

# **TEST REPORT**



AB-0505-T

72201430130

12.06.2020

LAB LOCATION: TURKEY LAB NO.: (7220)143-0130 **SERVICE TYPE: Regular DATE IN: May 22th, 2020** 

RESUBMISSION DATE: June 12th, 2020

DATE OUT: June 12th, 2020

: BIGPOINT KIRTASIYE SAN. ve TİC. LTD. ŞTİ. **MATERIAL SUBMITTED** 

(Attn: efe@bigpoint.com.tr)

26003844, LT940-12 SUPPLIER REFERENCE

**STYLE NO** 

**BUYER** BIGPOINT KIRTASIYE SAN. ve TİC. LTD. ŞTİ.

MANUFACTURER

**COUNTRY OF ORIGIN EGYPT** 

Sample A: 12 pcs. Colour Pencil SAMPLE DESCRIPTION

**COLOR** SUBMITTED CARE **INSTRUCTION** LOT NO LABEL AGE GRADE 36 M +

**TESTED AGE GRADE** 36 M +: PASS **GENERAL CONCLUSION** 

## **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
EN 71 Part 3: 2019 Migration of Certain Elements*	P
Migration of Certain Elements Chromium III and Chromium VI Confirmation*	P
Phthalates*	P
Total Cadmium Content*	P
Polynuclear Aromatic Hydrocarbons (PAHs)*	P
*TURKAK ACCREDITED TESTS	

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.

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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 <a href="https://www.bureauveritas.com/cps">www.bureauveritas.com/cps</a> 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 are propriets for fur 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



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

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

Eylem Yaldizli

Senior Client Team Lead -Hardline

Yagiz Barin

Hardline & Pharma Lab. Manager



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# -Photo of the Submitted Sample-





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## **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 Importer Name And Address		-	Present
7	Product Identification	-	Present
7.1	General	-	Pass
7.2	Toys not intended for children under 36 months		Pass

<sup>\*</sup>Remark: The methods indicated with "#" are not accredited.

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

Clause	Clause Description	RESULT
		<b>(A)</b>
4.1	General requirements	PASS



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## **TEST RESULTS**

# **MIGRATION OF CERTAIN ELEMENTS**

Test Method: European Standard EN 71 Part 3: 2019, Section 8.

: I001 Wood

: I002 Black Pen Nib

: I003 Grey Pen Nib

: I004 Red Pen Nib

: I005 Brown Pen Nib

: I006 Orange Pen Nib

I007 Yellow Pen Nib

1008 Light Green Pen Nib

I009 Dark Green Pen Nib

: I010 Blue Pen Nib

I011 Navy Pen Nib

I012 Purple Pen Nib

I013 Pink Pen Nib

: I014 Black-Silver Coating

I015 Grey-Silver Coating

I016 Red-Silver Coating

I017 Brown-Silver Coating

I018 Orange-Silver Coating

I019 Yellow-Silver Coating

I020 Light Green-Silver Coating

I021 Dark Green-Silver Coating

: I022 Blue-Silver Coating

I023 Navy-Silver Coating

: I024 Purple-Silver Coating

I025 Pink-Silver Coating

: I026 White Paper

: I027 Blue Printed Paper

: I028 Yellow Printed Paper

: I029 Multicolor Printed Paper In Bottom

See Soluble Element (Parameter) and
its corresponding Maximum Allowable
Limit (Req.) in Result Table

Tested Item(s)

Sample A

Type I	Dry, brittle, powder-like or pliable toy material
Type II	Liquid or sticky toy material
Type III	Scraped-off toy material



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## **TEST RESULTS**

## **MIGRATION OF CERTAIN ELEMENTS**

Test Method: European Standard EN 71 Part 3: 2019, Section 8.

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

	Unit	Req.					Result				
Test Item(s)	-	-	1002	1003	1004	1005	1006	1009	I010	I011	I013
Туре	-	I	I	I	I	I	I	I	I	I	I
Parameter	-	-	-	-	-	-	-	-	-	-	-
Aluminium (Al)	mg/kg	5625	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony (Sb)	mg/kg	45	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (As)	mg/kg	3.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	1500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron (B)	mg/kg	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	37.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	10.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	622.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead (Pb)	mg/kg	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (Mn)	mg/kg	1200	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (Hg)	mg/kg	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	75	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	37.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	4500	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tin (Sn)	mg/kg	15000	ND	ND	ND	ND	ND	ND	ND	ND	ND
Organic tin	mg/kg	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	3750	ND	4.05	ND	ND	ND	ND	ND	ND	ND
Conclusion	-	-	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Note / Key:

ND = Not detected NR = Not requested  $``>" = Greater\ than$ Req. = Requirement INCON: Inconclusive g = gram(s)

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

[] = Detection Limit by test method with reference to EN 71 Part 3: 2019, Annex F

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 : 0.05 [0.002] ; Each ( Others ) : 2

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#### 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.

Proposals to amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:					
- Type II Type III					
Element(s)	Aluminium (Al)	Aluminium (Al)	Aluminium (Al)		
Current	5 625 mg/kg	1 406 mg/kg	70 000 mg/kg		
Proposed <sup>[b]</sup>	2 250 mg/kg	560 mg/kg	28 130 mg/kg		

[a] denotes as these maximum allowable limits apply from May 20, 2021 according to European Commission Directive (EU) 2019/1922 of 18 November 2019 amending, for the purposes 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 aluminium.



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## **TEST RESULTS**

## **MIGRATION OF CERTAIN ELEMENTS**

Test Method: European Standard EN 71 Part 3: 2019, Section 8.

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

	Unit	Req.		Result	
Test Item(s)	-	-	1007	1008	I012
Type	-	I	I	I	I
Parameter	-	-	-	-	-
Aluminium (Al)	mg/kg	5625	ND	ND	ND
Antimony (Sb)	mg/kg	45	ND	ND	ND
Arsenic (As)	mg/kg	3.8	ND	ND	ND
Barium (Ba)	mg/kg	1500	ND	ND	ND
Boron (B)	mg/kg	1200	ND	ND	ND
Cadmium (Cd)	mg/kg	1.3	ND	ND	ND
Chromium III (Cr III)	mg/kg	37.5	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.02	ND	ND	ND
Cobalt (Co)	mg/kg	10.5	ND	ND	ND
Copper (Cu)	mg/kg	622.5	ND	ND	ND
Lead (Pb)	mg/kg	2	ND	ND	ND
Manganese (Mn)	mg/kg	1200	ND	ND	ND
Mercury (Hg)	mg/kg	7.5	ND	ND	ND
Nickel (Ni)	mg/kg	75	ND	ND	ND
Selenium (Se)	mg/kg	37.5	ND	ND	ND
Strontium (Sr)	mg/kg	4500	ND	ND	ND
Total Tin	mg/kg	-	0.05	0.07	0.04
Tin (Sn)	mg/kg	15000	###	###	###
Organic tin	mg/kg	0.9	###	###	###
Zinc (Zn)	mg/kg	3750	ND	ND	ND
Conclusion	-	-	PASS	PASS	PASS

## ###As total Tin is less than 0.9 mg/kg Organic Tin confirmation has not been performed.

Note / Key:

">" = Greater than Req. = Requirement ND = Not detected INCON: Inconclusive

NR = Not requested g = gram(s) mg/kg = milligram(s) per kilogram = ppm = part(s) per million

[] = Detection Limit by test method with reference to EN 71 Part 3: 2019, Annex F

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: 0.05 [0.002]; Each (Others): 2

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#### 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.

Proposals to amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:					
- Type II Type III					
Element(s)	Aluminium (Al)	Aluminium (Al)	Aluminium (Al)		
Current	5 625 mg/kg	1 406 mg/kg	70 000 mg/kg		
Proposed <sup>[b]</sup>	2 250 mg/kg	560 mg/kg	28 130 mg/kg		

[a] denotes as these maximum allowable limits apply from May 20, 2021 according to European Commission Directive (EU) 2019/1922 of 18 November 2019 amending, for the purposes 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 aluminium.



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#### **TEST RESULTS**

## **MIGRATION OF CERTAIN ELEMENTS**

Test Method: European Standard EN 71 Part 3: 2019, Section 8.

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

	Unit	Req.				Result			
Test Item(s)	-	-	1001	I014	I016	I018	I019	1020	I021
Туре	-	III	III	III	III	III	III	III	III
Parameter	-	-	-	•	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	2.95	2.78	5.8	ND	3.94	2.71	2.75
Antimony (Sb)	mg/kg	560	3.35	3.8	3.51	ND	4.11	2.4	2.78
Arsenic (As)	mg/kg	47	ND	ND	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	2.96	2.31	3.52	3.02	ND	4.15	2.33
Boron (B)	mg/kg	15000	ND	ND	ND	ND	ND	ND	ND
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	460	ND	ND	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.053	ND	ND	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	ND	ND	ND	ND	ND
Lead (Pb)	mg/kg	23	ND	ND	ND	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	ND	ND	ND	ND
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	3.5	2.42	3.4	ND	3.78	2.96	2.76
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	3.94	3.4	3.6	2.72	5.83	3.99	3.27
Conclusion	-	-	PASS	PASS	PASS	PASS	PASS	PASS	PASS

## Note / Key:

ND = Not detected NR = Not requested  $``>" = Greater\ than$ Req. = Requirement INCON: Inconclusive g = gram(s)

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

[] = Detection Limit by test method with reference to EN 71 Part 3: 2019, Annex F

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 : 0.05 [0.002] ; Each ( Others ) : 2

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#### 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.

Proposals to	Proposals to amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:				
-	Type I	Type II	Type III		
Element(s)	Aluminium (Al)	Aluminium (Al)	Aluminium (Al)		
Current	5 625 mg/kg	1 406 mg/kg	70 000 mg/kg		
Proposed <sup>[b]</sup>	2 250 mg/kg	560 mg/kg	28 130 mg/kg		

[a] denotes as these maximum allowable limits apply from May 20, 2021 according to European Commission Directive (EU) 2019/1922 of 18 November 2019 amending, for the purposes 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 aluminium.



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## **TEST RESULTS**

## **MIGRATION OF CERTAIN ELEMENTS**

Test Method: European Standard EN 71 Part 3: 2019, Section 8.

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

	Unit	Req.			Result		
Test Item(s)	-	-	1023	I024	1025	I026	1029
Туре	-	III	III	III	III	III	III
Parameter	-	-	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	2.33	6.53	2.50	251.8	214.1
Antimony (Sb)	mg/kg	560	2.09	3.74	3.14	ND	ND
Arsenic (As)	mg/kg	47	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	4.71	3.93	2.82	10.1	2.3
Boron (B)	mg/kg	15000	ND	ND	ND	2.71	3.34
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	460	ND	ND	ND	ND	ND
Chromium VI (Cr VI)	mg/kg	0.053	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	ND	ND	ND
Lead (Pb)	mg/kg	23	ND	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	18.4	13.1
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	3.4	2.6	2.41	58.4	23.67
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	6.88	4.86	2.5	9.93	2.74
Conclusion	-	-	PASS	PASS	PASS	PASS	PASS

Note / Key:

Req. = Requirement INCON: Inconclusive ND = Not detected ">" = Greater than NR = Not requested g = gram(s)

NK = Not requested g = gram(s) INCON: Inconclusi mg/kg = milligram(s) per kilogram = ppm = part(s) per million
[] = Detection Limit by test method with reference to EN 71 Part 3: 2019, Annex F

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: 0.05 [0.002]; Each (Others): 2

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#### 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.
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Proposals to	Proposals to amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:				
-	Type I	Type II	Type III		
Element(s)	Aluminium (Al)	Aluminium (Al)	Aluminium (Al)		
Current	5 625 mg/kg	1 406 mg/kg	70 000 mg/kg		
Proposed <sup>[b]</sup>	2 250 mg/kg	560 mg/kg	28 130 mg/kg		

[a] denotes as these maximum allowable limits apply from May 20, 2021 according to European Commission Directive (EU) 2019/1922 of 18 November 2019 amending, for the purposes 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 aluminium.



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

	Unit	Req.			Resul	t	
Test Item(s)	-	-	I015	I017	1022	1027	1028
Туре	-	III	III	III	III	III	III
Parameter	-	-	-	-	-	-	-
Aluminium (Al)	mg/kg	70000	5.8	4.5	5.13	259.6	233.3
Antimony (Sb)	mg/kg	560	2.97	5.37	4.6	ND	ND
Arsenic (As)	mg/kg	47	ND	ND	ND	ND	ND
Barium (Ba)	mg/kg	18750	ND	6.69	3.87	10.8	2.4
Boron (B)	mg/kg	15000	ND	ND	ND	2.93	2.89
Cadmium (Cd)	mg/kg	17	ND	ND	ND	ND	ND
Chromium III (Cr III)	mg/kg	460	0.063	0.121	0.72	0.158	0.135
Chromium VI (Cr VI)	mg/kg	0.053	ND	ND	ND	ND	ND
Cobalt (Co)	mg/kg	130	ND	ND	ND	ND	ND
Copper (Cu)	mg/kg	7700	ND	ND	5.61	ND	ND
Lead (Pb)	mg/kg	23	ND	ND	ND	ND	ND
Manganese (Mn)	mg/kg	15000	ND	ND	ND	18.7	14.1
Mercury (Hg)	mg/kg	94	ND	ND	ND	ND	ND
Nickel (Ni)	mg/kg	930	ND	ND	ND	ND	ND
Selenium (Se)	mg/kg	460	ND	ND	ND	ND	ND
Strontium (Sr)	mg/kg	56000	3.53	6.34	3.57	59.84	24.95
Tin (Sn)	mg/kg	180000	ND	ND	ND	ND	ND
Organic tin	mg/kg	12	ND	ND	ND	ND	ND
Zinc (Zn)	mg/kg	46000	5.36	6.15	3.70	9.7	2.82
Conclusion	-	-	PASS	PASS	PASS	PASS	PASS

## Note / Key:

ND = Not detected NR = Not requested  $``>" = Greater\ than$ Req. = Requirement INCON: Inconclusive g = gram(s)

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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 : 0.05 [0.002] ; Each ( Others ) : 2

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#### Remark:

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Proposals to	Proposals to amendment of European Parliament and Council Directive 2009/48/EC, Annex II, Part III, Point 13:				
-	Type I	Type II	Type III		
Element(s)	Aluminium (Al)	Aluminium (Al)	Aluminium (Al)		
Current	5 625 mg/kg	1 406 mg/kg	70 000 mg/kg		
Proposed <sup>[b]</sup>	2 250 mg/kg	560 mg/kg	28 130 mg/kg		

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## **TEST RESULTS**

## **CHROMIUM (VI) CONFIRMATION**

: European Standard EN 71 Part 3: 2019, Section 8. **Test Method** 

I001 Grey-Silver Coating

Tested Item(s) Sample A

I002 Brown-Silver Coating I003 Blue-Silver Coating I004 Blue Printed Paper

1005 Yellow Printed Paper

Parameter	Unit	Results	Limit
-	-	I001	
Chromium (VI)	mg/kg	ND	0.053
Conclusion	-	PASS	

Parameter	Unit	Results	Limit
-	-	1002	
Chromium (VI)	mg/kg	ND	0.053
Conclusion	-	PASS	

Parameter	Unit	Results	Limit
-	-	1003	
Chromium (VI)	mg/kg	ND	0.053
Conclusion	-	PASS	

Parameter	Unit	Results	Limit
-	-	I004	
Chromium (VI)	mg/kg	ND	0.053
Conclusion	-	PASS	

Parameter	Unit	Results	Limit
-	-	1005	
Chromium (VI)	mg/kg	ND	0.053
Conclusion	1	PASS	

No. = Number(s)



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## **TEST RESULTS**

## **Cadmium Content\***

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

I001 Black Pen Nib + Grey Pen Nib+ Red Pen Nib

I002 Brown Pen Nib+ Orange Pen Nib+ Yellow Pen Nib

I003 Light Green Pen Nib+ Dark Green Pen Nib+ Blue Pen Nib

Tested Item(s) : I004 Navy Pen Nib+ Purple Pen Nib+ Pink Pen Nib

Sample A : I005 Black-Silver Coating+ Grey-Silver Coating+ Red-Silver Coating

I006 Brown-Silver Coating+ Orange-Silver Coating+ Yellow-Silver Coating
 I007 Light Green-Silver Coating+ Dark Green-Silver Coating+ Blue-Silver Coating

: I008 Navy-Silver Coating+ Purple-Silver Coating+ Pink-Silver Coating

Parameter	Unit	Result		Result		Requirement by Client
-	-	1001 1002		-		
Total Cadmium (Cd)	ppm	N.D.	N.D.	100		
Conclusion	-	PASS	PASS	-		

Parameter	Unit	Result		Requirement by Client
-	-	1003 1004		-
Total Cadmium (Cd)	ppm	N.D.	N.D.	100
Conclusion	-	PASS	PASS	-

Parameter	Unit	Result		Requirement by Client
-	-	1005 1006		-
Total Cadmium (Cd)	ppm	N.D. N.D.		100
Conclusion	-	PASS	PASS	-

Parameter	Unit	Result		Result		Requirement by Client
-	-	1007 1008		-		
Total Cadmium (Cd)	ppm	N.D.	N.D.	100		
Conclusion	-	PASS	PASS	-		

Note / Key:

ND = Not detected ">" = Greater than mg/kg = milligram(s) per kilogram = ppm = part(s) per million

Detection Limit (mg/kg): 10

No. = Number(s)

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## **TEST RESULTS**

#### **PHTHALATES\***

Tested Item(s)

Sample A

**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 Pen Nib I001 Grey Pen Nib : I002 : Red Pen Nib I003 : Brown Pen Nib I004 Orange Pen Nib I005 Yellow Pen Nib I006 Light Green Pen Nib I007 Dark Green Pen Nib I008 Blue Pen Nib : I009 : Navy Pen Nib I010 : Purple Pen Nib I011 Pink Pen Nib I012 Black-Silver Coating+ Grey-Silver Coating+ Red-Silver Coating I013 Brown-Silver Coating+ Orange-Silver Coating+ Yellow-Silver Coating I014 Light Green-Silver Coating+ Dark Green-Silver Coating+ Blue-Silver Coating I015 Navy-Silver Coating+ Purple-Silver Coating+ Pink-Silver Coating I016

Limit:	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	-
1001	Sum	-	mg/kg	PASS
1001	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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



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#### **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)	ND	mg/kg	-
1002	Sum	-	mg/kg	PASS
1002	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	-	mg/kg	-
	Sum	ND	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results	Conclusion		
Tested Item(s)	Detected Analytes	etected Analytes Conc. Unit		Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)	ND	mg/kg	-
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-
1003	Sum	-	mg/kg	PASS
1003	DNOP (Di-n-octylphthalate)	ND	mg/kg	•
	DIDP (Diisodecylphthalate)	ND	mg/kg	•
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	•
	Sum	-	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	-
1004	Sum	-	mg/kg	PASS
1004	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	mg/kg	PASS
	Overall Conclusion	-	-	PASS

Remark1: Note:

ND = Not detected

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

% = percent = 10000 mg/kg Detection Limit (mg/kg): Each 50; Sum 150

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

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## **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	-
1005	Sum	-	mg/kg	PASS
1005	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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	-
1006	Sum	-	mg/kg	PASS
1000	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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	-	mg/kg	PASS
1007	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	mg/kg	PASS
	Overall Conclusion	-	-	PASS

Remark1: Note:

. ND

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

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## **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					
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion		
	DBP (Dibutylphthalate)	ND	mg/kg	-		
	BBP (Butylbenzylphthalate)	ND	mg/kg	-		
1000	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-		
	Sum	-	mg/kg	PASS		
1008	DNOP (Di-n-octylphthalate)	ND	mg/kg	-		
	DIDP (Diisodecylphthalate)	ND	mg/kg	-		
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-		
	Sum	-	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	-
1009	Sum	-	mg/kg	PASS
1009	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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	1
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	1
1010	Sum	-	mg/kg	PASS
1010	DNOP (Di-n-octylphthalate)	ND	mg/kg	1
	DIDP (Diisodecylphthalate)	ND	mg/kg	1
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	1
	Sum	-	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

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## **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	-
I011	Sum	-	mg/kg	PASS
1011	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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	-
I012	Sum	-	mg/kg	PASS
1012	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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	-
1013	Sum	-	mg/kg	PASS
1013	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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

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## **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					
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion		
	DBP (Dibutylphthalate)	ND	mg/kg	-		
	BBP (Butylbenzylphthalate)	ND	mg/kg	-		
1014	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	-		
	Sum	-	mg/kg	PASS		
I014	DNOP (Di-n-octylphthalate)	ND	mg/kg	-		
	DIDP (Diisodecylphthalate)	ND	mg/kg	-		
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-		
	Sum	-	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	-
1015	Sum	-	mg/kg	PASS
1015	DNOP (Di-n-octylphthalate)	ND	mg/kg	-
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	mg/kg	PASS
	Overall Conclusion	-	-	PASS

-	Results			Conclusion
Tested Item(s)	Detected Analytes	Conc.	Unit	Conclusion
	DBP (Dibutylphthalate)	ND	mg/kg	-
	BBP (Butylbenzylphthalate)		mg/kg	1
	DEHP (Di(2-ethylhexyl)-phthalate)	ND	mg/kg	1
I016	Sum	-	mg/kg	PASS
1010	DNOP (Di-n-octylphthalate)	ND	mg/kg	1
	DIDP (Diisodecylphthalate)	ND	mg/kg	-
	DINP (Di-iso-nonylphthalate)	ND	mg/kg	-
	Sum	-	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

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## **TEST RESULTS**

## POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)\*

Test method: BV CPS In House Method, CPSD-AN-00090-MTHD ZEK - 01.4-08

I001 Black Pen Nib I002 Grey Pen Nib Red Pen Nib I003 Brown Pen Nib I004 Orange Pen Nib I005 Yellow Pen Nib I006 I007 Light Green Pen Nib I008 Dark Green Pen Nib

Tested Item(s) Sample A

I009 Blue Pen Nib Navy Pen Nib I010 Purple Pen Nib I011 : I012 Pink Pen Nib

Black-Silver Coating+ Grey-Silver Coating I013 Red-Silver Coating+ Brown-Silver Coating I014 Orange-Silver Coating+ Yellow-Silver Coating I015

I016 Light Green-Silver Coating+ Dark Green-Silver Coating

I017 Blue-Silver Coating+ Navy-Silver Coating I018 Purple-Silver Coating+ Pink-Silver Coating

Parameter	Unit	Results			Requirements by Client
-	-	I001	1002	1003	
Benzo (a) pyrene	mg/kg	ND	ND	ND	
Benzo (e) pyrene	mg/kg	ND	ND	ND	Requirement by client
Benzo (a) anthracene	mg/kg	ND	ND	ND	Sum of PAH:
Chrysene	mg/kg	ND	ND	ND	2 33-33 0 3 3 3 3 3 3 3
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	< 10 ppm
Benzo ( j ) fluoranthene	mg/kg	ND	ND	ND	
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	
Dibenzo(a,h)anthracene	mg/kg	ND	ND	ND	
Sum	mg/kg	ND	ND	ND	
Conclusion	-	PASS	PASS	PASS	-

ND: NOT DETECTED ">" = Greater than Req. = Requirement

INCON. = Inconclusive NR = Not requested g = 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.

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## **TEST RESULTS**

# POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)\*

Test method: BV CPS In House Method, CPSD-AN-00090-MTHD ZEK - 01.4-08

Parameter	Unit		Results		Requirements by Client
-	-	I004	1005	1006	
Benzo (a) pyrene	mg/kg	ND	ND	ND	
Benzo (e) pyrene	mg/kg	ND	ND	ND	Requirement by client
Benzo (a) anthracene	mg/kg	ND	ND	ND	Sum of PAH:
Chrysene	mg/kg	ND	ND	ND	2 11-11
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	< 10 ppm
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	
Dibenzo(a,h)anthracene	mg/kg	ND	ND	ND	
Sum	mg/kg	ND	ND	ND	
Conclusion	-	PASS	PASS	PASS	-

Parameter	Unit	Results			Requirements by Client
-	-	1007	1008	1009	
Benzo (a) pyrene	mg/kg	ND	ND	ND	
Benzo (e) pyrene	mg/kg	ND	ND	ND	Requirement by client
Benzo (a) anthracene	mg/kg	ND	ND	ND	Sum of PAH:
Chrysene	mg/kg	ND	ND	ND	2 1222 02 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	< 10 ppm
Benzo ( j ) fluoranthene	mg/kg	ND	ND	ND	
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	
Dibenzo(a,h)anthracene	mg/kg	ND	ND	ND	
Sum	mg/kg	ND	ND	ND	
Conclusion	-	PASS	PASS	PASS	-

ND: NOT DETECTED ">" = Greater than Req. = Requirement

NR = Not requested INCON. = Inconclusive g = 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.

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## **TEST RESULTS**

# POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)\*

Test method: BV CPS In House Method, CPSD-AN-00090-MTHD ZEK - 01.4-08

Parameter	Unit		Results		Requirements by Client
-	-	I010	I011	I012	
Benzo (a) pyrene	mg/kg	ND	ND	ND	
Benzo (e) pyrene	mg/kg	ND	ND	ND	Requirement by client
Benzo (a) anthracene	mg/kg	ND	ND	ND	Sum of PAH:
Chrysene	mg/kg	ND	ND	ND	
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	< 10 ppm
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	
Dibenzo(a,h)anthracene	mg/kg	ND	ND	ND	
Sum	mg/kg	ND	ND	ND	
Conclusion	-	PASS	PASS	PASS	-

Parameter	Unit	Results			Requirements by Client
-	-	I013	I014	I015	
Benzo (a) pyrene	mg/kg	ND	ND	ND	
Benzo (e) pyrene	mg/kg	ND	ND	ND	Requirement by client
Benzo (a) anthracene	mg/kg	ND	ND	ND	Sum of PAH:
Chrysene	mg/kg	ND	ND	ND	2 0000 00 0000
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	< 10 ppm
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	
Dibenzo(a,h)anthracene	mg/kg	ND	ND	ND	
Sum	mg/kg	ND	ND	ND	
Conclusion	-	PASS	PASS	PASS	-

ND: NOT DETECTED ">" = Greater than Req. = Requirement

NR = Not requested INCON. = Inconclusive g = 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.

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## **TEST RESULTS**

# POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)\*

Test method: BV CPS In House Method, CPSD-AN-00090-MTHD ZEK - 01.4-08

Parameter	Unit	Results		Requirements by Client	
-	-	I016	I017	I018	
Benzo (a) pyrene	mg/kg	ND	ND	ND	
Benzo (e) pyrene	mg/kg	ND	ND	ND	Requirement by client
Benzo (a) anthracene	mg/kg	ND	ND	ND	Sum of PAH:
Chrysene	mg/kg	ND	ND	ND	2 3
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	< 10 ppm
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	
Dibenzo(a,h)anthracene	mg/kg	ND	ND	ND	
Sum	mg/kg	ND	ND	ND	
Conclusion	_	PASS	PASS	PASS	-

ND: NOT DETECTED ">" = Greater than Req. = Requirement

NR = Not requested 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.

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**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**

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

List	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	-	-	-		

**APPENDIX C** 

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 D

TEST NAME	STANDARD NAME	MEASUREMENT UNCERTAINTY
Total Cadmium Content	BS EN 1122	± %3
	CPSD-AN-00004-MTHD	

# -END OF REPORT-