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Dresden, 28/11/2022/
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Test Report
Order no. 2522502-6-A1

Client:	HEMEL BOYA VE KIMYA SN. A.S. Istanbul Deri Organize Sanayi Bölgesi Vakum Cad. No:25 B-1 Özel Parsel, Aydinli-Orhanli Mevkii, Tuzla 34957 Istanbul Turkey
Date of order:	2022-10-17
Order:	Determination of the migration behavior of heavy metals according to DIN EN 71-3: 2021-06 (category III, table 1) in a primer sample
Contractor:	EPH – Laboratory chemical testing
Engineer in charge:	Dr. Christiane Swaboda

Dipl.-Ing. M. Broege
Head of Laboratory Chemical Testing

The test report contains 3 pages. Any duplication of extracts requires the written permission of EPH. The test results refer exclusively to the material tested.

The report replaces the test report 2522502 dated 21/11/2022.

1 Assignment

Determination of the migration behaviour of heavy metals according to DIN EN 71-3: 2021-06 (Category III according to Table 1) in a paint sample

2 Sample material

The client handed over the following sample:

Table 1: sampling information

Nr.	Sample Name	Description	Amount
6	**Prime Park Astari**	acrylic parquet primer	200 ml

Sample receipt in the EPH: 18/10/2022

3 Performed tests

Tabelle 2: perfomed tests

Pos.	Performed tests	Testing period
1	Determination of heavy metals according to DIN EN 71-3: 2021-06	27/10/2022 – 04/11/2022

3.1 Determination of heavy metals according to DIN EN 71-3: 2021-06

sample quantities: ca. 0.5 g
solvent: 25 mL 0.07 n hydrochloric acid
method: Elution over 2 h in a water bath at 37 °C
Quantification: with ICP-OES
Determination: double determination

The following elements were to be determined:

Aluminum (Al), Antimony (Sb), Arsenic (As), Barium (Ba), Boron (B), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Mercury (Hg), Manganese (Mn), Nickel (Ni), Lead (Pb), Selenium (Se), Tin (Sn), Strontium (Sr), Zinc (Zn)

Table 3: Limit of quantification of different elements

Element	Al	As	B	Ba	Cd	Co	Cr ges.	Cr VI	Cu	Hg
LOQ [mg/kg]	3	1.5	3	0.1	0.05	0.05	0.02	0.005	0.1	0.05

LOQ Limit of quantification [mg/kg]

Table 4: Limit of quantification of different elements

Element	Mn	Ni	Pb	Sb	Se	Sn	Sr	Zn
LOQ [mg/kg]	0.05	0.25	1.5	1.5	1.5	0.05	0.05	1.5

LOQ Limit of quantification [mg/kg]

4 Results and Evaluation*

Table 5: Result overview of the tested material

	LOQ	Limit Value Category III	Measured Values [mg/kg]	Evaluation according to DIN EN 71-3: 2021-06 comply with limit value
Element	[mg/kg]	[mg/kg]	P6	P6
Al	3	28130	6.5	Yes
As	1.5	47	4.0	Yes
B	3	15000	<BG	Yes
Ba	0.1	18750	<BG	Yes
Cd	0.05	17	<BG	Yes
Co	0.05	130	<BG	Yes
Cr total	0.02	460	<BG	Yes
Cr (III)[1]	0.02	460	<BG	Yes
Cr (VI)[2]	0.005	0.053	n.d.	Yes
Cu	0.1	7700	<BG	Yes
Hg	0.05	94	<BG	Yes
Mn	0.05	15000	<BG	Yes
Ni	0.25	930	<BG	Yes
Pb	1.5	23	<BG	Yes
Sb	1.5	560	<BG	Yes
Se	1.5	460	<BG	Yes
Sn	0.05	180000	0.6	Yes
Organotin[3]	1	12	n.d.	Yes
Sr	0.05	56000	<BG	Yes
Zn	1.5	46000	<BG	Yes

n.d. not determined

[1] The chromium (III) content corresponds to the total chromium content minus the chromium (VI) content.

[2] Chromium (VI) is only to determine for samples in which the total chromium content has exceeded the limit value for chromium (VI).

[3] The organotin content is only to determine for samples in which the tin content exceeded the limit value for organotin.

* Statements on conformity assessment/classification were made based on the measurement results obtained. Measurement uncertainties were not included in the assessment (ILAC G8 03/2009) "Guidelines on the Reporting of Compliance with Specification" Section 2.

Christine Swaboda

Dr. rer. nat. Ch. Swaboda
Chemist in Charge