



07-23

# **TEST REPORT**

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REPORT NUMBER: TURT230071076

APPLICANT NAME Bigpoint Kırtasiye San. ve Tic.Ltd.Şti.

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Attention: Efe Yüksel (efe@bigpoint.com.tr)

**SAMPLE DESCRIPTION:** 

Sample 1: Two samples of Beestar 12 Colour Jumbo Dry Paint Pencil
Sample 2: Two samples of Beestar 12 Colour Dry Paint Pencil
Sample 3: Two sample sof Lotte 12 Colour Dry Paint Pencil

DATE IN: 07 July, 2023 (09:32)

DATE OUT: 14 July, 2023

**TESTED MODEL NO:** 

**Sample 1:** 26014932 **Sample 2:** 26014929 **Sample 3:** LT940

**CLAIMED MODEL NO:** 

**Sample 1:** 26014932 **Sample 2:** 26014929 **Sample 3:** LT940

**COUNTRY OF ORIGIN:** 

Sample 1: EGYPT Sample 2: EGYPT Sample 3: EGYPT

Ezgi Aleyna Arı Senior Customer Care Executive Zeynep Akın Chemical Laboratory Manager

İsmail Avcıoğlu Textile Laboratory Manager

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TEST	Sample 1	Sample 2	Sample 3
SAFETY OF TOYS – PART 1: MECHANICAL AND PHYSICAL PROPERTIES	Р	Р	Р
SAFETY OF TOYS – PART 2: FLAMMABILITY	Р	Р	Р
SAFETY OF TOYS – PART 3: MIGRATION OF CERTAIN ELEMENTS	Р	Р	Р
PHTHALATE CONTENT	Р	Р	Р
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) ANALYSIS	Р	Р	Р

P = MEETS BUYER' S REQUIREMENT / F = DOES NOT MEET BUYER' S REQUIREMENT / NR = NO REQUIREMENT / SC=STILL CONTINUES / X=NOT PERFORMED / NA = NOT APPLICABLE / LS : LACK OF SAMPLE

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SAMPLE		
Sample 1	Beestar 12 Colour Jumbo Dry Paint Pencil	
Sample 2	Beestar 12 Colour Dry Paint Pencil	
Sample 3	Lotte 12 Colour Dry Paint Pencil	
PARTS		
1	Blue jumbo body (Sample 1)	
2	Pink jumbo body (Sample 1)	
3	Yellow jumbo body (Sample 1)	
4	Orange jumbo body (Sample 1)	
5	Light green jumbo body (Sample 1)	
6	Navy jumbo body (Sample 1)	
7	Light brown jumbo body (Sample 1)	
8	Purple jumbo body (Sample 1)	
9	Red jumbo body (Sample 1)	
10	Dark green jumbo body (Sample 1)	
11	Dark green jumbo body (Sample 1)	
12	Black jumbo body (Sample 1)	
13	Beige inner part (Sample 1)	
14	Silver print (Sample 1)	
15	Blue jumbo dye (Sample 1)	
16	Pink jumbo dye (Sample 1)	
17	Yellow jumbo dye (Sample 1)	
18	Orange jumbo dye (Sample 1)	
19	Light green jumbo dye (Sample 1)	
20	Navy jumbo dye (Sample 1)	
21	Light brown jumbo dye (Sample 1)	
22	Purple jumbo dye (Sample 1)	
23	Red jumbo dye (Sample 1)	
24	Dark green jumbo dye (Sample 1)	
25	Dark green jumbo dye (Sample 1)	
26	Black jumbo dye (Sample 1)	
27	Blue body (Sample 2&3)	
28	Navy body (Sample 2&3)	
29	Purple body (Sample 2&3)	
30	Pink body (Sample 2&3)	
31	Red body (Sample 2&3)	
32	Orange body (Sample 2&3)	
33	Yellow body (Sample 2&3)	
34	Light green body (Sample 2&3)	
35	Dark green body (Sample 2&3)	
36		
37	Light brown body (Sample 283)	
	Dark brown body (Sample 2&3)	
38	Black body (Sample 2&3)	



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PARTS	
39	Beige inner part (Sample 2&3)
40	Silver print (Sample 2&3)
41	Blue dye (Sample 2&3)
42	Navy dye (Sample 2&3)
43	Purple dye (Sample 2&3)
44	Pink dye (Sample 2&3)
45	Red dye (Sample 2&3)
46	Orange dye (Sample 2&3)
47	Yellow dye (Sample 2&3)
48	Light green dye (Sample 2&3)
49	Dark green dye (Sample 2&3)
50	Light brown dye (Sample 2&3)
51	Dark brown dye (Sample 2&3)
52	Black dye (Sample 2&3)
53	Multicolor cartoon box (Sample 1)
54	Multicolor cartoon box (Sample 2)
55	Multicolor cartoon box (Sample 3)

Remark: Only suitable parts tested for the related tests.



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This report details the clauses appropriate to this item. Those clauses not referred to were considered not applicable.

#### SAFETY OF TOYS - PART 1: MECHANICAL AND PHYSICAL PROPERTIES

BS EN 71 - 1: 2014 + A1 : 2018

#### Sample 1

The item was labelled: "UYARI! BOĞULMA TEHLİKESİ Küçük Parçalar 3 yaşından küçük çocuklar için uygun değildir." "WARNING! CHOKING HAZARD Small parts are not suitable for children under 3 years old."

The item was tested for children aged over 10 months.

The item was packaging in a cardboard box which was considered to be disposable.

SECTION	TEST	RESULTS
4	General Requirements	
4.1	Material	Pass
4.7	Edges	Pass
4.8	Point & Metallic Wires	Pass
5	Toys Intented For Children Under 36 Months	
5.1	General Requirements	
a)	Toys and removable components	Pass
5.10	Small Balls	Pass
7	Warning and Instruction for Use	
7.1	General #  The toy was labelled for over 3 years but the toy was suitable for children under 3 years.	Pass See Comment



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#### # Requirements of clause 7.1 is as below. Only requirements that can be checked (as summited) were considered.

Warnings on toys shall not be misleading or incorrect. Toys intended for children under 36 months shall comply with the requirements in Clause 5. A warning on a toy or its packaging does not release the manufacturer or his authorized representative from the obligation to meet these requirements. A toy shall not bear a warning that conflicts with the intended use of the toy, as determined by virtue of its function, dimension and characteristics.

The warnings shall be preceded by the words "Warning" or "Warnings", as appropriate (i.e. instead of repeating the word "Warning" before each warning when several of the warnings in Clause 7 are present, the word "Warnings" may be used once). The word "Warning" or "Warnings" may be followed by punctuation, e.g. an exclamation mark.

The manufacturer shall mark the warnings in a clearly visible, easily legible and understandable and accurate manner on the toy, on an affixed label or on the packaging and, if appropriate, include the warnings in the instructions for use.

Manufacturers shall for that purpose consider the good practice given in A.33.

In the following clauses, the location of the warnings is therefore indicated (on the toy itself, on the packaging, in the instructions for use, on an accompanying leaflet). Warnings which determine the decision to purchase the toy shall appear on the consumer packaging or be otherwise clearly visible to the consumer before the purchase.

Small toys that are sold without packaging (for example from a display box or from a vending machine) shall have the appropriate warnings affixed to them. In all cases the warning shall be clearly legible at the point of sale. It is not sufficient to place the warning(s) only on a display box. For information, it should be noted that the requirement that certain warnings shall be "clearly visible to the consumer at the time of purchase" applies also in cases where the purchase is made on line (e.g. internet) or by catalogue or by other means where the buyer does not have access to the toy at the time of purchase.

In the following subclauses a requirement, that a toy shall carry a warning shall mean that the warning shall appear on the toy itself.

#### NOTE

The text of this note is for information only and the indents do not constitute requirements of this European Standard. The information is not exhaustive and Directive 2009/48/EC and the associated guidance documents should be consulted for further details.

The toy or, its packaging or document accompanying must be labelled with:

- The name and address of the manufacturer\*\* (Not Present)
- The name and address of the importer.\*\* (Present)
- Type, batch, serial or model number or other element allowing of toy identification (Present)
- A CE mark in the correct shape and size. (Present)
- Warning and other information should be in the national language(s) of the countries where the toy is marketed.
- \*\* In the case of the toy sell in European countries, the toy, its packaging or document accompanying must be labelled with the name and address of the manufacturer and importer.
- \*\*\*Only Turkish language was checked.

Estimated Total Uncertainty = (±19.9%)



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This report details the clauses appropriate to this item. Those clauses not referred to were considered not applicable.

#### SAFETY OF TOYS - PART 1: MECHANICAL AND PHYSICAL PROPERTIES

BS EN 71 - 1: 2014 + A1 : 2018

#### Sample 2

The item was labelled: "UYARI! BOĞULMA TEHLİKESİ Küçük Parçalar 3 yaşından küçük çocuklar için uygun değildir." "WARNING! CHOKING HAZARD Small parts are not suitable for children under 3 years old."

The item was tested for children aged over 10 months.

The item was packaging in a cardboard box which was considered to be disposable.

SECTION	TEST	RESULTS
4	General Requirements	
4.1	Material	Pass
4.7	Edges	Pass
4.8	Point & Metallic Wires	Pass
5	Toys Intented For Children Under 36 Months	
5.1	General Requirements	
a)	Toys and removable components	Pass
5.10	Small Balls	Pass
7	Warning and Instruction for Use	
7.1	General #  The toy was labelled for over 3 years but the toy was suitable for children under 3 years.	Pass See Comment



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#### # Requirements of clause 7.1 is as below. Only requirements that can be checked (as summited) were considered.

Warnings on toys shall not be misleading or incorrect. Toys intended for children under 36 months shall comply with the requirements in Clause 5. A warning on a toy or its packaging does not release the manufacturer or his authorized representative from the obligation to meet these requirements. A toy shall not bear a warning that conflicts with the intended use of the toy, as determined by virtue of its function, dimension and characteristics.

The warnings shall be preceded by the words "Warning" or "Warnings", as appropriate (i.e. instead of repeating the word "Warning" before each warning when several of the warnings in Clause 7 are present, the word "Warnings" may be used once). The word "Warning" or "Warnings" may be followed by punctuation, e.g. an exclamation mark.

The manufacturer shall mark the warnings in a clearly visible, easily legible and understandable and accurate manner on the toy, on an affixed label or on the packaging and, if appropriate, include the warnings in the instructions for use.

Manufacturers shall for that purpose consider the good practice given in A.33.

In the following clauses, the location of the warnings is therefore indicated (on the toy itself, on the packaging, in the instructions for use, on an accompanying leaflet). Warnings which determine the decision to purchase the toy shall appear on the consumer packaging or be otherwise clearly visible to the consumer before the purchase.

Small toys that are sold without packaging (for example from a display box or from a vending machine) shall have the appropriate warnings affixed to them. In all cases the warning shall be clearly legible at the point of sale. It is not sufficient to place the warning(s) only on a display box. For information, it should be noted that the requirement that certain warnings shall be "clearly visible to the consumer at the time of purchase" applies also in cases where the purchase is made on line (e.g. internet) or by catalogue or by other means where the buyer does not have access to the toy at the time of purchase.

In the following subclauses a requirement, that a toy shall carry a warning shall mean that the warning shall appear on the toy itself.

#### NOTE

The text of this note is for information only and the indents do not constitute requirements of this European Standard. The information is not exhaustive and Directive 2009/48/EC and the associated guidance documents should be consulted for further details.

The toy or, its packaging or document accompanying must be labelled with:

- The name and address of the manufacturer\*\* (Not Present)
- The name and address of the importer.\*\* (Present)
- Type, batch, serial or model number or other element allowing of toy identification (Present)
- A CE mark in the correct shape and size. (Present)
- Warning and other information should be in the national language(s) of the countries where the toy is marketed.
- \*\* In the case of the toy sell in European countries, the toy, its packaging or document accompanying must be labelled with the name and address of the manufacturer and importer.
- \*\*\*Only Turkish language was checked.

Estimated Total Uncertainty = (±19.9%)



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This report details the clauses appropriate to this item. Those clauses not referred to were considered not applicable.

#### SAFETY OF TOYS - PART 1: MECHANICAL AND PHYSICAL PROPERTIES

BS EN 71 - 1: 2014 + A1 : 2018

#### Sample 3

The item was labelled: "UYARI! BOĞULMA TEHLİKESİ Küçük Parçalar 3 yaşından küçük çocuklar için uygun değildir." "WARNING! CHOKING HAZARD Small parts are not suitable for children under 3 years old."

The item was tested for children aged over 10 months.

The item was packaging in a cardboard box which was considered to be disposable.

SECTION	TEST	RESULTS
4	General Requirements	
4.1	Material	Pass
4.7	Edges	Pass
4.8	Point & Metallic Wires	Pass
5	Toys Intented For Children Under 36 Months	
5.1	General Requirements	
a)	Toys and removable components	Pass
5.10	Small Balls	Pass
7	Warning and Instruction for Use	
7.1	General #  The toy was labelled for over 3 years but the toy was suitable for children under 3 years.	Pass See Comment



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#### # Requirements of clause 7.1 is as below. Only requirements that can be checked (as summited) were considered.

Warnings on toys shall not be misleading or incorrect. Toys intended for children under 36 months shall comply with the requirements in Clause 5. A warning on a toy or its packaging does not release the manufacturer or his authorized representative from the obligation to meet these requirements. A toy shall not bear a warning that conflicts with the intended use of the toy, as determined by virtue of its function, dimension and characteristics.

The warnings shall be preceded by the words "Warning" or "Warnings", as appropriate (i.e. instead of repeating the word "Warning" before each warning when several of the warnings in Clause 7 are present, the word "Warnings" may be used once). The word "Warning" or "Warnings" may be followed by punctuation, e.g. an exclamation mark.

The manufacturer shall mark the warnings in a clearly visible, easily legible and understandable and accurate manner on the toy, on an affixed label or on the packaging and, if appropriate, include the warnings in the instructions for use.

Manufacturers shall for that purpose consider the good practice given in A.33.

In the following clauses, the location of the warnings is therefore indicated (on the toy itself, on the packaging, in the instructions for use, on an accompanying leaflet). Warnings which determine the decision to purchase the toy shall appear on the consumer packaging or be otherwise clearly visible to the consumer before the purchase.

Small toys that are sold without packaging (for example from a display box or from a vending machine) shall have the appropriate warnings affixed to them. In all cases the warning shall be clearly legible at the point of sale. It is not sufficient to place the warning(s) only on a display box. For information, it should be noted that the requirement that certain warnings shall be "clearly visible to the consumer at the time of purchase" applies also in cases where the purchase is made on line (e.g. internet) or by catalogue or by other means where the buyer does not have access to the toy at the time of purchase.

In the following subclauses a requirement, that a toy shall carry a warning shall mean that the warning shall appear on the toy itself.

#### NOTE

The text of this note is for information only and the indents do not constitute requirements of this European Standard. The information is not exhaustive and Directive 2009/48/EC and the associated guidance documents should be consulted for further details.

The toy or, its packaging or document accompanying must be labelled with:

- The name and address of the manufacturer\*\* (Not Present)
- The name and address of the importer.\*\* (Present)
- Type, batch, serial or model number or other element allowing of toy identification (Present)
- A CE mark in the correct shape and size. (Present)
- Warning and other information should be in the national language(s) of the countries where the toy is marketed.
- \*\* In the case of the toy sell in European countries, the toy, its packaging or document accompanying must be labelled with the name and address of the manufacturer and importer.
- \*\*\*Only Turkish language was checked.

Estimated Total Uncertainty = (±19.9%)



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This report details the clauses appropriate to this item. Those clauses not referred to were considered not applicable.

#### **SAFETY OF TOYS - PART 2: FLAMMABILITY**

BS EN 71-2: 2020

Sample 1

SECTION	TEST	RESULTS
4.1	General	
	Celluloid (cellulose nitrate) and materials with same burning behaviour in fire	Pass

Sample 2

SECTION	TEST	RESULTS
4.1	General	
	Celluloid (cellulose nitrate) and materials with same burning behaviour in fire	Pass

Sample 3

SECTION	TEST	RESULTS
4.1	General	
	Celluloid (cellulose nitrate) and materials with same burning behaviour in fire	Pass

The test results thus obtained can not be considered as providing an overall indication of the potential fire hazard of toys or materials when subjected to other sources of ignition.

Estimated Total Uncertainty = (±18.6%)



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#### **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

		Results	s (mg/kg)		Detection Limit	Requirements (mg/kg)	
	Part 1	Part 2	Part 3	Part 4	(mg/kg)	Category III	
Antimony (Sb)	1.7	0.9	1.3	2.8	0,125	560	
Arsenic (As)	ND	ND	ND	ND	0,125	47	
Barium (Ba)	1	1.3	1.5	1.2	0,125	18750	
Cadmium (Cd)	ND	ND	ND	ND	0,125	17	
Chromium (III)	ND	ND	ND	ND	0,125	460	
Chromium (VI)	ND	ND	ND	ND	0,025	0,053	
Lead (Pb)	0.5	0.3	0.4	0.9	0,125	23	
Mercury (Hg)	ND	ND	ND	ND	0,0125	94	
Selenium (Se)	ND	ND	ND	ND	0,125	460	
Aluminium (AI)	2.4	1.8	2.8	2.3	0,125	28130	
Boron (B)	ND	ND	ND	ND	0,125	15000	
Cobalt (Co)	ND	ND	ND	ND	0,125	130	
Copper (Cu)	1.8	1.5	2.1	2.3	0,125	7700	
Manganese (Mn)	0.6	0.8	0.6	0.5	0,125	15000	
Nickel (Ni)	0.6	0.9	0.5	1.1	0,125	930	
Strontium (Sr)	1.4	1.1	1.3	2.3	0,125	56000	
Tin (Sn)	ND	ND	ND	ND	0,125	180000	
Organic tin∆	ND	ND	ND	ND	0.02	12	
Zinc (Zn)	3.5	2.8	3.1	4.8	0,125	46000	

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million) ND

=mg/kg =Not Detected

(Estimated Total Uncertainty)

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%



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#### **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

	Results (mg/kg)				i intertion i imiti	
	Part 5	Part 6	Part 7	Part 8	(mg/kg)	(mg/kg) Category III
Antimony (Sb)	3.1	2.5	1	1.3	0,125	560
Arsenic (As)	ND	ND	ND	ND	0,125	47
Barium (Ba)	1.6	1.9	0.5	0.7	0,125	18750
Cadmium (Cd)	ND	ND	ND	ND	0,125	17
Chromium (III)	ND	ND	ND	ND	0,125	460
Chromium (VI)	ND	ND	ND	ND	0,025	0,053
Lead (Pb)	0.7	0.8	0.3	0.5	0,125	23
Mercury (Hg)	ND	ND	ND	ND	0,0125	94
Selenium (Se)	ND	ND	ND	ND	0,125	460
Aluminium (AI)	2.9	3.3	1.8	2.1	0,125	28130
Boron (B)	ND	ND	ND	ND	0,125	15000
Cobalt (Co)	ND	ND	0.3	0.6	0,125	130
Copper (Cu)	2.8	3.1	2	2.8	0,125	7700
Manganese (Mn)	0.7	0.9	0.3	0.5	0,125	15000
Nickel (Ni)	1.3	1.2	0.9	1.1	0,125	930
Strontium (Sr)	2.7	2.1	2.3	2.8	0,125	56000
Tin (Sn)	ND	ND	ND	ND	0,125	180000
Organic tin∆	ND	ND	ND	ND	0.02	12
Zinc (Zn)	5.8	4.7	2.4	3.1	0,125	46000

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg/kg

ND (Estimated Total Uncertainty) =Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%



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#### **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

		Results	(mg/kg)		Detection Limit	Requirements (mg/kg)	
	Part 9	Part 10	<u>Part 11</u>	<u>Part 12</u>	(mg/kg)	Category III	
Antimony (Sb)	1.7	1.1	1.3	1.6	0,125	560	
Arsenic (As)	ND	ND	ND	ND	0,125	47	
Barium (Ba)	1.1	0.7	0.9	1.2	0,125	18750	
Cadmium (Cd)	ND	ND	ND	ND	0,125	17	
Chromium (III)	ND	ND	ND	ND	0,125	460	
Chromium (VI)	ND	ND	ND	ND	0,025	0,053	
Lead (Pb)	0.6	0.3	0.4	0.7	0,125	23	
Mercury (Hg)	ND	ND	ND	ND	0,0125	94	
Selenium (Se)	ND	ND	ND	ND	0,125	460	
Aluminium (AI)	3.3	0.8	1.2	1.3	0,125	28130	
Boron (B)	ND	ND	ND	ND	0,125	15000	
Cobalt (Co)	0.5	0.3	0.6	0.8	0,125	130	
Copper (Cu)	3.1	1.1	1.3	2.1	0,125	7700	
Manganese (Mn)	0.7	0.3	0.5	0.8	0,125	15000	
Nickel (Ni)	1.3	0.4	0.6	0.7	0,125	930	
Strontium (Sr)	3.3	1.1	1.6	1.5	0,125	56000	
Tin (Sn)	ND	ND	ND	ND	0,125	180000	
Organic tin∆	ND	ND	ND	ND	0.02	12	
Zinc (Zn)	3.8	2.2	3.1	2.8	0,125	46000	

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg/kg

=Not Detected ND

(Estimated Total Uncertainty)

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

	Results (mg/kg)			Detection Limit	Requirements (mg/kg)
	<u>Part 13</u>			(mg/kg)	Category III
Antimony (Sb)	2.8			0,125	560
Arsenic (As)	ND			0,125	47
Barium (Ba)	1.4			0,125	18750
Cadmium (Cd)	0.3			0,125	17
Chromium (III)	ND			0,125	460
Chromium (VI)	ND			0,025	0,053
Lead (Pb)	0.6			0,125	23
Mercury (Hg)	ND			0,0125	94
Selenium (Se)	ND			0,125	460
Aluminium (AI)	2.3			0,125	28130
Boron (B)	ND			0,125	15000
Cobalt (Co)	ND			0,125	130
Copper (Cu)	2.7			0,125	7700
Manganese (Mn)	0.7			0,125	15000
Nickel (Ni)	1.1			0,125	930
Strontium (Sr)	1.2			0,125	56000
Tin (Sn)	ND			0,125	180000
Organic tin∆	ND			0.02	12
Zinc (Zn)	3.9	•		0,125	46000

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg/kg =Not Detected

(Estimated Total Uncertainty)

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22% Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22% Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma-ICP\_MS.

		Results	s (mg/kg)		Detection Limit	Requirements (mg/kg)
	<u>Part 15</u>	<u>Part 16</u>	<u>Part 17</u>	<u>Part 18</u>	(mg/kg)	Category I
Antimony (Sb)	ND	ND	ND	ND	0,125	45
Arsenic (As)	ND	ND	ND	ND	0,125	3.8
Barium (Ba)	ND	ND	ND	ND	0,125	1500
Cadmium (Cd)	ND	ND	ND	ND	0,125	1.3
Chromium (III)	ND	ND	ND	ND	0,125	37.5
Chromium (VI)	ND	ND	ND	ND	0,0025	0.02
Lead (Pb)	ND	ND	ND	ND	0,125	2.0
Mercury (Hg)	ND	ND	ND	ND	0,0125	7.5
Selenium (Se)	ND	ND	ND	ND	0,125	37.5
Aluminium (AI)	10.7	10.9	5.4	2.7	0,125	2250
Boron (B)	ND	ND	ND	ND	0,125	1200
Cobalt (Co)	ND	ND	ND	ND	0,125	10.5
Copper (Cu)	ND	ND	ND	ND	0,125	622.5
Manganese (Mn)	1.1	1.1	1.2	1.6	0,125	1200
Nickel (Ni)	ND	ND	ND	ND	0,125	75
Strontium (Sr)	0.2	22.1	0.2	0.6	0,125	4500
Tin (Sn)	ND	ND	ND	ND	1,25	15000
Organic tin ∆	ND	ND	ND	ND	0,02	0.9
Zinc (Zn)	ND	ND	ND	ND	0,125	3750

#### Note: Dewaxed procedure was applied.

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

ND

(Estimated Total Uncertainty)

=mg / kg =Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22%

Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma-ICP\_MS.

		Results	(mg/kg)		Detection Limit	Requirements (mg/kg)
	<u>Part 19</u>	<u>Part 20</u>	<u>Part 21</u>	<u>Part 22</u>	(mg/kg)	Category I
Antimony (Sb)	ND	ND	ND	ND	0,125	45
Arsenic (As)	ND	ND	ND	ND	0,125	3.8
Barium (Ba)	ND	ND	ND	ND	0,125	1500
Cadmium (Cd)	ND	ND	ND	ND	0,125	1.3
Chromium (III)	ND	ND	ND	ND	0,125	37.5
Chromium (VI)	ND	ND	ND	ND	0,0025	0.02
Lead (Pb)	ND	ND	ND	ND	0,125	2.0
Mercury (Hg)	ND	ND	ND	ND	0,0125	7.5
Selenium (Se)	ND	ND	ND	ND	0,125	37.5
Aluminium (AI)	5.8	4.2	7.2	14.9	0,125	2250
Boron (B)	ND	ND	ND	ND	0,125	1200
Cobalt (Co)	ND	ND	ND	ND	0,125	10.5
Copper (Cu)	ND	ND	ND	ND	0,125	622.5
Manganese (Mn)	1.2	2.3	1.5	2.2	0,125	1200
Nickel (Ni)	ND	ND	ND	ND	0,125	75
Strontium (Sr)	0.2	0.3	0.2	34.7	0,125	4500
Tin (Sn)	ND	ND	ND	ND	1,25	15000
Organic tin ∆	ND	ND	ND	ND	0,02	0.9
Zinc (Zn)	54.5	ND	ND	0.6	0,125	3750

#### Note: Dewaxed procedure was applied.

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

ND

(Estimated Total Uncertainty)

=mg / kg =Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22%

Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma-ICP\_MS.

		Results	s (mg/kg)		Detection Limit	Requirements (mg/kg)
	<u>Part 23</u>	<u>Part 24</u>	<u>Part 25</u>	<u>Part 26</u>	(mg/kg)	Category I
Antimony (Sb)	ND	ND	ND	ND	0,125	45
Arsenic (As)	ND	ND	ND	ND	0,125	3.8
Barium (Ba)	ND	ND	ND	ND	0,125	1500
Cadmium (Cd)	ND	ND	ND	ND	0,125	1.3
Chromium (III)	ND	ND	ND	ND	0,125	37.5
Chromium (VI)	ND	ND	ND	ND	0,0025	0.02
Lead (Pb)	ND	ND	ND	ND	0,125	2.0
Mercury (Hg)	ND	ND	ND	ND	0,0125	7.5
Selenium (Se)	ND	ND	ND	ND	0,125	37.5
Aluminium (AI)	4.3	ND	ND	1.8	0,125	2250
Boron (B)	ND	ND	ND	ND	0,125	1200
Cobalt (Co)	ND	ND	ND	ND	0,125	10.5
Copper (Cu)	ND	ND	ND	ND	0,125	622.5
Manganese (Mn)	2	1.5	1.7	1.4	0,125	1200
Nickel (Ni)	ND	ND	ND	ND	0,125	75
Strontium (Sr)	77.3	1.5	1.5	2.2	0,125	4500
Tin (Sn)	ND	ND	ND	ND	1,25	15000
Organic tin ∆	ND	ND	ND	ND	0,02	0.9
Zinc (Zn)	ND	ND	ND	2	0,125	3750

#### Note: Dewaxed procedure was applied.

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

ND

(Estimated Total Uncertainty)

=mg / kg =Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22%

Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

		Results		Detection Limit	Requirements (mg/kg)	
	<u>Part 27</u>	<u>Part 28</u>	<u>Part 29</u>	Part 30	(mg/kg)	Category III
Antimony (Sb)	2.4	3.1	1.6	1.8	0,125	560
Arsenic (As)	ND	ND	ND	ND	0,125	47
Barium (Ba)	1.6	1.8	0.7	1.1	0,125	18750
Cadmium (Cd)	0.2	0.4	ND	ND	0,125	17
Chromium (III)	ND	ND	ND	ND	0,125	460
Chromium (VI)	ND	ND	ND	ND	0,025	0,053
Lead (Pb)	0.7	0.8	0.4	0.6	0,125	23
Mercury (Hg)	ND	ND	ND	ND	0,0125	94
Selenium (Se)	ND	ND	ND	ND	0,125	460
Aluminium (AI)	2.4	2.8	1.2	1.3	0,125	28130
Boron (B)	ND	ND	ND	ND	0,125	15000
Cobalt (Co)	ND	ND	0.5	0.4	0,125	130
Copper (Cu)	3.1	3.9	1	1.2	0,125	7700
Manganese (Mn)	0.6	0.9	0.3	0.6	0,125	15000
Nickel (Ni)	1.3	1.2	0.4	0.5	0,125	930
Strontium (Sr)	1.6	1.4	2.6	3.1	0,125	56000
Tin (Sn)	ND	ND	ND	ND	0,02	180000
Organic tin∆	ND	ND	ND	ND	0,125	12
Zinc (Zn)	4.1	4.8	2.4	3.1	0,125	46000

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

(Estimated Total Uncertainty)

=mg/kg =Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22% Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22% Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

		Results	(mg/kg)		Detection Limit	Requirements (mg/kg) Category III
	<u>Part 31</u>	<u>Part 32</u>	Part 33	Part 34	(mg/kg)	
Antimony (Sb)	2.1	1.5	1.3	1.6	0,125	560
Arsenic (As)	ND	ND	ND	ND	0,125	47
Barium (Ba)	0.9	1	1.4	1.8	0,125	18750
Cadmium (Cd)	ND	ND	ND	ND	0,125	17
Chromium (III)	ND	ND	ND	ND	0,125	460
Chromium (VI)	ND	ND	ND	ND	0,025	0,053
Lead (Pb)	0.9	0.7	0.9	0.6	0,125	23
Mercury (Hg)	ND	ND	ND	ND	0,0125	94
Selenium (Se)	ND	ND	ND	ND	0,125	460
Aluminium (AI)	1.6	1.3	1.8	2.1	0,125	28130
Boron (B)	ND	ND	ND	ND	0,125	15000
Cobalt (Co)	0.3	0.3	0.5	0.6	0,125	130
Copper (Cu)	1.4	1.8	1.7	1.9	0,125	7700
Manganese (Mn)	0.7	0.5	0.6	0.9	0,125	15000
Nickel (Ni)	0.8	ND	ND	ND	0,125	930
Strontium (Sr)	2.8	1.1	1.3	1.6	0,125	56000
Tin (Sn)	ND	ND	ND	ND	0,02	180000
Organic tin∆	ND	ND	ND	ND	0,125	12
Zinc (Zn)	3.8	2.8	2.4	2.8	0,125	46000

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg/kg

(Estimated Total Uncertainty)

=Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22% Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22% Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

		Results		Detection Limit	Requirements (mg/kg)	
	<u>Part 35</u>	Part 36	<u>Part 37</u>	Part 38	(mg/kg)	Category III
Antimony (Sb)	3	2.8	3.5	1.6	0,125	560
Arsenic (As)	ND	ND	ND	ND	0,125	47
Barium (Ba)	1.4	1.6	2.1	0.8	0,125	18750
Cadmium (Cd)	ND	ND	ND	ND	0,125	17
Chromium (III)	ND	ND	ND	ND	0,125	460
Chromium (VI)	ND	ND	ND	ND	0,025	0,053
Lead (Pb)	0.5	0.8	0.7	0.4	0,125	23
Mercury (Hg)	ND	ND	ND	ND	0,0125	94
Selenium (Se)	ND	ND	ND	ND	0,125	460
Aluminium (AI)	2.6	3.3	2.8	1	0,125	28130
Boron (B)	ND	ND	ND	ND	0,125	15000
Cobalt (Co)	ND	ND	ND	ND	0,125	130
Copper (Cu)	1.9	2.1	3.2	0.8	0,125	7700
Manganese (Mn)	0.6	0.7	0.5	0.4	0,125	15000
Nickel (Ni)	0.8	0.6	0.9	0.5	0,125	930
Strontium (Sr)	2.1	3.1	2.8	1	0,125	56000
Tin (Sn)	ND	ND	ND	ND	0,02	180000
Organic tin∆	ND	ND	ND	ND	0,125	12
Zinc (Zn)	4.1	3.3	2.8	2.9	0,125	46000

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg/kg =Not Detected

(Estimated Total Uncertainty)

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22% Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22%

Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

		Results (mg/kg)	Detection Limit		
	<u>Part 39</u>		(mg/kg)	(mg/kg) Category III	
Antimony (Sb)	1.9		0,125	560	
Arsenic (As)	ND		0,125	47	
Barium (Ba)	1.1		0,125	18750	
Cadmium (Cd)	ND		0,125	17	
Chromium (III)	ND		0,125	460	
Chromium (VI)	ND		0,025	0,053	
Lead (Pb)	0.6		0,125	23	
Mercury (Hg)	ND		0,0125	94	
Selenium (Se)	ND		0,125	460	
Aluminium (AI)	1.3		0,125	28130	
Boron (B)	ND		0,125	15000	
Cobalt (Co)	ND		0,125	130	
Copper (Cu)	0.6		0,125	7700	
Manganese (Mn)	0.5		0,125	15000	
Nickel (Ni)	0.8		0,125	930	
Strontium (Sr)	1.2		0,125	56000	
Tin (Sn)	ND		0,02	180000	
Organic tin∆	ND		0,125	12	
Zinc (Zn)	3.1		0,125	46000	

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg/kg =Not Detected

(Estimated Total Uncertainty)

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22% Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22% Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma-ICP\_MS.

		Results	s (mg/kg)		Detection Limit	Requirements (mg/kg) Category I
	<u>Part 41</u>	<u>Part 42</u>	Part 43	<u>Part 44</u>	(mg/kg)	
Antimony (Sb)	ND	ND	ND	ND	0,125	45
Arsenic (As)	ND	ND	ND	ND	0,125	3.8
Barium (Ba)	ND	ND	ND	ND	0,125	1500
Cadmium (Cd)	ND	ND	ND	ND	0,125	1.3
Chromium (III)	ND	ND	ND	ND	0,125	37.5
Chromium (VI)	ND	ND	ND	ND	0,0025	0.02
Lead (Pb)	ND	ND	ND	ND	0,125	2.0
Mercury (Hg)	ND	ND	ND	ND	0,0125	7.5
Selenium (Se)	ND	ND	ND	ND	0,125	37.5
Aluminium (AI)	11.2	1.9	8.5	11.2	0,125	2250
Boron (B)	ND	ND	ND	ND	0,125	1200
Cobalt (Co)	ND	ND	ND	ND	0,125	10.5
Copper (Cu)	ND	ND	ND	ND	0,125	622.5
Manganese (Mn)	1.4	1	1.4	1.3	0,125	1200
Nickel (Ni)	ND	ND	ND	ND	0,125	75
Strontium (Sr)	ND	0.2	10.1	22.4	0,125	4500
Tin (Sn)	ND	ND	ND	ND	1,25	15000
Organic tin ∆	ND	ND	ND	ND	0,02	0.9
Zinc (Zn)	ND	ND	ND	ND	0,125	3750

#### Note: Dewaxed procedure was applied.

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

ND

(Estimated Total Uncertainty)

=mg / kg =Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22%

Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%



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#### **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma-ICP\_MS.

		Results	s (mg/kg)		Detection Limit	Requirements (mg/kg)
	<u>Part 45</u>	<u>Part 46</u>	Part 47	Part 48	(mg/kg)	Category I
Antimony (Sb)	ND	ND	ND	ND	0,125	45
Arsenic (As)	ND	ND	ND	ND	0,125	3.8
Barium (Ba)	ND	ND	ND	ND	0,125	1500
Cadmium (Cd)	ND	ND	ND	ND	0,125	1.3
Chromium (III)	ND	ND	ND	ND	0,125	37.5
Chromium (VI)	ND	ND	ND	ND	0,0025	0.02
Lead (Pb)	ND	ND	ND	ND	0,125	2.0
Mercury (Hg)	ND	ND	ND	ND	0,0125	7.5
Selenium (Se)	ND	ND	ND	ND	0,125	37.5
Aluminium (AI)	1.8	1.9	10.4	ND	0,125	2250
Boron (B)	ND	ND	ND	ND	0,125	1200
Cobalt (Co)	ND	ND	ND	ND	0,125	10.5
Copper (Cu)	ND	ND	ND	ND	0,125	622.5
Manganese (Mn)	2.6	1.2	2.2	1.2	0,125	1200
Nickel (Ni)	ND	ND	ND	ND	0,125	75
Strontium (Sr)	88.9	0.6	0.2	0.3	0,125	4500
Tin (Sn)	ND	ND	ND	ND	1,25	15000
Organic tin ∆	ND	ND	ND	ND	0,02	0.9
Zinc (Zn)	ND	ND	ND	ND	0,125	3750

#### Note: Dewaxed procedure was applied.

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg / kg =Not Detected

(Estimated Total Uncertainty)

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22% Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22% Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%



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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma-ICP\_MS.

		Results	s (mg/kg)		Detection Limit	Requirements (mg/kg)
	<u>Part 49</u>	<u>Part 50</u>	Part 51	Part 52	(mg/kg)	Category I
Antimony (Sb)	ND	ND	ND	ND	0,125	45
Arsenic (As)	ND	ND	ND	ND	0,125	3.8
Barium (Ba)	ND	ND	ND	ND	0,125	1500
Cadmium (Cd)	ND	ND	ND	ND	0,125	1.3
Chromium (III)	ND	ND	ND	ND	0,125	37.5
Chromium (VI)	ND	ND	ND	ND	0,0025	0.02
Lead (Pb)	ND	ND	ND	ND	0,125	2.0
Mercury (Hg)	ND	ND	ND	ND	0,0125	7.5
Selenium (Se)	ND	ND	ND	ND	0,125	37.5
Aluminium (AI)	0.4	11.5	0.3	1.4	0,125	2250
Boron (B)	ND	ND	ND	ND	0,125	1200
Cobalt (Co)	ND	ND	ND	ND	0,125	10.5
Copper (Cu)	ND	ND	ND	ND	0,125	622.5
Manganese (Mn)	3	1.7	4.7	2	0,125	1200
Nickel (Ni)	ND	ND	ND	ND	0,125	75
Strontium (Sr)	2.5	0.7	0.4	7.1	0,125	4500
Tin (Sn)	ND	ND	ND	ND	1,25	15000
Organic tin ∆	ND	ND	ND	ND	0,02	0.9
Zinc (Zn)	ND	ND	ND	ND	0,125	3750

#### Note: Dewaxed procedure was applied.

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

ND

(Estimated Total Uncertainty)

=mg / kg =Not Detected

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22%

Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22%

Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22% Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%

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## **SAFETY OF TOYS - PART 3: MIGRATION OF CERTAIN ELEMENTS**

BS EN 71 3:2019+A1:2021

Acid extraction method was used and migration elements content were determined by Inductively Coupled Plasma (ICP-MS)

		Results	s (mg/kg)	Detection Limit	Requirements (mg/kg)
	<u>Part 53</u>	<u>Part 54</u>	<u>Part 55</u>	(mg/kg)	Category III
Antimony (Sb)	0.2	0.2	ND	0,125	560
Arsenic (As)	ND	ND	ND	0,125	47
Barium (Ba)	8.4	19.5	13.7	0,125	18750
Cadmium (Cd)	ND	ND	ND	0,125	17
Chromium (III)	0.3	0.5	0.4	0,125	460
Chromium (VI)	ND	ND	ND	0,025	0,053
Lead (Pb)	1	1.6	1.1	0,125	23
Mercury (Hg)	ND	ND	ND	0,0125	94
Selenium (Se)	ND	ND	ND	0,125	460
Aluminium (AI)	397.2	583.8	423.5	0,125	28130
Boron (B)	4	8.1	5.7	0,125	15000
Cobalt (Co)	0.3	0.2	0.2	0,125	130
Copper (Cu)	2.2	3.1	2.3	0,125	7700
Manganese (Mn)	12.9	18.6	13.8	0,125	15000
Nickel (Ni)	0.4	0.5	0.4	0,125	930
Strontium (Sr)	42.8	69.3	50.4	0,125	56000
Tin (Sn)	ND	ND	ND	0,02	180000
Organic tin∆	ND	ND	ND	0,125	12
Zinc (Zn)	18.2	18.9	16	0,125	46000

 $\Delta$  = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n- Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin after converted to Tributyl tin by calculation.

ppm (Part per million)

=mg/kg =Not Detected

(Estimated Total Uncertainty)

= Paper - Cr VI: 10%, Org. Tin: 25%, Others: 22% Scrapable Coating - Cr VI: 10%, Org. Tin: 25%, Others: 22% Metal - Cr VI: 10%, Org. Tin: 26%, Others: 22% Crayons - Cr VI: 10%, Org. Tin: 26%, Others: 21% Plastic - Cr VI: 14%, Org. Tin: 24%, Others: 23% Liquid Paint - Cr VI: 13%, Org. Tin: 26%, Others: 22% Textile - Cr VI: 15%, Org. Tin: 25%, Others: 23%



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#### PHTHALATE CONTENT

INTERTEK IHTM AL.2.026 based on EN 14372: 2004

Method By Gas Chromotographic- Mass Spectrometric (GC- MS ) Analysis

	CAS No	Part 1&2&3	Part 4&5&6	Part 7&8&9
DIBUTYL PHTHALATE (DBP)	84-74-2	ND	ND	ND
DIETHYL HEXYL PHTHALATE (DEHP)	117-81-7	75 ppm	60 ppm	45 ppm
BENZYL BUTYL PHTHALATE (BBP)	85-68-7	ND	ND	ND
DI-ISO-BUTYL PHTHALATE (DIBP)	84-69-5	ND	ND	ND
SUM OF FOUR PHTHALATES		75 ppm	60 ppm	45 ppm
DI-ISO-NONYL PHTHALATE (DINP)	28553-12-0	ND	ND	ND
DI-N-OCTYL PHTHALATE (DNOP)	117-84-0	ND	ND	ND
DI-ISO-DECYL PHTHALATE (DIDP)	26761-40-0	ND	ND	ND
SUM OF THREE PHTHALATES		ND	ND	ND

	CAS No	Part 10&11&12	Part 13&27&28	Part 29&30&31
DIBUTYL PHTHALATE (DBP)	84-74-2	ND	ND	ND
DIETHYL HEXYL PHTHALATE (DEHP)	117-81-7	45 ppm	180 ppm	75 ppm
BENZYL BUTYL PHTHALATE (BBP)	85-68-7	ND	ND	ND
DI-ISO-BUTYL PHTHALATE (DIBP)	84-69-5	ND	ND	ND
SUM OF FOUR PHTHALATES		45 ppm	180 ppm	75 ppm
DI-ISO-NONYL PHTHALATE (DINP)	28553-12-0	ND	ND	ND
DI-N-OCTYL PHTHALATE (DNOP)	117-84-0	ND ND	ND	ND
DI-ISO-DECYL PHTHALATE (DIDP)	26761-40-0	ND	ND	ND
SUM OF THREE PHTHALATES		ND	ND	ND

	CAS No	Part 32&33&34	Part 35&36&37	Part 38&39
DIBUTYL PHTHALATE (DBP)	84-74-2	ND	ND	ND
DIETHYL HEXYL PHTHALATE (DEHP)	117-81-7	75 ppm	90 ppm	45 ppm
BENZYL BUTYL PHTHALATE (BBP)	85-68-7	ND	ND	ND
DI-ISO-BUTYL PHTHALATE (DIBP)	84-69-5	ND	ND	ND
SUM OF FOUR PHTHALATES		75 ppm	90 ppm	45 ppm
DI-ISO-NONYL PHTHALATE (DINP)	28553-12-0	ND	ND	ND
DI-N-OCTYL PHTHALATE (DNOP)	117-84-0	ND	ND	ND
DI-ISO-DECYL PHTHALATE (DIDP)	26761-40-0	ND	ND	ND
SUM OF THREE PHTHALATES		ND	ND	ND

=Not Detected ppm (part per million)

**Detection Limit** 

=DIDP, DINP: 100 ppm, Other Phthalates: 10 ppm =DBP,DEHP,BBP,DIBP < 1000 ppm; DINP, DNOP, DIDP < 1000 ppm

(Estimated Total Uncertainty = ±18%)



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## POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) ANALYSIS

IHTM AL.2.032 based on AfPS GS 2019:01 determined by GC-MS

	Part 1&2&3	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

	Part 4&5&6	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

	Part 7&8&9	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

ppm (part per million) = mg / kgDetection Limit = 0.1 ppm

Estimated Total Uncertainty = Textile:±15%, Plastic:±17%



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# POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) ANALYSIS

IHTM AL.2.032 based on AfPS GS 2019:01 determined by GC-MS

	Part 10&11&12	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

	Part 13&27&28	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

	Part 29&30&31	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

ppm (part per million) = mg / kgDetection Limit = 0.1 ppm

Estimated Total Uncertainty = Textile:±15%, Plastic:±17%



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## POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) ANALYSIS

IHTM AL.2.032 based on AfPS GS 2019:01 determined by GC-MS

Part 32&33&34	RESULT (mg/kg)	REQUIREMENT
1 Benzo (a) pyrene	Not Detected	0.5 ppm
2 Benzo (e) pyrene	Not Detected	0.5 ppm
3 Benzo (a) anthracene	Not Detected	0.5 ppm
4 Benzo (b) fluoranthene	Not Detected	0.5 ppm
5 Benzo (j) fluoranthene	Not Detected	0.5 ppm
6 Benzo (k) fluoranthene	Not Detected	0.5 ppm
7 Chrysene	Not Detected	0.5 ppm
8 Dibenzo (a,h) anthrace	ne Not Detected	0.5 ppm

	Part 35&36&37	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

	Part 38&39	RESULT (mg/kg)	REQUIREMENT
1	Benzo (a) pyrene	Not Detected	0.5 ppm
2	Benzo (e) pyrene	Not Detected	0.5 ppm
3	Benzo (a) anthracene	Not Detected	0.5 ppm
4	Benzo (b) fluoranthene	Not Detected	0.5 ppm
5	Benzo (j) fluoranthene	Not Detected	0.5 ppm
6	Benzo (k) fluoranthene	Not Detected	0.5 ppm
7	Chrysene	Not Detected	0.5 ppm
8	Dibenzo (a,h) anthracene	Not Detected	0.5 ppm

 $\begin{array}{ll} \text{ppm (part per million)} & = \text{mg / kg} \\ \text{Detection Limit} & = 0.1 \text{ ppm} \end{array}$ 

Estimated Total Uncertainty = Textile:±15%, Plastic:±17%



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## **SAMPLE PHOTOS**









Sample 3



## END OF TEST REPORT ##