

TEST REPORT



AB-0505-T

72191770083 REVISION

16.07.2019

LAB LOCATION: TURKEY

LAB NO.: (7219)177-0083 REVISION

SERVICE TYPE: Regular DATE IN: June 26th, 2019 DATE OUT: July 10th, 2019 REVISION DATE: July 16th, 2019

MATERIAL SUBMITTED BİLGİ DAĞITIM KİTAP KIRTASİYE BÜRO

MALZEMELERİ TİC. LTD. STİ.

(Address: Merkez Mah. 29 Ekim Cad. No:53 Yenibosna-

Bahçelievler / YENİBOSNA)

LT943 **SUPPLIER REFERENCE**

KİTAP **BUYER** BİLGİ DAĞITIM **KIRTASİYE** BÜRO

MALZEMELERİ TİC. LTD. ŞTİ. /

MANUFACTURER

COUNTRY OF ORIGIN COUNTRY OF DESTINATION

SAMPLE DESCRIPTION Sample A: COLOURED PENCIL

COLOR SUBMITTED CARE

INSTRUCTION

LABEL AGE GRADE 36 Months + TESTED AGE GRADE 36 Months + **GENERAL CONCLUSION PASS**

SUMMARY OF TEST RESULTS

TEST REQUIRED	Sample A	
EN 71-1:2014+A1:2018 Physical and Mechanical Properties*	P	
EN 71:2:2011+A1:2014 Flammability*	P	
Migration of Certain Elements*	P	
Total Cadmium Content *	P	
Polynuclear Aromatic Hydrocarbons (PAHs)*	P	
Phthalates*	P	
*TURKAK ACCREDITED TESTS		

C/N PC/EY PAGE 1 OF 28

BV CPS TEST LABORATUVARLARI LTD. STI. BUREAU VERITAS CONSUMER PRODUCTS SERVICES Yalçın Koreş Caddesi No:22 Erdinç Binaları A Blok 2. Kule 1. Kat 34209 Güneşli, Istanbul / Turkey Tel:+90.212.494 35 35 Fax:+90.212.494 35 60 email:info.turkey@bvcps.com.tr

website: www.bureauveritas.com/cps

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at www.bureauveritas.com/cps and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted.

Our report includes all the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from the date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents



72191770083 REVISION

16.07.2019

P:PASS F:FAIL

REMARK 1*= The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. Unless otherwise is specified, the uncertainty of measurement has not been taken into account when assessing pass/fail of the sample against the requirements of the standard. In case consideration of measurement uncertainties when assessing pass/ fail limits, some results may be in borderline.

The test result, the uncertainties (if applicable) with confidence probability are given on the following pages which are part of this report.

REMARK 1: 72191770083 test report dated July 10^{th} , 2019 is not valid, it is replaced by this report 72191770083 REVISION.

REMARK 2: As per client's request, "Sample Photo" has been corrected and "Supplier Reference" has been changed as "LT943".

EXECUTIVE SUMMARY: Only vendor selected tests have been performed and submitted sample has been rated as "PASS".

Bureau Veritas Consumer Products Services Turkey BV CPS Test Lab. Ltd. Sti.

Eylem Yaldizli

Senior Client Team Lead -Hardline

Kerem Can

Operations Manager

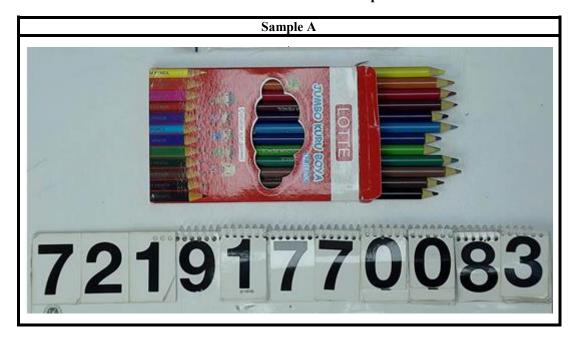




72191770083 REVISION

16.07.2019

-Photos of the Submitted Sample-





AB-0505-T 72191770083 REVISION

16.07.2019

TEST RESULTS

EN 71-1:2014+A1:2018 PHYSICAL AND MECHANICAL PROPERTIES OF TOYS

Clause	Clause Description	Test Method	RESULT
4	General Requirements	-	(A)
4.1	Material Cleanliness	-	Pass
4.7 & 7.6	Edges	8.11	Pass
4.8 & 7.6	Points And Metallic Wires	8.12, 8.13	Pass
	WARNINGS, INSTRUCTIONS FOR USE		
7	Ce Mark	-	Present
7	Manufacturer Name And Address Remark 1:There is not any manufacturer name and address on toy. According to TSD 2009/48/EC the manufacturers shall indicate their name, registered trade name or registered trade mark and the address at which they can be contacted on the toy, or, where that is not possible, on its packaging or in a document accompanying the toy.	-	Not Present (See Remark 1)
7	Importer Name And Address	-	Present
7	Product Identification	-	Present
7.1	General	-	PASS
7.2	Toys not intended for children under 36 months		PASS

^{*}Remark: The methods indicated with " $^{"}$ " are not accredited.

TEST RESULTS

EN 71-2:2011 + A1: 2014 FLAMMABILITY OF TOYS

Clause	Clause Description	RESULT
		(A)
4.1	General requirements	PASS



Tested Item(s) Sample A AB-0505-T

72191770083 REVISION

16.07.2019

TEST RESULTS

MIGRATION OF CERTAIN ELEMENTS

: I026

Slat Part

Test Method: European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8.

:	I001	Black Writing Part End Of Pencil
:	1002	Dark Brown Writing Part End Of Pencil
:	1003	Purple Writing Part End Of Pencil
:	1004	Light Brown Writing Part End Of Pencil
:	1005	Yellow Writing Part End Of Pencil
:	1006	Bordeaux Writing Part End Of Pencil
:	1007	Orange Writing Part End Of Pencil
:	1008	Red Writing Part End Of Pencil
:	1009	Dark Green Writing Part End Of Pencil
:	I010	Light Green Writing Part End Of Pencil
:	I011	Light Blue Writing Part End Of Pencil
:	I012	Dark Blue Writing Part End Of Pencil
:	I013	Black Coating On Pencil
:	I014	Dark Brown On Pencil
:	I015	Purple Coating On Pencil
:	I016	Light Brown Coating On Pencil
:	: I017	Yellow Coating On Pencil
:	I018	Bordeaux Coating On Pencil
:	I019	Orange Coating On Pencil
:	1020	Red Coating On Pencil
:	1021	Dark Green Coating On Pencil
:	1022	Light Green Coating On Pencil
:	1023	Light Blue Coating On Pencil
:	1024	Dark Blue Coating On Pencil
:	1025	Silver Coating On The Pencil

See Soluble Element (Parameter) and its	Type I	Dry, brittle, powder-like or pliable toy material
corresponding Maximum	Type II	Liquid or sticky toy material
Allowable Limit (Req.) in Result Table	Type III	Scraped-off toy material



72191770083 REVISION

16.07.2019

TEST RESULTS

MIGRATION OF CERTAIN ELEMENTS

Test Method: European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8.

-	Unit	Req.	Result				
Test Item(s)	-	-	I001	I002	I003	I005	I006
Type	-	I	I	I	I	I	I
Parameter	-	-	-	-	-	-	-
Aluminium (Al)	mg/kg	5625	2.54	2.79	2.28	2.22	2.84
Antimony (Sb)	mg/kg	45	ND	ND	ND	ND	ND
Arsenic (As)	mg/kg	3.8	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	1500	4.02	13.51	5.78	ND	26.45
Boron (B)	mg/kg	1200	ND	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	1.3	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	37.5	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.02	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	10.5	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	622.5	ND	ND	ND	ND	ND
Lead (Pb)	mg/kg	2	0.82	0.61	0.57	0.73	ND
Manganese (Mn)	mg/kg	1200	5.21	5.28	5.04	4.73	4.95
Mercury (Hg)	mg/kg	7.5	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	75	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	37.5	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	4500	ND	ND	ND	ND	ND
Tin (Sn)	mg/kg	15000	ND	ND	ND	ND	ND
Organic tin	mg/kg	0.9	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	3750	5.10	4.85	3.13	ND	2.70
Conclusion	-	-	PASS	PASS	PASS	PASS	PASS

Note / Key :

 $\label{eq:normalized} ND = Not \ detected \\ NR = Not \ requested \\ mg/kg = milligram(s) \ per \ kilogram = ppm = part(s) \ per \ million \\ [] = Detection Limit by In House Ion Chromatography Analysis \\ Detection Limit (mg/kg) :$

Req. = Requirement INCON. = Inconclusive

Detection Limit (mg/kg):

For Type I and Type II - Each (As, Cd, Cr III and Hg): 0.15; Cr VI: 0.005 [0.002]; Organic tin: 0.04; Pb: 0.5; Each (Others): 2

For Type III - Cr III: 0.15; Cr VI: 0.15 [0.002]; Each (Others): 2

Remark:

- Results of Cr III and Cr VI were reported as sum of soluble chromium content unless further verified.
- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The European Commission amended the maximum allowable limit(s) of migratable lead of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13. See details in Comment.

Latest amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:							
-	Type II Type III						
Element(s)	Chromium VI (Cr VI)	Chromium VI (Cr VI)	Chromium VI (Cr VI)				
Current	0.02 mg/kg	0.005 mg/kg	0.2 mg/kg				
Amended ^[a]	0.02 mg/kg	0.005 mg/kg	0.053 mg/kg				

[[]a] denotes as these maximum allowable limits apply from November 18, 2019 according to European Commission Directive (EU) 2018/725 of 16 May 2018 amending, for the purpose of adaptation to technical and



72191770083 REVISION

16.07.2019

scientific developments, point 13 of part III of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chromium VI.

TEST RESULTS

MIGRATION OF CERTAIN ELEMENTS

Test Method : European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8.

-	Unit	Req.			Res	ult		
Test Item(s)	-	-	I007	1008	1009	I010	I011	I012
Туре	-	I	I	I	I	I	I	I
Parameter	-	-	-	-	-	-	-	-
Aluminium (Al)	mg/kg	5625	2.17	3.06	3.90	2.77	4.77	2.61
Antimony (Sb)	mg/kg	45	ND	ND	ND	ND	ND	ND
Arsenic (As)	mg/kg	3.8	ND	0.15	ND	ND	ND	ND
Barium (Ba)	mg/kg	1500	7.56	25.93	3.37	2.63	2.89	5.19
Boron (B)	mg/kg	1200	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	1.3	ND	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	37.5	ND	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.02	ND	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	10.5	ND	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	622.5	ND	ND	ND	ND	ND	ND
Lead (Pb)	mg/kg	13.5	0.63	0.89	0.88	0.80	1.16	0.73
Manganese (Mn)	mg/kg	1200	4.47	6.45	5.86	5.47	7.25	7.48
Mercury (Hg)	mg/kg	7.5	ND	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	75	ND	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	37.5	ND	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	4500	ND	ND	ND	ND	ND	ND
Tin (Sn)	mg/kg	15000	ND	ND	ND	ND	ND	ND
Organic tin	mg/kg	0.9	ND	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	3750	ND	3.21	18.86	5.08	4.47	2.49
Conclusion	-	-	PASS	PASS	PASS	PASS	PASS	PASS

Note / Key :

Req. = Requirement INCON. = Inconclusive

 $ND = Not \ detected \\ NR = Not \ requested \\ Req. = Requir \\ Reg. = Sequir \\ Reg. = Reg. = Reg. = Reg. \\ Reg. = Requir \\ Reg. = Reg.$

Remark:

- Results of Cr III and Cr VI were reported as sum of soluble chromium content unless further verified.
- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The European Commission amended the maximum allowable limit(s) of migratable lead of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13. See details in Comment.

Latest amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:						
-	Type I	Type II	Type III			
Element(s)	Chromium VI (Cr VI)	Chromium VI (Cr VI)	Chromium VI (Cr VI)			
Current	0.02 mg/kg	0.005 mg/kg	0.2 mg/kg			
Amended ^[a]	0.02 mg/kg	0.005 mg/kg	0.053 mg/kg			
[a] denotes as these maximum allowable limits apply from November 18, 2019 according to European						



72191770083 REVISION

16.07.2019

Commission Directive (EU) 2018/725 of 16 May 2018 amending, for the purpose of adaptation to technical and scientific developments, point 13 of part III of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chromium VI.

TEST RESULTS

MIGRATION OF CERTAIN ELEMENTS

: European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8. **Test Method**

-	Unit	Req.	Result
Test Item(s)	-	-	I004
Type	-	I	I
Parameter	=	-	-
Aluminium (Al)	mg/kg	5625	5.78
Antimony (Sb)	mg/kg	45	ND
Arsenic (As)	mg/kg	3.8	0.19
Barium (Ba)	mg/kg	1500	11.60
Boron (B)	mg/kg	1200	ND
Cadmium (Cd)	mg/kg	1.3	ND
Total Chromium	mg/kg	-	0.006
Chromium III (Cr III)	mg/kg	37.5	##
Chromium VI (Cr VI)	mg/kg	0.02	##
Cobalt (Co)	mg/kg	10.5	ND
Copper (Cu)	mg/kg	622.5	2.42
Lead (Pb)	mg/kg	13.5	1.31
Manganese (Mn)	mg/kg	1200	9.62
Mercury (Hg)	mg/kg	7.5	ND
Nickel (Ni)	mg/kg	75	ND
Selenium (Se)	mg/kg	37.5	ND
Strontium (Sr)	mg/kg	4500	ND
Tin (Sn)	mg/kg	15000	ND
Organic tin	mg/kg	0.9	ND
Zinc (Zn)	mg/kg	3750	5.65
Conclusion	-	-	PASS

As total Chromium is less than 0.02 mg/kg Chromium (VI) has not been performed.

Note / Key

ND = Not detected NR = Not requested ">" = Greater than Req. = Requirement INCON. = Inconclusive g = gram(s)INCO. = interpretation of requested g = gram(s) INCO. = interpretation of the properties of the proper

Remark:

- Results of Cr III and Cr VI were reported as sum of soluble chromium content unless further verified.
- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The European Commission amended the maximum allowable limit(s) of migratable lead of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13. See details in Comment.

C/N PC/EY PAGE 8 OF 28



72191770083 REVISION

16.07.2019

Latest amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:							
-	Type II Type III						
Element(s)	Chromium VI (Cr VI)	Chromium VI (Cr VI)	Chromium VI (Cr VI)				
Current	0.02 mg/kg	0.005 mg/kg	0.2 mg/kg				
Amended ^[a]	0.02 mg/kg	0.005 mg/kg	0.053 mg/kg				

[[]a] denotes as these maximum allowable limits apply from November 18, 2019 according to European Commission Directive (EU) 2018/725 of 16 May 2018 amending, for the purpose of adaptation to technical and scientific developments, point 13 of part III of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chromium VI.



72191770083 REVISION

16.07.2019

TEST RESULTS

Migration of Certain Elements

Test Method : European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8.

See Soluble Element (Parameter) and its	Type I	Dry, brittle, powder-like or pliable toy material
corresponding Maximum	Type II	Liquid or sticky toy material
Allowable Limit (Req.) in Result Table	Type III	Scraped-off toy material

-	Unit	Req.		Res	ult	
Test Item(s)	-	_	I013	I014	I016	I019
Type	-	III	III	III	III	III
Parameter	-	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	ND	ND	ND	ND
Antimony (Sb)	mg/kg	560	ND	2.07	ND	ND
Arsenic (As)	mg/kg	47	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	ND	ND	ND	ND
Boron (B)	mg/kg	15000	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND
Total Chromium	mg/kg	-	0.08	0.013	0.013	0.012
Chromium III (Cr III)	mg/kg	460	##	##	##	##
Chromium VI (Cr VI)	mg/kg	0.2	##	##	##	##
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	ND	ND
Lead (Pb)	mg/kg	23	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	ND	ND	ND	ND
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	ND	ND	ND	ND
Conclusion	-	-	PASS	PASS	PASS	PASS

As total Chromium is less than 0.2 mg/kg Chromium (VI) has not been performed.

Note / Key

ND = Not detected ">" = Greater than Req. = Requir NR = Not requested g = gram(s) INCON. = Income Reg. = milligram(s) per kilogram = ppm = part(s) per million
[] = Detection Limit by In House Ion Chromatography Analysis Detection Limit (mg/kg):
For Type I and Type II - Each (As, Cd, Cr III and Hg): 0.15; Cr VI: 0.005 [0.002]; Organic tin: 0.04; Pb: 0.5; Each (Others): 2
For Type III - Cr III: 0.15; Cr VI: 0.15 [0.002]; Each (Others): 2 Req. = Requirement INCON. = Inconclusive

Remark:

- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The European Commission amended the maximum allowable limit(s) of migratable lead of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13. See details in Comment.



72191770083 REVISION

16.07.2019

Latest amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:					
-	Type II Type III				
Element(s)	Chromium VI (Cr VI)	Chromium VI (Cr VI)	Chromium VI (Cr VI)		
Current	0.02 mg/kg	0.005 mg/kg	0.2 mg/kg		
Amended ^[a]	0.02 mg/kg	0.005 mg/kg	0.053 mg/kg		

^[a] denotes as these maximum allowable limits apply from November 18, 2019 according to European Commission Directive (EU) 2018/725 of 16 May 2018 amending, for the purpose of adaptation to technical and scientific developments, point 13 of part III of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chromium VI.



72191770083 REVISION

16.07.2019

TEST RESULTS

Migration of Certain Elements

Test Method : European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8.

See Soluble Element (Parameter) and its	Type I	Dry, brittle, powder-like or pliable toy material
corresponding Maximum	Type II	Liquid or sticky toy material
Allowable Limit (Req.) in Result Table	Type III	Scraped-off toy material

-	Unit	Req.		Res	ult	
Test Item(s)	-	-	I021	I022	I025	I026
Type	-	III	III	III	III	III
Parameter	-	-	-	-	-	_
Aluminium (Al)	mg/kg	70000	ND	ND	3.79	2.31
Antimony (Sb)	mg/kg	560	ND	ND	ND	6.72
Arsenic (As)	mg/kg	47	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	ND	ND	ND	ND
Boron (B)	mg/kg	15000	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND
Total Chromium	mg/kg	-	0.011	0.025	0.036	0.064
Chromium III (Cr III)	mg/kg	460	##	##	##	##
Chromium VI (Cr VI)	mg/kg	0.2	##	##	##	##
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	ND	ND
Lead (Pb)	mg/kg	23	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	ND	ND	ND	2.20
Tin (Sn)	mg/kg	180000	ND	ND	ND	0.98
Organic tin	mg/kg	12	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	ND	ND	ND	2.69
Conclusion	-	-	PASS	PASS	PASS	PASS

As total Chromium is less than 0.2 mg/kg Chromium (VI) has not been performed.

Note / Key

ND = Not detected ">" = Greater than Req. = Requir NR = Not requested g = gram(s) INCON. = Income Reg. = milligram(s) per kilogram = ppm = part(s) per million
[] = Detection Limit by In House Ion Chromatography Analysis Detection Limit (mg/kg):
For Type I and Type II - Each (As, Cd, Cr III and Hg): 0.15; Cr VI: 0.005 [0.002]; Organic tin: 0.04; Pb: 0.5; Each (Others): 2
For Type III - Cr III: 0.15; Cr VI: 0.15 [0.002]; Each (Others): 2 Req. = Requirement INCON. = Inconclusive

Remark:

- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The European Commission amended the maximum allowable limit(s) of migratable lead of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13. See details in Comment.



72191770083 REVISION

16.07.2019

Latest amend	Latest amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:					
-	Type I	Type II	Type III			
Element(s)	Chromium VI (Cr VI)	Chromium VI (Cr VI)	Chromium VI (Cr VI)			
Current	0.02 mg/kg	0.005 mg/kg	0.2 mg/kg			
Amended ^[a]	0.02 mg/kg	0.005 mg/kg	0.053 mg/kg			

[[]a] denotes as these maximum allowable limits apply from November 18, 2019 according to European Commission Directive (EU) 2018/725 of 16 May 2018 amending, for the purpose of adaptation to technical and scientific developments, point 13 of part III of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chromium VI.



72191770083 REVISION

16.07.2019

TEST RESULTS

Migration of Certain Elements

Test Method : European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8.

See Soluble Element (Parameter) and its	Type I	Dry, brittle, powder-like or pliable toy material
corresponding Maximum	Type II	Liquid or sticky toy material
Allowable Limit (Req.) in Result Table	Type III	Scraped-off toy material

-	Unit	Req.		Res	ult	
Test Item(s)	-	-	I015	I017	I018	I020
Type	-	III	III	III	III	III
Parameter	-	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	ND	ND	ND	ND
Antimony (Sb)	mg/kg	560	ND	ND	ND	ND
Arsenic (As)	mg/kg	47	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	ND	ND	ND	ND
Boron (B)	mg/kg	15000	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	460	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.2	ND	ND	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	ND	ND
Lead (Pb)	mg/kg	23	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	ND	ND	ND	ND
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	ND	ND	ND	ND
Conclusion	-	-	PASS	PASS	PASS	PASS

Note / Key :

ND = Not detected NR = Not requested ">" = Greater than NR = Not requested g = gram(s)

MR = Not requested g = gram(s)

mg/kg = milligram(s) per kilogram = ppm = part(s) per million

[] = Detection Limit by In House Ion Chromatography Analysis

Req. = Requirement INCON. = Inconclusive

Detection Limit (mg/kg): For Type I and Type II - Each (As, Cd, Cr III and Hg): 0.15; Cr VI: 0.005 [0.002]; Organic tin: 0.04; Pb: 0.5; Each (Others): 2 For Type III - Cr III: 0.15; Cr VI: 0.15 [0.002]; Each (Others): 2

Remark:

- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The European Commission amended the maximum allowable limit(s) of migratable lead of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13. See details in Comment.



72191770083 REVISION

16.07.2019

Latest amend	Latest amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:					
-	Type II Type III					
Element(s)	Chromium VI (Cr VI)	Chromium VI (Cr VI)	Chromium VI (Cr VI)			
Current	0.02 mg/kg	0.005 mg/kg	0.2 mg/kg			
Amended ^[a]	0.02 mg/kg	0.005 mg/kg	0.053 mg/kg			

[[]a] denotes as these maximum allowable limits apply from November 18, 2019 according to European Commission Directive (EU) 2018/725 of 16 May 2018 amending, for the purpose of adaptation to technical and scientific developments, point 13 of part III of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chromium VI.



72191770083 REVISION

16.07.2019

TEST RESULTS

Migration of Certain Elements

Test Method : European Standard EN 71 Part 3: 2013 with Amendment A3: 2018, Section 8.

See Soluble Element (Parameter) and its	Type I	Dry, brittle, powder-like or pliable toy material
corresponding Maximum	Type II	Liquid or sticky toy material
Allowable Limit (Req.) in Result Table	Type III	Scraped-off toy material

-	Unit	Req.	Res	ult
Test Item(s)	-	-	I023	I024
Type	-	III	III	III
Parameter	-	_	-	-
Aluminium (Al)	mg/kg	70000	ND	ND
Antimony (Sb)	mg/kg	560	2.11	ND
Arsenic (As)	mg/kg	47	ND	ND
Barium (Ba)	mg/kg	18750	ND	ND
Boron (B)	mg/kg	15000	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND
Chromium III (Cr III)	mg/kg	460	ND	ND
Chromium VI (Cr VI)	mg/kg	0.2	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND
Lead (Pb)	mg/kg	23	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND
Selenium (Se)	mg/kg	460	ND	ND
Strontium (Sr)	mg/kg	56000	ND	ND
Tin (Sn)	mg/kg	180000	ND	ND
Organic tin	mg/kg	12	ND	ND
Zinc (Zn)	mg/kg	46000	ND	ND
Conclusion	-	_	PASS	PASS

Note / Key :

">" = Greater than

Req. = Requirement INCON. = Inconclusive

Detection Limit (mg/kg): For Type I and Type II - Each (As, Cd, Cr III and Hg): 0.15; Cr VI: 0.005 [0.002]; Organic tin: 0.04; Pb: 0.5; Each (Others): 2 For Type III - Cr III: 0.15; Cr VI: 0.15 [0.002]; Each (Others): 2

Remark:

- Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The European Commission amended the maximum allowable limit(s) of migratable lead of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13. See details in Comment.



72191770083 REVISION

16.07.2019

Latest amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:					
-	Type I	Type II	Type III		
Element(s)	Chromium VI (Cr VI)	Chromium VI (Cr VI)	Chromium VI (Cr VI)		
Current	0.02 mg/kg	0.005 mg/kg	0.2 mg/kg		
Amended ^[a]	0.02 mg/kg	0.005 mg/kg	0.053 mg/kg		

[[]a] denotes as these maximum allowable limits apply from November 18, 2019 according to European Commission Directive (EU) 2018/725 of 16 May 2018 amending, for the purpose of adaptation to technical and scientific developments, point 13 of part III of Annex II to Directive 2009/48/EC of the European Parliament and of the Council on the safety of toys, as regards chromium VI.



72191770083 REVISION

16.07.2019

TEST RESULTS

TOTAL CADMIUM CONTENT

Test Method : In House Test Method CPSD-AN-00004-MTHD

: I001 Black Writing Part End Of Pencil+ Dark Brown Writing Part End Of Pencil +

Purple Writing Part End Of Pencil

: I002 Light Brown Writing Part End Of Pencil + Yellow Writing Part End Of Pencil +

Tested Item(s) Bordeaux Writing Part End Of Pencil

Sample A : 1003 Orange Writing Part End Of Pencil + Red Writing Part End Of Pencil + Dark

Green Writing Part End Of Pencil

: I004 Light Green Writing Part End Of Pencil+ Light Blue Writing Part End Of Pencil+

Dark Blue Writing Part End Of Pencil

: I005 Black Coating On Pencil+ Dark Brown On Pencil+ Purple Coating On Pencil

: I006 Light Brown Coating On Pencil+ Yellow Coating On Pencil+ Bordeaux Coating On

Pencil

: I007 Orange Coating On Pencil+ Red Coating On Pencil+ Dark Green Coating On Pencil

Light Green Coating On Pencil + Light Blue Coating On Pencil
Dark Blue Coating On Pencil+ Silver Coating On The Pencil

Limit:	100 mg/kg
--------	-----------

Parameter	Unit		Results				
-	-	I001	1002	1003	1004	1005	
Total Cadmium (Cd)	ppm	<10	<10	<10	<10	<10	
Conclusion	-	PASS	PASS	PASS	PASS	PASS	

Parameter	Unit		Results				
-	-	1006	1007	1008	1009		
Total Cadmium (Cd)	ppm	<10	<10	<10	<10		
Conclusion	-	PASS	PASS	PASS	PASS		

Note / Key:

ND = Not detected ">" = Greater than

mg/kg = milligram(s) per kilogram = ppm = part(s) per million

10 000 mg/kg = 1 %

% = percent No. = Number(s)

Detection Limit (mg/kg): 10

Remark: Analysis has been performed and evaluated as European Parliament and Council Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with its Latest Amendment, Entry 23



72191770083 REVISION

16.07.2019

TEST RESULTS

POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)

Test method: BV CPS In House Method, CPSD-AN-00090-MTHD

I001 Black Writing Part End Of Pencil 1002 Dark Brown Writing Part End Of Pencil Purple Writing Part End Of Pencil I003 Tested Item(s) I004 Light Brown Writing Part End Of Pencil : Yellow Writing Part End Of Pencil I005 Sample A Bordeaux Writing Part End Of Pencil I006 I007 Orange Writing Part End Of Pencil Red Writing Part End Of Pencil 1008 I009 Dark Green Writing Part End Of Pencil I010 Light Green Writing Part End Of Pencil Light Blue Writing Part End Of Pencil : I011 Dark Blue Writing Part End Of Pencil I012 Black Coating On Pencil + Dark Brown On Pencil I013 I014 Purple Coating On Pencil + Light Brown Coating On Pencil Yellow Coating On Pencil + Bordeaux Coating On Pencil I015 Orange Coating On Pencil + Red Coating On Pencil I016 I017 Dark Green Coating On Pencil + Light Green Coating On Pencil : Light Blue Coating On Pencil I018 Dark Blue Coating On Pencil + Dark Blue Coating On Pencil I019

Parameter	Unit			Results			Requirements
-	-	I001	1002	1003	I004	1005	
Benzo (a) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2]
Benzo (e) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1
Benzo (a) anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1
Chrysene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	Each of 8 PAHs
Benzo (b) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5 mg/kg
Benzo (j) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (k) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2]
Dibenzo(a,h)anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Sum	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Conclusion	-	PASS	PASS	PASS	PASS	PASS	-

ND = Not detected ">" = Greater than Req. = Requirement

NR = Not requested g = gram(s) INCON. = Inconclusive

mg/kg = milligram(s) per kilogram = ppm =

part(s) per million

Detection Limit (mg/kg): Each: 0.2; Sum: 0.2

Remark: - The list of list of Polynuclear Aromatic Hydrocarbons are summarized in table of Appendix B.

C/N PC/EY PAGE 19 OF 28



72191770083 REVISION

16.07.2019

TEST RESULTS

POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)

Test method: BV CPS In House Method, CPSD-AN-00090-MTHD

Parameter	Unit		Results				
-	-	1006	1007	1008	1009	I010	
Benzo (a) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	<0.2	< 0.2	
Benzo (e) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (a) anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	E 1 CODAIN
Chrysene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	Each of 8 PAHs
Benzo (b) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5 mg/kg
Benzo (j) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2]
Benzo (k) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Dibenzo(a,h)anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1
Sum	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1
Conclusion	-	PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit			Results			Requirements
-	-	I011	I012	I013	I014	I015	
Benzo (a) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (e) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (a) anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	Factor CO DAIL
Chrysene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	Each of 8 PAHs
Benzo (b) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5 mg/kg
Benzo (j) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (k) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Dibenzo(a,h)anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Sum	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
Conclusion	-	PASS	PASS	PASS	PASS	PASS	-

ND = Not detected ">" = Greater than Req. = Requirement

g = gram(s)

mg/kg = milligram(s) per kilogram = ppm =

part(s) per million

Detection I in the first section of the part is the first section of the part in the first section of the part is the first section of the part is the first section of the part in the first section of the part is the part is the part is the part in the part is the INCON. = Inconclusive NR = Not requested

Detection Limit (mg/kg): Each: 0.2; Sum: 0.2

Remark: -The list of list of Polynuclear Aromatic Hydrocarbons are summarized in table of Appendix B.

PAGE 20 OF 28 C/N PC/EY



72191770083 REVISION

16.07.2019

TEST RESULTS

POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs)

Test method: BV CPS In House Method, CPSD-AN-00090-MTHD

Parameter	Unit		Re	sults		Requirements
-	-	I016	I017	I018	I019	
Benzo (a) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (e) pyrene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (a) anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	E 1 CODAII
Chrysene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	Each of 8 PAHs
Benzo (b) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5 mg/kg
Benzo (j) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	
Benzo (k) fluoranthene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2]
Dibenzo(a,h)anthracene	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	
Sum	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	
Conclusion	-	PASS	PASS	PASS	PASS	-

ND = Not detected ">" = Greater than Req. = RequirementINCON. = Inconclusive

NR = Not requestedg = gram(s)

mg/kg = milligram(s) per kilogram = ppm =
part(s) per million
Detection Limit (mg/kg): Each: 0.2; Sum: 0.2

Remark: -The list of list of Polynuclear Aromatic Hydrocarbons are summarized in table of Appendix B.

PAGE 21 OF 28 C/N PC/EY



72191770083 REVISION

16.07.2019

TEST RESULTS

PHTHALATES

Test Method: BV In-house test method CPSD-AN-00095-MTHD

Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS) or Liquid

Chromatograph Mass Spectrometer (LC-MS).

Black Writing Part End Of Pencil I001 1002 Dark Brown Writing Part End Of Pencil I003 Purple Writing Part End Of Pencil Light Brown Writing Part End Of Pencil Tested Item(s) I004 : 1005 Yellow Writing Part End Of Pencil Sample A Bordeaux Writing Part End Of Pencil I006 I007 Orange Writing Part End Of Pencil I008 Red Writing Part End Of Pencil Dark Green Writing Part End Of Pencil 1009 : I010 Light Green Writing Part End Of Pencil : I011 Light Blue Writing Part End Of Pencil Dark Blue Writing Part End Of Pencil I012 : I013 Black Coating On Pencil + Dark Brown On Pencil+ Purple Coating On Pencil : I014 Light Brown Coating On Pencil + Yellow Coating On Pencil + Bordeaux Coating On Pencil I015 Orange Coating On Pencil + Red Coating On Pencil+ Dark Green Coating On Pencil I016 Light Green Coating On Pencil + Light Blue Coating On Pencil

Limit: Sum of (DBP, BBP, DEHP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))

Dark Blue Coating On Pencil + Silver Coating On The Pencil

Sum of (DNOP, DIDP, DINP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))

-	Results			Complexion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1001	Sum	ND	mg/kg	PASS
1001	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1002	Sum	ND	mg/kg	PASS
1002	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
_	Overall Conclusion	-	-	PASS

Remark1:

Note:

ND = Not detected % = percent = 10000 mg/kg Detection Limit (mg/kg): Each 50; Sum 150 ">" = More than mg/kg = milligram per kilogram Conc. = Concentration

Remark2:

- The list of phthalates is summarized in table of Appendix C.

I017

Recommended Max. limit specified by entries 51 and 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously

C/N PC/EY PAGE 22 OF 28



72191770083 REVISION

16.07.2019

restricted under Directive 2005/84/EC

TEST RESULTS

PHTHALATES

BV In-house test method CPSD-AN-00095-MTHD **Test Method**

Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS) or Liquid

Chromatograph Mass Spectrometer (LC-MS).

Sum of (DBP, BBP, DEHP): Less than 1000 mg/kg (Sum) (0.1 % (Sum)) Limit: Sum of (DNOP, DIDP, DINP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1003	Sum	ND	mg/kg	PASS
1003	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1004	Sum	ND	mg/kg	PASS
1004	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	1
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Constraion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1005	Sum	ND	mg/kg	PASS
1003	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

Remark1:

Note:

ND = Not detected % = percent = 10000 mg/kg Detection Limit (mg/kg): Each 50; Sum 150

">" = More than mg/kg = milligram per kilogram Conc. = Concentration

Remark2:

The list of phthalates is summarized in table of Appendix C.

Remark3:

Recommended Max. limit specified by entries 51 and 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC

C/N PC/EY **PAGE 23 OF 28**



72191770083 REVISION

16.07.2019

TEST RESULTS

PHTHALATES

Test Method: BV In-house test method CPSD-AN-00095-MTHD

Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS) or Liquid

Chromatograph Mass Spectrometer (LC-MS).

Limit: Sum of (DBP, BBP, DEHP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))
Sum of (DNOP, DIDP, DINP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))

-	Results	Results			
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion	
	DBP (Dibutylphthalate)	ND	mg/kg	-	
	BBP (Butylbenzylphthalate)	ND	mg/kg	-	
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-	
1006	Sum	ND	mg/kg	PASS	
1000	DNOP (Di-n-octylphthalate)	ND	mg/kg	-	
	DIDP (Diisodecylphthalate)	ND	mg/kg	-	
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-	
	Sum	ND	mg/kg	PASS	
	Overall Conclusion	-	-	PASS	

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1007	Sum	ND	mg/kg	PASS
1007	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1008	Sum	ND	mg/kg	PASS
1006	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

Remark1:

Note:

ND = Not detected % = percent = 10000 mg/kg ">" = More than mg/kg = milligram per kilogram Conc. = Concentration

Remark2:

The list of phthalates is summarized in table of Appendix C.

Detection Limit (mg/kg): Each 50; Sum 150

Remark3:

 $Recommended \ Max. \ limit specified \ by \ entries \ 51 \ and \ 52 \ of \ Regulation \ (EC) \ No \ 552/2009 \ amending \ Annex \ XVII \ of \ REACH \ Regulation \ (EC) \ No \ 1907/2006 \ (previously restricted \ under \ Directive \ 2005/84/EC$



72191770083 REVISION

16.07.2019

TEST RESULTS

PHTHALATES

Test Method: BV In-house test method CPSD-AN-00095-MTHD

Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS) or Liquid

Chromatograph Mass Spectrometer (LC-MS).

Limit: Sum of (DBP, BBP, DEHP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))
Sum of (DNOP, DIDP, DINP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1009	Sum	ND	mg/kg	PASS
1009	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	1
	BBP (Butylbenzylphthalate)	ND	mg/kg	•
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1010	Sum	ND	mg/kg	PASS
1010	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
I011	Sum	ND	mg/kg	PASS
1011	DNOP (Di-n-octylphthalate)	ND	mg/kg	•
	DIDP (Diisodecylphthalate)	ND	mg/kg	•
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	•
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

Remark1:

Note:

ND = Not detected % = percent = 10000 mg/kg Detection Limit (mg/kg): Each 50; Sum 150 ">" = More than mg/kg = milligram per kilogram Conc. = Concentration

Remark2:

- The list of phthalates is summarized in table of Appendix C.

Remark3:

 $Recommended \ Max. \ limit specified \ by \ entries \ 51 \ and \ 52 \ of \ Regulation \ (EC) \ No \ 552/2009 \ amending \ Annex \ XVII \ of \ REACH \ Regulation \ (EC) \ No \ 1907/2006 \ (previously restricted \ under \ Directive \ 2005/84/EC$



72191770083 REVISION

16.07.2019

TEST RESULTS

PHTHALATES

Test Method: BV In-house test method CPSD-AN-00095-MTHD

Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS) or Liquid

Chromatograph Mass Spectrometer (LC-MS).

Limit: Sum of (DBP, BBP, DEHP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))
Sum of (DNOP, DIDP, DINP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
I012	Sum	ND	mg/kg	PASS
1012	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	•
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	83.6	mg/kg	PASS
I013	Sum	83.6	mg/kg	PASS
1013	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	77.1	mg/kg	PASS
1014	Sum	77.1	mg/kg	PASS
1014	DNOP (Di-n-octylphthalate)	ND	mg/kg	1
	DIDP (Diisodecylphthalate)	ND	mg/kg	•
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	•
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

Remark1:

Note:

ND = Not detected % = percent = 10000 mg/kg Detection Limit (mg/kg): Each 50; Sum 150 ">" = More than mg/kg = milligram per kilogram Conc. = Concentration

Remark2:

- The list of phthalates is summarized in table of Appendix C.

Remark3:

Recommended Max. limit specified by entries 51 and 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC



72191770083 REVISION

16.07.2019

TEST RESULTS

PHTHALATES

Test Method BV In-house test method CPSD-AN-00095-MTHD

Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS) or Liquid

Chromatograph Mass Spectrometer (LC-MS).

Sum of (DBP, BBP, DEHP): Less than 1000 mg/kg (Sum) (0.1 % (Sum)) Limit: Sum of (DNOP, DIDP, DINP): Less than 1000 mg/kg (Sum) (0.1 % (Sum))

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	65.8	mg/kg	PASS
I015	Sum	65.8	mg/kg	PASS
1013	DNOP (Di-n-octylphthalate)	ND	mg/kg	1
	DIDP (Diisodecylphthalate)	ND	mg/kg	1
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	1
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	54.2	mg/kg	PASS
I016	Sum	54.2	mg/kg	PASS
1010	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	61.8	mg/kg	PASS
1017	Sum	61.8	mg/kg	PASS
1017	DNOP (Di-n-octylphthalate)	ND	mg/kg	
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

Remark1:

Note:

ND = Not detected % = percent = 10000 mg/kg Detection Limit (mg/kg): Each 50; Sum 150

">" = More than mg/kg = milligram per kilogram Conc. = Concentration

Remark2:

The list of phthalates is summarized in table of Appendix C.

Remark3:

Recommended Max. limit specified by entries 51 and 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC

PAGE 27 OF 28



72191770083 REVISION

16.07.2019

APPENDIX A

TEST NAME	STANDARD NAME	MEASUREMENT UNCERTAINTY
Polybag /Plastic Thickness	EN 71-1 4.3, 5.3 & 6, 8.25.1	±12,2 %
Sheeting Measurement		
Yo-Yo Ball Test	EN 71-1 part 4.24, 8.37.1 6 8.37.2	±2,8 %
Torque Test	EN 71-1 part 8.3	±15,7 %
Perimeter of Toys	EN 71-1 part 8.36	±1,2 %
Tension Test	EN 71-1 part 8.4	±18,1 %
Kinetic Energy Test	EN 71-1 part 8.24	±0,9 %
Soft Filled Toys	EN 71-2 part 4.5	±6,97 %
Heavy Metal	DIN EN 71 Part 3	± %9
	BS EN 71: Part 3	± %9

APPENDIX B

List	List of Polynuclear Aromatic Hydrocarbons:						
No.	Name of Analytes	CAS-No.					
1	Benzo (a) anthracene	56-55-3					
2	Chrysene	218-01-9					
3	Benzo (a) pyrene	50-32-8					
4	Benzo (e) pyrene	192-97-2					
5	Dibenzo (a,h) anthracene	53-70-3					
6	Benzo (b) fluoranthene	205-99-2					
7	Benzo (k) fluoranthene	207-08-9					
8	Benzo (j) fluoranthene	205-82-3					

APPENDIX C

TEST NAME	STANDARD NAME	MEASUREMENT UNCERTAINTY
Phthalates	In-house test method	± 0.16 x result
	CPSD-AN-00095-MTHD	

List o	List of Phthalates:								
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.				
1	Butylbenzylphthalate (BBP)	85-68-7	5	Di-iso-nonylphthalate (DINP)	28553-12-0				
2	Dibutylphthalate (DBP)	84-74-2	6	Diisodecylphthalate (DIDP)	26761-40-0				
3	Di(2-ethylhexyl)-phthalate (DEHP)	117-81-7	7	-	-				
4	Di-n-octylphthalate (DNOP)	117-84-0	-	-	-				

- END OF REPORT-