

Technický a zkušební ústav stavební Praha, s. p.,
odštěpný závod Zkušební ústav lehkého průmyslu
Nemanická 441/8, 370 10 České Budějovice

Zkušební laboratoř o.z. ZÚLP

Zkušební laboratoř 1018.9 akreditována Českým institutem pro akreditaci, o.p.s. podle
ČSN EN ISO/IEC 17025:2018

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TEST PROTOCOL

Number: 100-066636
Dated: 2023-05-02

Name and address of the customer: Technický a zkušební ústav stavební Praha, s.p.
Pobočka Praha - 0100
Prosecká 811/76a
190 00 Praha 9 – Prosek

Name and address of the manufacturer/importer: --

Product name: Decorative wallpaper KOINTEC SD901 (VZ010230118)
Decorative wallpaper KOINTEC SD923 (VZ010230120)
Decorative wallpaper KOINTEC SD903 (VZ010230121)
Decorative wallpaper KOINTEC SD990 (VZ010230119)

Test subject and method:

Determination of releasable formaldehyde in the wallpaper flask method spectrophotometrically with acetylacetone reagent:	method No. 100607-05 (ČSN EN 12149)
Determination of certain elements migration – AAS – flame:	method No. 100608-01
Determination of Hg migration – AMA:	method No. 100608-02
Determination of vinyl chloride – GC–MS:	method No. 100663 (ČSN EN 12149)

Test legal basis: ČSN EN 15102:2019 – Decorative wallcoverings – Roll form.

The test was performed in the premises of a testing laboratory:

TZÚS Praha s.p. – o.z. ZÚLP České Budějovice, Nemanická 441/8, 370 10 České Budějovice
– the field of the analytical chemistry

Date of sample receipt for testing: 2023-03-06

Tests were carried out: from: 2023-03-06 to: 2023-05-02

Name, position of the person authorized to approve this Test Protocol:




Ing. Martina Mrhalová
Head of the field

The data supplied by the customer is clearly labelled and the laboratory is not responsible for it. The test results given in this test report relate only to the test article as received. The protocol must not be copied other than in its entirety. The written consent of the testing laboratory is required for any use of part of it.



Description and identification of the sample:

The contracting authority is responsible for the representativeness of the samples and their description (including information on the manufacturer / importer).

- Decorative wallpaper KOINTEC SD901 (VZ010230118)
- Decorative wallpaper KOINTEC SD923 (VZ010230120)
- Decorative wallpaper KOINTEC SD903 (VZ010230121)
- Decorative wallpaper KOINTEC SD990 (VZ010230119)

Data supplied by the customer:

Producer: KOINTEC INC.
Address of the producer: 38, Haogae-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, Republic of Korea
Address of the factory: 38, Haogae-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, Republic of Korea

Devices used: spectrophotometer Specord 210, atomic absorption spectrometer contraAA 800D, mercury analyzer AMA 254, gas chromatograph with mass detection GC-MS ThermoFisher Scientific Trace 1310

Test results:

*Indication * these are tests outside the scope of accreditation*

Determination of formaldehyde release by the flask method according to the standard EN 12149:1999:

Formaldehyde release was determined by hanging samples tested above distilled water in a shut bottle at the temperature of 40°C for the period of twice 24 hours. Formaldehyde absorbed by distilled water during second 24 hours period was determined with spectrophotometer against a blank solution, using acetyl acetone as an agent.

Sample No.	Sample name	Units	Formaldehyde	Max. value acc. to ČSN EN 15102
164	Decorative wallpapers KOINTEC SD901 + SD923 + SD903 + SD990 (mixed sample)	mg/kg	0.5	120
Extended uncertainty in % rel.			10	-

Determination of certain element migration according to the standard EN 12149:1999:

By measuring an extract of hydrochloric acid with AAS method using contraAA 800D following values of given migration elements were measured. Mercury was determined using mercury-meter AMA 254.

Results are given in mg of element/kg of material:

Sample No.	Sample name	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
159	Decorative wallpaper KOINTEC SD901 (VZ010230118)	< 5	< 1	< 5	< 0.2	< 5	< 1	< 0.01	< 5
160	Decorative wallpaper KOINTEC SD923 (VZ010230120)	< 5	< 1	< 5	< 0.2	< 5	< 1	< 0.01	< 5
Maximum migration acc. to ČSN EN 15102		No upper limit	25	500	25	60	90	20	165

Results are given in mg of element/kg of material:

Sample No.	Sample name	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
161	Decorative wallpaper KOINTEC SD903 (VZ010230121)	< 5	< 1	< 5	< 0.2	< 5	< 1	< 0.01	< 5
162	Decorative wallpaper KOINTEC SD990 (VZ010230119)	< 5	< 1	< 5	< 0.2	< 5	< 1	< 0.01	< 5
Maximum migration acc. to ČSN EN 15102		No upper limit	25	500	25	60	90	20	165

Determination of vinyl chloride to the standard EN 12149:1999:

Sample No.	Sample name	Units	Vinyl chloride	Max. value acc. to ČSN EN 15102
164	Decorative wallpapers KOINTEC SD901 + SD923 + SD903 + SD990 (mixed sample)	mg/kg	< 0.2	< 0.2
Extended uncertainty in % rel.			-	-

The uncertainty mentioned is the extended uncertainty calculated by using the extension coefficient equalling 2 and so it corresponds to the significance level by approx. 95%.

Tests carried out by: V. Všečeková M.Sc., O. Berec, M.Sc., S. Kučerová, M. Pfeiferová
Protocol completed by: M. Pfeiferová

- TEST PROTOCOL END -