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03.02.2023

Report No. 0001132262/40 AZ 593669

Test item: One panel

Identification: Material Producer: PISA Sp. z o.o.
Material Description: Acoustic panel made with one or 2 layers.
60% rPET in range of colours
Material Identification: L-ICxx; L-IKxx; L-IBxx; K-ICxx; K-11Uxx; K-IBxx
G-Cxx; G-Kxx; G-Ixx *
*code depends on production line, not composition
Batch No.: 16.01.2023
Date stamp: 20.01.2023

Condition at delivery: No claim

Date of delivery: 26.01.2023

Place of testing: Cologne, Nuremberg

Test period: 27.01.2023 to 03.02.2023

Test scope: Parameters selected by customer

Test specification: IKEA IOS-MAT-0010 Vers. AA-10911-16 dated 2022-01-10/
IKEA IOS-MAT-0054 Vers. AA-92520-13 dated 2022-03-28

Test result: According to the kind and extent of tests performed the test item meets the requirements of the test specification.

tested by: tested by:

03.02.2023

X 

Sachverständige(r)/Expert
Signiert von: Petra Van Dyck

03.02.2023

X 

Sachverständige(r)/Expert
Signiert von: Marqot Thiel

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Summary of results - Parameter

Test parameter	Result	Sample No.
Alkylphenolethoxylates	pass	
Alkylphenols	pass	
Chloroparaffins	pass	
EN 71-3, Migration of certain elements, category 3	pass	
Flame retardants, brominated biphenyls and biphenyl ether	pass	
Flame retardants, brominated phenols	pass	
Flame retardants, organophosphates	pass	
Flame retardants, TEPA	pass	
Formaldehyde, textile extraction method	pass	
Heavy metals, soluble acid perspiration solution	pass	
Metals, total content at decomposition	pass	
Migration of certain elements	pass	
Organotin compounds	pass	
Polycyclic aromatic hydrocarbons (PAH)	pass	
RoHS, chromium(VI)	pass	

Photo documentation

Picture 1: Acoustic panel made with one or 2 layers



List of materials

Article	Article name
1	Acoustic panel made with one or 2 layers. 60% rPET in range of colours, Batch No.: 16.01.2023, Date stamp: 20.01.2023

Results

Alkylphenoethoxylates

Sample composition	Art. 1				
Sample No.	593669-001				
Unit	mg/kg				
Alkylphenoethoxylates					
Nonylphenoethoxylates	<20				
Octylphenoethoxylates	<20				

Limit values:

Textiles 100 mg/kg (sum of APEO and AP)

Polymeric 100 mg/kg for AP, APEO and AP phosphites

Alkylphenols

Sample composition	Art. 1				
Sample No.	593669-002				
Unit	mg/kg				
Alkylphenols					
Nonylphenol	<10				
4-n-Octylphenol	<10				
4-tert-Octylphenol	<10				

Limit values:

Textiles 100 mg/kg (sum of APEO and AP)

Polymeric 100 mg/kg for AP, APEO and AP phosphites

Chloroparaffins

Sample composition	Art. 1				
Sample No.	593669-007				
Unit	mg/kg				
Chlorinated paraffins C10-C13 (SCCP)	<50				
Chlorinated paraffins C14-C17 (MCCP)	<50				
Chlorinated paraffins >C17	<100				

Limit value for sum of short-chain chlorinated paraffins (SCCP) and medium-chain chlorinated paraffins (MCCP): 100 mg/kg.

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EN 71-3, Migration of certain elements, category 3

Sample composition	Art. 1				
Sample No.	593669-010				
Unit	mg/kg				
Migratable elements, material testing					
Dewaxing	n				
Aluminium	<100				
Antimony	<5				
Arsenic	<1				
Barium	<100				
Boron	<10				
Cadmium	<0,1				
Chromium, total	<0,05				
Chromium (III)	<0,05				
Chromium(VI)	<0,05				
Cobalt	<1				
Copper	<10				
Lead	<1				
Manganese	<100				
Mercury	<1				
Nickel	<10				
Selenium	<5				
Strontium	<100				
Tin*	<3				
Zinc	<100				

n no

Maximum values according to the toy safety-directive 2009/48/EC:

Category 3: Scraped off toy material:

aluminium 28130 mg/kg, antimony 560 mg/kg, arsenic 47 mg/kg, barium 18.750 mg/kg, boron 15.000 mg/kg, cadmium 17 mg/kg, chromium(III) 460 mg/kg, chromium(VI) 0.053 mg/kg, cobalt 130 mg/kg, copper 7.700 mg/kg, lead 23 mg/kg, manganese 15.000 mg/kg, mercury 94 mg/kg, nickel 930 mg/kg, selenium 460 mg/kg, strontium 56.000 mg/kg, tin 180.000 mg/kg, zinc 46.000 mg/kg

*Tin: If the migration of tin is less than the reporting limit the compliance with the limit value of 12 mg/kg can be confirmed.
The determination of tin organic compounds is not required in regards to metals.

Flame retardants, brominated biphenyls and biphenyl ether

Sample composition	Art. 1				
Sample No.	593669-006				
Unit	mg/kg				
Brom. biphenyls and biphenyl ether	.				
Monobromobiphenyls	<5				
Dibromobiphenyls	<5				
Tribromobiphenyls	<5				
Tetrabromobiphenyls	<5				
Pentabromobiphenyls	<5				
Hexabromobiphenyls	<5				
Heptabromobiphenyls	<5				
Octabromobiphenyls	<5				
Nonabromobiphenyls	<5				
Decabromobiphenyls	<5				
Monobromodiphenyl ethers	<5				
Dibromodiphenyl ethers	<5				
Tribromodiphenyl ethers	<5				
Tetrabromodiphenyl ethers	<5				
Pentabromodiphenyl ethers	<5				
Hexabromodiphenyl ethers	<5				
Heptabromodiphenyl ethers	<5				
Octabromodiphenyl ethers	<5				
Nonabromodiphenyl ethers	<5				
Decabromodiphenyl ether	<5				
Hexabromo-cyclododecane, HBCDD	<5				

Limit value Brominated flame retardants

Textile: 50 mg/kg for the sum of substances

Polymeric and PU foam: 150 mg/kg for the sum of substances

Flame retardants, brominated phenols

Sample composition	Art. 1				
Sample No.	593669-006				
Unit	mg/kg				
Brominated phenols	.				
Tetrabromobisphenol A	<5				
2,4,6-Tribromophenol	<5				

Limit values other flame retardants (TEPA, TDCP and TCEP, as well any other flame retardant unless specifically allowed in the product documentation)

Textile: 50 mg/kg for the sum of substances

Polymeric and PU-foam: 200 mg/kg

Flame retardants, organophosphates

Sample composition	Art. 1				
Sample No.	593669-006				
Unit	mg/kg				
Organophosphates	.				
Trimethylphosphate (TMP)	<5				
Triethylphosphate	<5				
Tributylphosphate (TBP)	<5				
Tris-(2-chlorethyl)-phosphate (TCEP)	<5				
Tris-(monochlorpropyl)-phosphate	<5				
Triphenylphosphit	<5				
Tris(1,3-dichloro-2-propyl)phosphate (TDCP)	<5				
Trisbutoxyethylphosphate (TBEP)	<5				
Triphenylphosphate (TPP)	<5				
Trikresylphosphate (TKP)	<5				
Tri-o-kresylphosphate	<5				
Tri-(2,3-dibromopropyl)-phosphate (TRIS)	<5				

Limit values other flame retardants (TEPA, TDCP and TCEP, as well any other flame

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retardant unless specifically allowed in the product documentation)

Textile: 50 mg/kg for the sum of substances

Polymeric and PU-foam: 200 mg/kg

Flame retardants, TEPA

Sample composition	Art. 1				
Sample No.	593669-006				
Unit	mg/kg				
Tris-(aziridiny)-phosphate, TEPA	<5				

Limit values other flame retardants (TEPA, TDCP and TCEP, as well any other flame retardant unless specifically allowed in the product documentation)

Textile: 50 mg/kg for the sum of substances

Polymeric and PU-foam: 200 mg/kg

Formaldehyde, textile extraction method

Sample composition	Art. 1				
Sample No.	593669-003				
Unit	mg/kg				
Formaldehyde	<10				

Limit value 16 ppm

Heavy metals, soluble acid perspiration solution

Sample composition	Art. 1				
Sample No.	593669-005				
Unit	mg/kg				
Soluble heavy metals					
Antimony	0,78				
Arsenic	<0,1				
Lead	<0,2				
Cadmium	<0,05				
Chromium	<0,2				
Cobalt	<0,1				
Copper	<0,5				
Nickel	<0,5				
Mercury	<0,01				

Limit values:

Arsenic 0,2 mg/kg, Antimony 30 mg/kg, Lead 0,2 mg/kg, Cadmium 0,1 mg/kg, Chromium(VI) 1 mg/kg*, Mercury 0,02 mg/kg, Nickel 1 mg/kg, Copper 20 mg/kg, Cobalt 1 mg/kg

*If Cr-total is >1 mg/kg, Cr(VI) has to be tested.

Metals, total content at decomposition

Sample composition	Art. 1				
Sample No.	593669-004				
Unit	mg/kg				
Antimony	120				
Lead	<5				
Cadmium	<5				

Limit values:

Generally cadmium 40 mg/kg, lead 40 mg/kg, mercury 0,5 mg/kg

Antimony added as a finish/flame retardant 200 mg/kg,

in polyester due to production process up to 400 mg/kg, without connection to flame retardant use

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Migration of certain elements

Sample composition	Art. 1				
Sample No.	593669-011				
Unit	mg/kg				
Soluble heavy metals					
Antimony	<5				
Arsenic	<1				
Barium	<100				
Cadmium	<0,1				
Chromium	<1				
Lead	<1				
Mercury	<1				
Selenium	<5				

Results refer to the analysis results of EN 71-3 and are reported under consideration of an analytical correction factor given by 4.2 of the method.

Analytical correction according to ISO 8124-3: Antimony 60 %, Arsenic 60 %, Barium 30 %, Cadmium 30 %, Chromium 30 %, Lead 30%, Mercury 50 %, Selenium 60 %.

Maxim acceptable migration value according to ISO 8124-3: Antimony 60 mg/kg, Arsenic 25 mg/kg, Barium 1.000 mg/kg, Cadmium 75 mg/kg, Chromium 60 mg/kg, Lead 90 mg/kg, Mercury 60 mg/kg, Selenium 500 mg/kg.

Organotin compounds

Sample composition	Art. 1				
Sample No.	593669-009				
Unit	mg/kg				
Organotin compounds					
Monobutyltin, MBT	<0,05				
Dibutyltin, DBT	<0,005				
Tributyltin, TBT	<0,005				
Tetrabutyltin, TeBT	<0,05				
Monooctyltin, MOT	<0,05				
Diocetyltn, DOT	<0,05				
Tricyclohexyltin, TCyT	<0,05				
Triphenyltin, TPhT	<0,005				
Dipropyltin, DPT	<0,05				
Diphenyltin, DPhT	<0,05				
Sum of organotin compounds	n.n./n.d.				
Sum of tri-organotin compounds	n.n./n.d.				
Sum of di-/tri-organotin compounds	n.n./n.d.				

n.n./n.d. not detectable

Limit values:

DBT and TBT 0,1 mg/kg each for polymerics (plastics, silicone, rubber, latex, elastomers), textiles, PU foam
DBT and TBT 0,2 mg/kg each for coverings and organic coatings

Sum of all organotin compounds 2,5 mg/kg

Polycyclic aromatic hydrocarbons (PAH)

Sample composition	Art. 1				
Sample No.	593669-012				
Unit	mg/kg				
Category *	.				
Acenaphthene	<0,2				
Acenaphthylene	<0,2				
Anthracene	<0,2				
Benzo(ghi)perylene	<0,2				
Fluoranthene	<0,2				
Fluorene	<0,2				
Indeno(1,2,3-cd)pyrene	<0,2				
Phenanthrene	<0,2				
Pyrene	<0,2				
Cyclopenta(c,d)pyrene	<0,2				
Dibenzo(a,l)pyrene	<0,2				
Dibenzo(a,e)pyrene	<0,2				
Dibenzo(a,h)pyrene	<0,2				
Dibenzo(a,i)pyrene	<0,2				
1-Methylpyrene	<0,2				
Naphthalene	<0,2				
Benzo(a)anthracene	<0,2				
Benzo(a)pyrene	<0,2				
Benzo(e)pyrene	<0,2				
Benzo(b)fluoranthene	<0,2				
Benzo(j)fluoranthene	<0,2				
Benzo(k)fluoranthene	<0,2				
Chrysene	<0,2				
Dibenz(ah)anthracene	<0,2				
Total 24 PAH	n.n./n.d.				

n.n./n.d. not detectable

Limit values:

Contamination limit values for total of 24 polycyclic aromatic hydrocarbons 10 mg/kg

Contamination limit values for each prioritised PAH substance 0.2 mg/kg

Naphtalene limit value 2 mg/kg

RoHS, chromium(VI)

Sample composition	Art. 1				
Sample No.	593669-008				
Unit	mg/kg				
Chromium(VI)	<10				

Limit value 100 mg/kg

Summary of methods

Alkylphenoethoxylates	Standard: EN ISO 18254-1	Issue date: 01.04.16
Method description: Textiles - Method for the detection and determination of alkylphenol ethoxylates (APEO) - Part 1: Method using HPLC - MS		
Alkylphenols	Standard: EN ISO 21084	Issue date: 01.03.19
Method description: Textiles - Method for determination of alkylphenols (AP), extraction with suitable solvent		
Chloroparaffins	Standard: EN ISO 18219-1/2	Issue date: 01.06.21
Method description: Leather - Determination of chlorinated hydrocarbons in leather - Part 1/2: Chromatographic method for short-/middle-chain chlorinated paraffins (SCCPs/MCCPs); Deviation: Extraction in toluene		
EN 71-3, Migration of certain elements, category 3	Standard: EN 71-3:2019+A1:2021	Issue date: 01.04.21
Method description: Safety of toys - Part 3: Migration of certain elements and chromium(VI) from toy materials of category III - Analysis of the elements by ICP-MS and chromium(VI) by ion chromatography		
Notes: Hint: Toys that have been tested according to and comply with EN 71-3:2019+A1:2021 also meet the requirements of BS EN 71-3:2019		
Flame retardants, brominated biphenyls and biphenyl ether	Standard: MS-0022874*	Issue date: 07.12.21
Method description: In-house method - Determination of brominated biphenyls and biphenyl ether after extraction with solvent. Quantification by GC-MS		
Notes: Quantification according to: Method proposal Federal Institute for Material Research and Testing, Lab IV.22 Emission from materials, Berlin, Germany.		
* in-house working instruction		
Flame retardants, brominated phenols	Standard: BVL B 82.02-8	Issue date: 01.06.01
Method description: Determination of brominated phenols according to: Material - Determination of 2,4,6-tribromophenol/tetrabrombisphenol		
Flame retardants, organophosphates	Standard: MS-0037157*	Issue date: 14.11.18
Method description: Determination of organophosphates by solvent extraction and GC-MS according to: Method proposal Federal Institute for Material Research and Testing, Lab IV.22 Emission from materials, Berlin, Germany		
Notes: * in-house working instruction		
Flame retardants, TEPA	Standard: MS-0022874*	Issue date: 07.12.21
Method description: In-house method - Determination of extractable Tris-(aziridinyl)-phosphine oxide (TEPA), extraction with organic solvent. Quantification by GC-MS		
Notes: * in-house working instruction		
Formaldehyde, textile extraction method	Standard: DIN EN ISO 14184-1	Issue date: 01.12.11
Method description: Textiles - Determination of formaldehyde - Part 1: Free and hydrolyzed formaldehyde (water extraction method), identical to BVL B 82.02-1 and Japanese LAW 112/JIS L 1041		

Heavy metals, soluble acid perspiration solution	Standard: DIN EN 16711-2	Issue date: 01.02.16
Method description: Textiles - Determination of metal content - Part 2: Determination of metals extracted by acid synthetic perspiration solution (acc. to DIN EN ISO 105-E04)		
Notes: The result refers to the material as delivered.		
Metals, total content at decomposition	Standard: MS-0022823*	Issue date: 02.06.21
Method description: In-house method - Determination of heavy metals after decomposition according to EPA 3052, quantification by ICP-OES according to DIN EN ISO 11885 respectively ICP-MS according to DIN EN ISO 17294-2.		
Notes: * in-house working instruction		
Migration of certain elements	Standard: ISO 8124-3	Issue date: 01.03.20
Method description: Safety of toys - Part 3: Migration of certain elements, including information according to part 4.2 adjusted analysis result		
Organotin compounds	Standard: ISO/TS 16179	Issue date: 01.08.12
Method description: Footwear - Critical substances potentially present in footwear and footwear components - Determination of organotin compounds in footwear materials.		
Polycyclic aromatic hydrocarbons (PAH)	Standard: DIN EN 17132	Issue date: 01.09.19
Method description: Textiles and textile products - Determination of Polycyclic Aromatic Hydrocarbons (PAH), method using gas chromatography		
Notes: Single components with an amount of < 0.2 mg/kg were not considered by the calculation of the sum. In the case of all PAH were not detected, the result is stated n.n. (not detectable).		
RoHS, chromium(VI)	Standard: DIN EN 62321*VDE 0042-1	Issue date: 01.12.09
Method description: Determination of hexavalent chromium (Cr(VI)) in polymers and electronics by the colorimetric method according to Electrotechnical products - Determination of levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers), Annex C		

Version directory

Version No.	Report No.	List of changes	Date
1	0001132262/40 AZ 593669	First edition	2023-02-03

Only the version last shown in the version directory is valid. The previous version(s) shown in the table lose their validity immediately. The customer has to make sure that the previous versions are no longer taken into account.

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