



**Test Report No.: 0154266699a 001**

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Item NO.	Description English	Age group
17053(B17053)	Layer puzzle frog	36M+
17054(B17054)	Layer puzzle butterfly	36M+
23610(B23610)	Wall element labyrinth	36M+
23628(B23628)	wall element "3 in a row"	36M+
25512(B25512)	XXL Torreta	36M+

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**Material List:**

Item: Refer to detail list

Material No.	Material	Color	Location	Remark
M006	Coating	Multi-color	Pattern on puzzle, 17053	
M007	Coating	Black	On wood	
M008	Coating	Multi-color	Pattern on puzzle, 17054	
M009	Coating	Orange red	On wood	
M010	Coating	Smoke blue	On wood	
M011	Paper + printing	White/Black	Instruction, 25512/23610/23628	
M012	Plastic + printing + adhesive	Transparent/Black	Sticker, 23610/23628	
M013	Paper + printing	Multi-color	Paper cards, 23628	
M014	Paper	Grey	Paper board(cards), 23628	
M015	Wood	Nature	Solid wood	Refer to 0154250380/M004
M016	Wood	Nature	Plywood	Refer to 0154250380/M005
M017	Wood	Nature	MDF	Refer to 0154250380/M006
M018	Coating	Yellow	On wood	Refer to 0154253354/M015
M019	Coating	Red	On wood	Refer to 0154253354/M003
M020	Coating	Dk.green	On wood	Refer to 0154250380/M020
M021	Coating	White	On wood	Refer to 0154253354/M005
M022	Coating	Transparent	On wood	Refer to 0154253354/M008
M023	Coating	Lt.green	On wood	Refer to 0154250380/M019

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**1. EN71-3:2013+A1:2014 Migration of 19 Elements**

Test Method: with reference to EN71-3:2013+A1:2014, for inorganic elements, analyzed by ICP-OES or ICP-MS.

**3) For scraped-off toy materials:**

				Test No.	T001	T002	T003
				Material No.	M006	M007(*1)	M008
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	
Aluminium (Al)	mg/kg	10	70000	437	121	535	
Antimony (Sb)	mg/kg	5	560	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	5	47	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	18750	5.4	23.3	5.5	
Boron (B)	mg/kg	10	15000	n.d.	n.d.	n.d.	
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.	
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-	
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-	
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	n.d.	
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.	
Manganese (Mn)	mg/kg	2.5	15000	26.7	25.2	18.4	
Mercury (Hg)	mg/kg	2.5	94	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	10	460	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	56000	n.d.	3.1	n.d.	
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.	
Organic Tin^	mg/kg	1.0	12	-	-	-	
Zinc (Zn)	mg/kg	10	46000	379	1350	430	

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				Test No.	T004	T005	T006
				Material No.	M009	M010	M011
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	70000	116	114	n.d.	n.d.
Antimony (Sb)	mg/kg	5	560	n.d.	n.d.	n.d.	n.d.
Arsenic (As)	mg/kg	5	47	n.d.	n.d.	n.d.	n.d.
Barium (Ba)	mg/kg	2.5	18750	110	86.7	3.1	3.1
Boron (B)	mg/kg	10	15000	n.d.	n.d.	n.d.	n.d.
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.	n.d.
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.	n.d.
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-	-
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-	-
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.	n.d.
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	n.d.	n.d.
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.	n.d.
Manganese (Mn)	mg/kg	2.5	15000	45.4	42.2	3.4	3.4
Mercury (Hg)	mg/kg	2.5	94	n.d.	n.d.	n.d.	n.d.
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.	n.d.
Selenium (Se)	mg/kg	10	460	n.d.	n.d.	n.d.	n.d.
Strontium (Sr)	mg/kg	2.5	56000	17.4	21.8	23.9	23.9
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.	n.d.
Organic Tin^	mg/kg	1.0	12	-	-	-	-
Zinc (Zn)	mg/kg	10	46000	141	119	11.5	11.5

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				Test No.	T007	T008	T009
				Material No.	M012	M013	M014
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	70000	n.d.	21.2	807	
Antimony (Sb)	mg/kg	5	560	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	5	47	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	18750	n.d.	n.d.	16.4	
Boron (B)	mg/kg	10	15000	n.d.	12.7	36.5	
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.	
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-	
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-	
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	3.9	
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.	
Manganese (Mn)	mg/kg	2.5	15000	2.5	9.5	25.8	
Mercury (Hg)	mg/kg	2.5	94	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	10	460	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	56000	n.d.	36.9	30.3	
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.	
Organic Tin^	mg/kg	1.0	12	-	-	-	
Zinc (Zn)	mg/kg	10	46000	n.d.	n.d.	29.5	

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				Test No.	T010	T011	T012
				Material No.	M015	M016	M017
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	
Aluminium (Al)	mg/kg	10	70000	n.d.	n.d.	55.7	
Antimony (Sb)	mg/kg	5	560	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	5	47	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	18750	8.1	n.d.	7.9	
Boron (B)	mg/kg	10	15000	n.d.	n.d.	n.d.	
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.	
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-	
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-	
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	n.d.	
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.	
Manganese (Mn)	mg/kg	2.5	15000	27.9	n.d.	10.4	
Mercury (Hg)	mg/kg	2.5	94	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	10	460	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	56000	n.d.	4.2	28.2	
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.	
Organic Tin^	mg/kg	1.0	12	-	-	-	
Zinc (Zn)	mg/kg	10	46000	n.d.	19.6	25.2	

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				Test No.	T013	T014	T015
				Material No.	M018	M019	M020
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	70000	653	595	128	
Antimony (Sb)	mg/kg	5	560	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	5	47	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	18750	3.6	2.9	42.1	
Boron (B)	mg/kg	10	15000	n.d.	n.d.	n.d.	
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.	
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-	
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-	
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	n.d.	
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.	
Manganese (Mn)	mg/kg	2.5	15000	10.1	14.4	48.4	
Mercury (Hg)	mg/kg	2.5	94	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	10	460	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	56000	28.9	32.4	8.8	
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.	
Organic Tin <sup>^</sup>	mg/kg	1.0	12	-	-	-	
Zinc (Zn)	mg/kg	10	46000	422	436	25.3	



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				Test No.	T016	T017	T018
				Material No.	M021	M022	M023
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result	Result
Aluminium (Al)	mg/kg	10	70000	786	14.1	16.7	
Antimony (Sb)	mg/kg	5	560	n.d.	n.d.	n.d.	
Arsenic (As)	mg/kg	5	47	n.d.	n.d.	n.d.	
Barium (Ba)	mg/kg	2.5	18750	n.d.	n.d.	2.9	
Boron (B)	mg/kg	10	15000	n.d.	n.d.	n.d.	
Cadmium (Cd)	mg/kg	1	17	n.d.	n.d.	n.d.	
Chromium (Cr)	mg/kg	0.15	-	n.d.	n.d.	n.d.	
Chromium (III) (Cr (III))§	mg/kg	0.15	460	-	-	-	
Chromium (VI) (Cr (VI))§	mg/kg	0.15	0.2	-	-	-	
Cobalt (Co)	mg/kg	2.5	130	n.d.	n.d.	n.d.	
Copper (Cu)	mg/kg	2.5	7700	n.d.	n.d.	n.d.	
Lead (Pb)	mg/kg	2.5	160	n.d.	n.d.	n.d.	
Manganese (Mn)	mg/kg	2.5	15000	5.2	3.8	32.6	
Mercury (Hg)	mg/kg	2.5	94	n.d.	n.d.	n.d.	
Nickel (Ni)	mg/kg	2.5	930	n.d.	n.d.	n.d.	
Selenium (Se)	mg/kg	10	460	n.d.	n.d.	n.d.	
Strontium (Sr)	mg/kg	2.5	56000	33.2	n.d.	10.4	
Tin (Sn)	mg/kg	1.0	180000	n.d.	n.d.	n.d.	
Organic Tin <sup>^</sup>	mg/kg	1.0	12	-	-	-	
Zinc (Zn)	mg/kg	10	46000	475	n.d.	37.2	

**Abbreviation:** n.d. = Not Detected (< RL)  
 RL = Reporting Limit  
 mg/kg denotes milligram per kilogram  
 § denotes Cr(III) and Cr(VI) are not necessary to be determined when the Combined Chromium concentration value is less than the requirement  
 ^ denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.9 mg/kg) or the components were confirmed to be pure metal

**Remark:**

\*1 According to EN71- 3:2013+A1:2014, the weight of test portion was less than 100mg, but greater than 10mg. The result was calculated as if 100mg of the samples were available.

Testing Laboratory accredited by DAkkS according to DIN EN ISO/IEC 17025. The accreditation is valid for the test methods stated in the certificate.

Testing Laboratory accredited by CNAS according to ISO/IEC 17025. The accreditation is valid for the test methods stated in the certificate.

Sample Photos



17053(B17053)



17054(B17054)



23610(B23610)



23628(B23628)



25512(B25512)

- END -