

TEST REPORT

APPLICANT : Ningbo Paulinda I/E Co., LTD

ADDRESS : Floor 20, XinZhouYinZuo Building, No.88 QianHe Nan road, YinZhou Ningbo, China 315100

SAMPLE DESCRIPTION : Advanced colored lead core

ITEM NO. : Advanced B

COUNTRY OF ORIGIN : China

AGE REQUESTED ON APPLICATION FORM : 3+

SAMPLE RECEIVED DATE : 27 - Apr - 2025

TURN AROUND TIME : 28 - Apr - 2025 to 09 - May - 2025

The following test item(s) was/were performed on submitted sample(s) and/or component(s) confirmed by applicant

TEST REQUESTED	TEST METHOD/REGULATION	RESULT
Colourants Content	EN 71 Part 9:2005 + A1:2007	Pass
Primary Aromatic Amines Content	EN 71 Part 9:2005 + A1:2007	Pass
Polycyclic Aromatic Hydrocarbons (PAHs)	REACH Annex XVII, Entry 50	Pass
Migration of Certain Elements	EN 71 Part 3:2019+A1:2021	Pass
Migration of Certain Elements	EN 71 Part 3:2019+A2:2024	Pass
Banned AZO Dyes	REACH Annex XVII, Entry 43	Pass

Samples are obtained by express delivery, Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins Product Testing Service (Hangzhou) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. Unless otherwise stated from the customer, regulation or the standard specification, Eurofins will apply it in accordance with ILAC G8:09/2019-(binary statement for simple acceptance rule). If you happen to have any comments, please do it by sending email to info.hz@cpt.eurofinscn.com and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins Product Testing Service (Hangzhou) Co., Ltd. If you happen to have any complaints, please do it by sending email to chinacomplaint.hz@cpt.eurofinscn.com and referring to this report number.



Eurofins (Hangzhou) contact information

Customer service: Nicole.Bao@cpt.eurofinscn.com/ +86 571 87203730

Sales specialist: Jo.Feng@cpt.eurofinscn.com/ +86 13818477322

***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

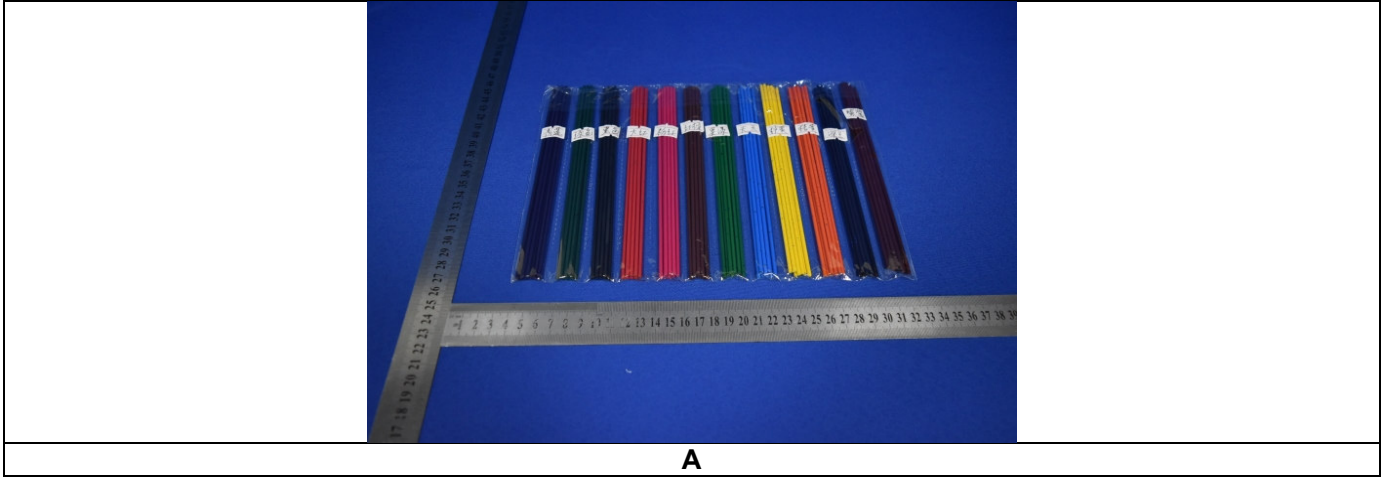
Signed for and on behalf of
Eurofins Product Testing Service (Hangzhou) Co., Ltd



Lincoln Shi
Operation Manager



SAMPLE PHOTO(S)



EFHZ25045618-CG-01-EN

TO BE CONTINUED

COMPONENT LIST

Component No.	Component	Sample No.
1	Lotus colored pencil lead	A
2	Green pencil lead	A
3	Black pencil lead	A
4	Red pencil lead	A
5	Pink pencil lead	A
6	Red brown pencil lead	A
7	Fruit green pencil lead	A
8	Sky blue pencil lead	A
9	Lemon yellow pencil lead	A
10	Orange pencil lead	A
11	Deep blue pencil lead	A
12	Purple red pencil lead	A

TO BE CONTINUED

TEST RESULT

Colourants Content

Test Request: Colourants content as specified in EN 71 Part 9:2005 + A1:2007.

Test Method: Sample preparation with reference to EN 71-10:2005 followed by analysis with reference to EN71-11:2005.

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					1	2	3	4
Disperse Orange 37/76	13301-61-6	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 3	2475-46-9	mg/kg	10	6	ND	ND	ND	ND
Basic Red 9	569-61-9	mg/kg	10	6	ND	ND	ND	ND
Acid Red 26	3761-53-3	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 106	12223-01-7	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 124	61951-51-7	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 1	60-09-3	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 1	2475-45-8	mg/kg	10	6	ND	ND	ND	ND
Disperse Orange 3	730-40-5	mg/kg	10	6	ND	ND	ND	ND
Disperse Red 1	2872-52-8	mg/kg	10	6	ND	ND	ND	ND
Disperse Yellow 3	2832-40-8	mg/kg	10	6	ND	ND	ND	ND
Basic Violet 1	8004-87-3	mg/kg	10	6	ND	ND	ND	ND
Basic Violet 3	548-62-9	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 2	60-11-7	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 3	97-56-3	mg/kg	10	6	ND	ND	ND	ND
Acid Violet 49	1694-09-3	mg/kg	10	6	ND	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					5	6	7	8
Disperse Orange 37/76	13301-61-6	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 3	2475-46-9	mg/kg	10	6	ND	ND	ND	ND
Basic Red 9	569-61-9	mg/kg	10	6	ND	ND	ND	ND
Acid Red 26	3761-53-3	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 106	12223-01-7	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 124	61951-51-7	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 1	60-09-3	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 1	2475-45-8	mg/kg	10	6	ND	ND	ND	ND
Disperse Orange 3	730-40-5	mg/kg	10	6	ND	ND	ND	ND
Disperse Red 1	2872-52-8	mg/kg	10	6	ND	ND	ND	ND
Disperse Yellow 3	2832-40-8	mg/kg	10	6	ND	ND	ND	ND
Basic Violet 1	8004-87-3	mg/kg	10	6	ND	ND	ND	ND
Basic Violet 3	548-62-9	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 2	60-11-7	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 3	97-56-3	mg/kg	10	6	ND	ND	ND	ND
Acid Violet 49	1694-09-3	mg/kg	10	6	ND	ND	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					9	10	11	12
Disperse Orange 37/76	13301-61-6	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 3	2475-46-9	mg/kg	10	6	ND	ND	ND	ND
Basic Red 9	569-61-9	mg/kg	10	6	ND	ND	ND	ND
Acid Red 26	3761-53-3	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 106	12223-01-7	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 124	61951-51-7	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 1	60-09-3	mg/kg	10	6	ND	ND	ND	ND
Disperse Blue 1	2475-45-8	mg/kg	10	6	ND	ND	ND	ND
Disperse Orange 3	730-40-5	mg/kg	10	6	ND	ND	ND	ND
Disperse Red 1	2872-52-8	mg/kg	10	6	ND	ND	ND	ND
Disperse Yellow 3	2832-40-8	mg/kg	10	6	ND	ND	ND	ND
Basic Violet 1	8004-87-3	mg/kg	10	6	ND	ND	ND	ND
Basic Violet 3	548-62-9	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 2	60-11-7	mg/kg	10	6	ND	ND	ND	ND
Solvent Yellow 3	97-56-3	mg/kg	10	6	ND	ND	ND	ND
Acid Violet 49	1694-09-3	mg/kg	10	6	ND	ND	ND	ND

Remarks:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Primary Aromatic Amines Content

Test Request: Primary Aromatic Amines content as specified in EN 71 Part 9:2005 + A1:2007.

Test Method: Sample preparation with reference to EN 71-10:2005 followed by analysis with reference to EN71-11:2005.

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					1	2	3	4
2-Naphthylamine	91-59-8	mg/kg	5	5	ND	ND	ND	ND
Benzidin	92-87-5	mg/kg	5	5	ND	ND	ND	ND
o-Toluidin	95-53-4	mg/kg	5	5	ND	ND	ND	ND
Aniline	62-53-3	mg/kg	5	5	ND	ND	ND	ND
o-Anisidine	90-04-0	mg/kg	5	5	ND	ND	ND	ND
3,3'-dichlorobenzidine	91-94-1	mg/kg	5	5	ND	ND	ND	ND
4-Chloroaniline	106-47-8	mg/kg	5	5	ND	ND	ND	ND
3,3'-dimethoxybenzidine	119-90-4	mg/kg	5	5	ND	ND	ND	ND
3,3'-dimethylbenzidine	119-93-7	mg/kg	5	5	ND	ND	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					5	6	7	8
2-Naphthylamine	91-59-8	mg/kg	5	5	ND	ND	ND	ND
Benzidin	92-87-5	mg/kg	5	5	ND	ND	ND	ND
o-Toluidin	95-53-4	mg/kg	5	5	ND	ND	ND	ND
Aniline	62-53-3	mg/kg	5	5	ND	ND	ND	ND
o-Anisidine	90-04-0	mg/kg	5	5	ND	ND	ND	ND
3,3'-dichlorobenzidine	91-94-1	mg/kg	5	5	ND	ND	ND	ND
4-Chloroaniline	106-47-8	mg/kg	5	5	ND	ND	ND	ND
3,3'-dimethoxybenzidine	119-90-4	mg/kg	5	5	ND	ND	ND	ND
3,3'-dimethylbenzidine	119-93-7	mg/kg	5	5	ND	ND	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					9	10	11	12
2-Naphthylamine	91-59-8	mg/kg	5	5	ND	ND	ND	ND
Benzidin	92-87-5	mg/kg	5	5	ND	ND	ND	ND
o-Toluidin	95-53-4	mg/kg	5	5	ND	ND	ND	ND
Aniline	62-53-3	mg/kg	5	5	ND	ND	ND	ND
o-Anisidine	90-04-0	mg/kg	5	5	ND	ND	ND	ND
3,3'-dichlorobenzidine	91-94-1	mg/kg	5	5	ND	ND	ND	ND
4-Chloroaniline	106-47-8	mg/kg	5	5	ND	ND	ND	ND
3,3'-dimethoxybenzidine	119-90-4	mg/kg	5	5	ND	ND	ND	ND
3,3'-dimethylbenzidine	119-93-7	mg/kg	5	5	ND	ND	ND	ND

Remarks:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: Polycyclic Aromatic Hydrocarbons (PAHs) content as specified in Regulation (EU) 2015/326 amending entry 50 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: Solvent extraction and quantification by gas chromatography-mass selective detection (GC-MS) with respect to AfPS GS 2019:01 PAK

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					1+2	3+4	5+6	7+8
Benz(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND	ND	ND	ND
Chrysene	218-01-9	mg/kg	0.5	0.2	ND	ND	ND	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND	ND	ND	ND
Benzo-(j)-fluoranthene	205-82-3	mg/kg	0.5	0.2	ND	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND	ND	ND	ND
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND	ND	ND	ND
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND	ND	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND	ND	ND	ND

Test Item(s)	CAS No.	Unit	Limit	MDL	Result	
					9+10	11+12
Benz(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND	ND
Chrysene	218-01-9	mg/kg	0.5	0.2	ND	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND	ND
Benzo-(j)-fluoranthene	205-82-3	mg/kg	0.5	0.2	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND	ND
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND	ND
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND	ND

Remarks:

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Migration of Certain Elements

Test Request: Migration of certain elements as specified in European Standard on Safety of Toys EN 71 Part 3:2019+A1:2021.

Test Method: General elements, with reference to EN 71 Part 3:2019+A1:2021, analysis was performed by ICP-MS;
Extractable Chromium (VI), with reference to EN 71 Part 3:2019+A1:2021, analysis was performed by IC-ICP-MS/IC-UV/Vis;
Extractable organic tin, with reference to EN 71 Part 3:2019+A1:2021, analysis was performed by GC-MS.

Test Item(s):	Unit	Result							
		1	2	3	4	5	6	7	8
Category Type		I	I	I	I	I	I	I	I
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND	1.1	ND	ND	1.1
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Aluminum (Al)	mg/kg	272	64	61	75	140	70	128	155
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	-	-	-	-	-	-	-	-
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium (III) (Cr III) #3	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium (VI) (Cr VI)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s):	Unit	Result			
		9	10	11	12
Category Type		I	I	I	I
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	25	ND
Extractable Aluminum (Al)	mg/kg	65	113	84	92
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	-	-	-	-
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND
Extractable Chromium (III) (Cr III) #3	mg/kg	ND	ND	ND	ND
Extractable Chromium (VI) (Cr VI)	mg/kg	ND	ND	ND	ND

Note:

#1 - The migration of organic tin is expressed as tributyltin.
#2 - If the migration of total Chromium is below the maximum limit for Chromium (VI), it can be inferred that the material complies with the requirements for both Chromium(III) and Chromium(VI).
#3 - In particular Chromium (III) is calculated by subtracting the Chromium (VI) concentration from the total chromium concentration.

Remarks:

mg/kg = milligram per kilogram
MDL = Method Detection Limit
ND = Not Detected, less than MDL

TO BE CONTINUED

TEST RESULT

Limits –MDL per category type:

Test Item(s):	Unit	Limit	MDL	Limit	MDL	Limit	MDL
Category Type		I		II		III	
Extractable Lead (Pb)	mg/kg	2.0	1.0	0.5	0.2	23	10
Extractable Antimony (Sb)	mg/kg	45	5	11.3	1	560	10
Extractable Arsenic (As)	mg/kg	3.8	0.2	0.9	0.1	47	5
Extractable Barium (Ba)	mg/kg	1500	50	375	10	18750	50
Extractable Cadmium (Cd)	mg/kg	1.3	0.1	0.3	0.05	17	1
Extractable Mercury (Hg)	mg/kg	7.5	0.5	1.9	0.2	94	10
Extractable Selenium (Se)	mg/kg	37.5	2	9.4	1	460	10
Extractable Boron (B)	mg/kg	1200	50	300	10	15000	50
Extractable Cobalt (Co)	mg/kg	10.5	1	2.6	0.2	130	10
Extractable Manganese (Mn)	mg/kg	1200	50	300	10	15000	50
Extractable Strontium (Sr)	mg/kg	4500	50	1125	50	56000	50
Extractable Zinc (Zn)	mg/kg	3750	50	938	50	46000	50
Extractable Copper (Cu)	mg/kg	622.5	10	156	10	7700	50
Extractable Aluminum (Al)	mg/kg	2250	50	560	50	28130	50
Extractable Nickel (Ni)	mg/kg	75	5	18.8	2	930	10
Extractable Tin (Sn)	mg/kg	15000	50	3750	50	180000	50
Extractable Organic Tin	mg/kg	0.9	0.2	0.2	0.2	12	0.2
Extractable Chromium	mg/kg	-	0.02	-	0.005	-	0.02
Extractable Chromium (III) (Cr III)	mg/kg	37.5	2	9.4	1	460	10
Extractable Chromium (VI) (Cr VI)	mg/kg	0.02	0.02	0.005	0.005	0.053	0.02

Category I: dry, brittle, powder-like or pliable toy material

Category II: liquid or sticky toy material

Category III: scraped-off toy material

"-" = Not Regulated

TO BE CONTINUED

TEST RESULT

Migration of Certain Elements

Test Request: Migration of certain elements as specified in European Standard on Safety of Toys EN71 Part 3:2019+A2:2024.

Test Method: General elements, with reference to EN 71 Part 3:2019+A2:2024, analysis was performed by ICP-MS;
Extractable Chromium (VI), with reference to EN 71 Part 3:2019+A2:2024, analysis was performed by IC-ICP-MS/IC-UV/Vis;
Extractable organic tin, with reference to EN 71 Part 3:2019+A2:2024, analysis was performed by GC-MS.

Test Item(s):	Unit	Result							
		1	2	3	4	5	6	7	8
Category Type									
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Aluminum (Al)	mg/kg	200	ND	ND	79	80	57	70	107
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	-	-	-	-	-	-	-	-
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium (III) (Cr III) #3	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium (VI) (Cr VI)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s):	Unit	Result			
		9	10	11	12
Category Type		I	I	I	I
Extractable Lead (Pb)	mg/kg	1.2	ND	ND	1.2
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	84	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	22	ND
Extractable Aluminum (Al)	mg/kg	75	102	57	184
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	-	-	-	-
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND
Extractable Chromium (III) (Cr III) #3	mg/kg	ND	ND	ND	ND
Extractable Chromium (VI) (Cr VI)	mg/kg	ND	ND	ND	ND

Note:

#1 - The migration of organic tin is expressed as tributyltin.
#2 - If the migration of total Chromium is below the maximum limit for Chromium (VI), it can be inferred that the material complies with the requirements for both Chromium(III) and Chromium(VI).
#3 - In particular Chromium (III) is calculated by subtracting the Chromium (VI) concentration from the total chromium concentration.

Remarks:

mg/kg = milligram per kilogram
MDL = Method Detection Limit
ND = Not Detected, less than MDL

TO BE CONTINUED

TEST RESULT

Limits –MDL per category type:

Test Item(s):	Unit	Limit	MDL	Limit	MDL	Limit	MDL
Category Type		I		II		III	
Extractable Lead (Pb)	mg/kg	2.0	1.0	0.5	0.2	23	10
Extractable Antimony (Sb)	mg/kg	45	5	11.3	1	560	10
Extractable Arsenic (As)	mg/kg	3.8	0.2	0.9	0.1	47	5
Extractable Barium (Ba)	mg/kg	1500	50	375	10	18750	50
Extractable Cadmium (Cd)	mg/kg	1.3	0.1	0.3	0.05	17	1
Extractable Mercury (Hg)	mg/kg	7.5	0.5	1.9	0.2	94	10
Extractable Selenium (Se)	mg/kg	37.5	2	9.4	1	460	10
Extractable Boron (B)	mg/kg	1200	50	300	10	15000	50
Extractable Cobalt (Co)	mg/kg	10.5	1	2.6	0.2	130	10
Extractable Manganese (Mn)	mg/kg	1200	50	300	10	15000	50
Extractable Strontium (Sr)	mg/kg	4500	50	1125	50	56000	50
Extractable Zinc (Zn)	mg/kg	3750	50	938	50	46000	50
Extractable Copper (Cu)	mg/kg	622.5	10	156	10	7700	50
Extractable Aluminum (Al)	mg/kg	2250	50	560	50	28130	50
Extractable Nickel (Ni)	mg/kg	75	5	18.8	2	930	10
Extractable Tin (Sn)	mg/kg	15000	50	3750	50	180000	50
Extractable Organic Tin	mg/kg	0.9	0.2	0.2	0.2	12	0.2
Extractable Chromium	mg/kg	-	0.02	-	0.005	-	0.02
Extractable Chromium (III) (Cr III)	mg/kg	37.5	2	9.4	1	460	10
Extractable Chromium (VI) (Cr VI)	mg/kg	0.02	0.02	0.005	0.005	0.053	0.02

Category I: dry, brittle, powder-like or pliable toy material

Category II: liquid or sticky toy material

Category III: scraped-off toy material

“-” = Not Regulated

TO BE CONTINUED

TEST RESULT

Banned AZO Dyes

Test Request: Banned AZO dyes as specified in entry 43 of annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: EN ISO 14362-1:2017, EN ISO 14362-3:2017, analysis was performed by GC-MS and confirmed with HPLC-DAD/LCMSMS

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					1+2+ 3	4+5+ 6#	7+8+ 9	10+1 1+12 #
4-methyl-m-phenylenediamine/ 2,4-Toluyldiamine	95-80-7	mg/kg	30	5	ND	ND	ND	ND
2-Naphthylamine	91-59-8	mg/kg	30	5	ND	ND	ND	ND
4,4'-methylenedi-o-toluidine/ 3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	mg/kg	30	5	ND	ND	ND	ND
Bis-(4-aminophenyl)methane	101-77-9	mg/kg	30	5	ND	ND	ND	ND
4,4'-Oxydianiline	101-80-4	mg/kg	30	5	ND	ND	ND	ND
4,4'-Thiodianiline	139-65-1	mg/kg	30	5	ND	ND	ND	ND
Benzidine	92-87-5	mg/kg	30	5	ND	ND	ND	ND
o-Toluidine	95-53-4	mg/kg	30	5	ND	ND	ND	ND
5-Nitro-o-toluidine	99-55-8	mg/kg	30	5	ND	ND	ND	ND
o-Aminoazotoluene	97-56-3	mg/kg	30	5	ND	ND	ND	ND
4-methoxy-m-phenylenediamine/ 2,4-Diaminoanisole	615-05-4	mg/kg	30	5	ND	ND	ND	ND
4,4'-Methylene-bis-(2-chloroaniline)	101-14-4	mg/kg	30	5	ND	ND	ND	ND
2,4,5-Trimethylaniline	137-17-7	mg/kg	30	5	ND	ND	ND	ND
4-Aminobiphenyl	92-67-1	mg/kg	30	5	ND	ND	ND	ND
o-Anisidine	90-04-0	mg/kg	30	5	ND	ND	ND	ND
3,3'-Dichlorobenzidine	91-94-1	mg/kg	30	5	ND	ND	ND	ND
4-Chloroaniline	106-47-8	mg/kg	30	5	ND	ND	ND	ND
3,3'-Dimethoxybenzidine	119-90-4	mg/kg	30	5	ND	ND	ND	ND
3,3'-Dimethylbenzidine	119-93-7	mg/kg	30	5	ND	ND	ND	ND
2-Methoxy-5-methylaniline	120-71-8	mg/kg	30	5	ND	ND	ND	ND
4-Chloro-2-methylaniline	95-69-2	mg/kg	30	5	ND	ND	ND	ND
4-Amino-azobenzene	60-09-3	mg/kg	30	5	ND	ND	ND	ND

Remarks:

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

#Further confirmation was done according to EN ISO 14362-3:2017 due to aniline and/ or 1, 4-phenylenediamine were detected.

1: The CAS-numbers 97-56-3 and 99-55-8 are further reduced to CAS-numbers 95-53-4 and 95-80-7.

2: 4-Amino-azobenzene(CAS No.:60-09-3) is reduced to aniline and 1, 4-phenylenediamine.

END OF THE REPORT