeň, Kralovická 59, on 2 June 2009. The apparatus has been verified by the Czech Metrology Institute based in Prague, as documented by the Verification Sheet No. 9011-OL-U5599-08, of 2 January 2008. The measurement and evaluation have been performed according to the methodology approved by the Czech Republic's State Office for Nuclear Safety. *For the above-mentioned measurement type, Ing. F. Vychytil, CSc., holds a licence, reference number 40587/2006, dated 11 May 2006, granted by the State Office for Nuclear Safety for an indeterminate period of time.*

Conclusion, recommendation: Section 6 of Act No. 18/1997, Coll. of the Czech Republic, and Section 96 of Executive Regulation No. 307/2002 Coll. of the Czech Republic, as amended, stipulate the limits for the content of natural radioactive nuclides in construction materials. For the above mentioned material (of the category of 'other construction materials'), which is intended for utilization within buildings with dwelling rooms or with other rooms in which persons will be staying (e.g., offices, workshops, surgeries, classrooms, halls, etc.), the guiding limit value of the weight activity index, as stipulated, equals 1.0. In the event that this guiding limit value has been exceeded, the respective construction material may only be released for distribution in properly substantiated cases, in which the costs related to the measures aimed at reducing the content of the radioactive nuclides (i.e., replacement of the raw material, raw materials supplied from a different deposit or locality, sorting of the raw material, change in the technology, or other appropriate measure) would, in a provable manner, exceed the related risks to health.

For the material represented by the supplied sample, the weight activity index is less than 1.0. This material may be utilized without limitation for a building with space within which persons will be staying.

Annex: Sample withdrawal report

Plzeň, dated 4 June 2009

Signature illegible
Ing. F. Vychytil, CSc.
Member of the Nuklid association
Stamp, text illegible

ZEMUS BLUE

EN1444A1 B111