

TEST REPORT

Test Report # 23H-004953 Date of Report Issue: July 6, 2023
Date of Sample Received: June 26, 2023 Pages: Page 1 of 18

CLIENT INFORMATION:

Company: Boston Industrial Solutions, Inc.
Recipient: Ephraim Wahiga
Recipient Email: info@bostonindustrialsolutions.com



SAMPLE INFORMATION:

Description: Natron® Primers (M87 / M74F / G1 / Fi)
Assortment: - Purchase Order Number: -
SKU/style No.: - Toy Co./Agency: -
Factory/Supplier/Vendor: Boston Industrial Solutions, Inc. Country of Origin: United States
Country of Distribution: - Labeled Age Grade: -
Quantity Submitted: 1 lot per style Recommended Age Grade: -
Testing Period: 06/27/2023 – 06/30/2023 Tested Age Grade: -

OVERALL RESULT:

 **PASS**

Refer to page 2 for test result summary and appropriate notes.

QIMA Testing (HK) Limited



Loska Yeung Lok Ka
Assistant Manager, Chemical Laboratory

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TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	CPSIA Section 106 & ASTM F963-17 Toy Safety, Clause 4.3.5 Total Elements Screening in Paint and Similar Surface Coatings
PASS	ASTM F2923-20 Consumer Product Safety for Children’s Jewelry, Clause 8 Total Elements Screening in Paint and Surface Coatings
PASS	CPSIA Section 101 & 16 CFR 1303, Total Lead in Paints and Surface Coatings
PASS	The Illinois Lead Poisoning Prevention Act (LPPA) (410 ILCS 45/6), Total Lead in Paints and Surface Coatings of Children’s Jewelry and Childcare Articles
PASS	Connecticut Public Act 10-113 (Substituted House Bill 5314), Total Cadmium Content in Children's Jewelry
PASS	Maryland Chapter 578 (House Bill 145), Total Cadmium in Children’s Jewelry
PASS	Minnesota Chapter 347-S.F. No. 2510, Total Cadmium Screening in Children’s Jewelry
PASS	California Proposition 65, Phthalates (DBP, BBP, DEHP, DINP, DIDP, DnHP)
PASS	16 CFR 1307 Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates (DBP, BBP, DEHP, DINP, DHEXP / DnHP, DCHP, DIBP, DPENP)
PASS	Washington Revised Code Section 70.240.020, Phthalates in Children’s Product
PASS	Canadian Toys Regulations SOR/2011-17 as Amended, Item 23 – Total Heavy Metal Screening in Stickers, Films and Surface Coating Materials
PASS	Canadian Surface Coating Materials Regulations SOR/2016-193, Total Lead in Stickers, Films and Surface Coating Materials
PASS	Canadian Surface Coating Materials Regulations SOR/2016-193, Total Mercury in Paints and Surface Coatings
PASS	Mexican Environmental Health NOM-252-SSA1-2011, Total Elements Screening from Toys and School Supplies

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DETAILED RESULTS:

CPSIA Section 106 & ASTM F963-17 Toy Safety, Clause 4.3.5 Total Elements Screening in Paint and Similar Surface Coatings

Test Method: ASTM F963-17 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Soluble Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Antimony (Sb)	ND	ND	---	---	---	60
Total Arsenic (As)	ND	ND	---	---	---	25
Total Barium (Ba)	ND	ND	---	---	---	1000
Total Cadmium (Cd)	ND	ND	---	---	---	75
Total Chromium (Cr)	ND	ND	---	---	---	60
Total Lead (Pb)	ND	ND	---	---	---	90
Total Mercury (Hg)	ND	ND	---	---	---	60
Total Selenium (Se)	ND	ND	---	---	---	500
Conclusion	PASS	PASS	---	---	---	

Note:

ppm (Parts per million) = mg/kg (Milligrams per kilogram)

LT = Less than

ND = Not detected (Reporting Limit: Sb, As, Ba, Cd, Cr, Pb, Hg = 20ppm; Se = 50ppm)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The total heavy metals screening results do not exceed the soluble heavy metal limits, therefore, further soluble analyses were not conducted.

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DETAILED RESULTS:

ASTM F2923-20 Consumer Product Safety for Children’s Jewelry, Clause 8 Total Elements Screening in Paint and Surface Coatings

Test Method: ASTM F963-17 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Soluble Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Antimony (Sb)	ND	ND	---	---	---	60
Total Arsenic (As)	ND	ND	---	---	---	25
Total Barium (Ba)	ND	ND	---	---	---	1000
Total Cadmium (Cd)	ND	ND	---	---	---	75
Total Chromium (Cr)	ND	ND	---	---	---	60
Total Mercury (Hg)	ND	ND	---	---	---	60
Total Selenium (Se)	ND	ND	---	---	---	500
Conclusion	PASS	PASS	---	---	---	

Note:
 ppm (Parts per million) = mg/kg (Milligrams per kilogram)
 LT = Less than
 ND = Not detected (Reporting Limit: Sb, As, Ba, Cd, Cr, Hg = 20 ppm; Se = 50 ppm)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:
 The total heavy metals screening results do not exceed the soluble heavy metal limits, therefore, further soluble analyses were not conducted.

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DETAILED RESULTS:**CPSIA Section 101 & 16 CFR 1303, Total Lead in Paints and Surface Coatings**

Test Method: CPSC-CH-E-1003-09.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Total Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Lead (Pb)	ND	ND	---	---	---	90
Conclusion	PASS	PASS	---	---	---	

Note:

ppm (Parts per million) = mg/kg (Milligrams per kilogram)

LT = Less than

ND = Not detected (Reporting Limit = 20 ppm)

Composite results are based on specimen of least mass resulting in highest potential concentration.

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DETAILED RESULTS:

The Illinois Lead Poisoning Prevention Act (LPPA) (410 ILCS 45/6), Total Lead in Paints and Surface Coatings of Children’s Jewelry and Childcare Articles

Test Method: CPSC-CH-E-1003-09.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Total Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Lead (Pb)	ND	ND	---	---	---	40
Conclusion	PASS	PASS	---	---	---	

Note:

ppm (Parts per million) = mg/kg (Milligrams per kilogram)

LT = Less than

ND = Not detected (Reporting Limit = 20 ppm)

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DETAILED RESULTS:

Connecticut Public Act 10-113 (Substituted House Bill 5314), Total Cadmium Content in Children's Jewelry

Test Method: ASTM F963-11 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Total Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Cadmium (Cd)	ND	ND	---	---	---	75
Conclusion	PASS	PASS	---	---	---	

Note:

ppm (Parts per million) = mg/kg (Milligrams per kilogram)

LT = Less than

ND = Not detected (Reporting Limit = 20 ppm)

Composite results are based on specimen of least mass resulting in highest potential concentration.

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DETAILED RESULTS:

Maryland Chapter 578 (House Bill 145), Total Cadmium in Children’s Jewelry

Test Method: ASTM F963-11 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Total Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Cadmium (Cd)	ND	ND	---	---	---	75
Conclusion	PASS	PASS	---	---	---	

Note:
 ppm (Parts per million) = mg/kg (Milligrams per kilogram)
 LT = Less than
 ND = Not detected (Reporting Limit = 20 ppm)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

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DETAILED RESULTS:

Minnesota Chapter 347-S.F. No. 2510, Total Cadmium Screening in Children’s Jewelry

Test Method: ASTM F963-11 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Soluble Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Cadmium (Cd)	ND	ND	---	---	---	75
Conclusion	PASS	PASS	---	---	---	

Note:

ppm (Parts per million) = mg/kg (Milligrams per kilogram)
 LT = Less than
 ND = Not detected (Reporting Limit = 20 ppm)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The total cadmium screening results did not exceed the soluble cadmium limit, therefore, further soluble analyses were not conducted.

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DETAILED RESULTS:

California Proposition 65, Phthalates (DBP, BBP, DEHP, DINP, DIDP, DnHP)

Test Method: CPSC-CH-C1001-09.4
 Test Instrument: Gas Chromatography with Mass Spectrometry

Specimen No.		1+2	3+4	---	---	Limit (% w/w)
Test Item	CAS No.	Result (% w/w)	Result (% w/w)	Result (% w/w)	Result (% w/w)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	---	---	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	---	---	0.1
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	---	---	0.1
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	---	---	0.1
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	ND	---	---	0.1
Di-n-hexyl phthalate (DnHP)	84-75-3	ND	ND	---	---	0.1
Conclusion		PASS	PASS	---	---	

Note:

% w/w = Percent by weight

LT = Less than

ND = Not detected (Reporting Limit = 0.015 % w/w)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

The specification is quoted from client's requirement.

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DETAILED RESULTS:

16 CFR 1307 Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates (DBP, BBP, DEHP, DINP, DHEXP / DnHP, DCHP, DIBP, DPENP)

Test Method: CPSC-CH-C1001-09.4
 Test Instrument: Gas Chromatography with Mass Spectrometry

Specimen No.		1+2	3+4	---	---	Limit (% w/w)
Test Item	CAS No.	Result (% w/w)	Result (% w/w)	Result (% w/w)	Result (% w/w)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	---	---	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	---	---	0.1
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	---	---	0.1
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	---	---	0.1
Di-n-hexyl phthalate (DHEXP / DnHP)	84-75-3	ND	ND	---	---	0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	ND	---	---	0.1
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	---	---	0.1
Di-n-pentyl phthalate (DPENP)	131-18-0	ND	ND	---	---	0.1
Conclusion		PASS	PASS	---	---	

Note:

% w/w = Percent by weight

LT = Less than

ND = Not detected (Reporting Limit = 0.015 % w/w)

Composite results are based on specimen of least mass resulting in highest potential concentration.

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DETAILED RESULTS:

Washington Revised Code Section 70.240.020, Phthalates in Children’s Product

Test Method: CPSC-CH-C1001-09.4
 Test Instrument: Gas Chromatography with Mass Spectrometry

Specimen No.		1+2	3+4	---	---	Limit (% w/w)
Test Item	CAS No.	Result (% w/w)	Result (% w/w)	Result (% w/w)	Result (% w/w)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	---	---	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	---	---	0.1
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	---	---	0.1
Di-n-octyl phthalate (DnOP)	117-84-0	ND	ND	---	---	0.1
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	---	---	0.1
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	ND	---	---	0.1
Sum		ND	ND	---	---	0.1
Conclusion		PASS	PASS	---	---	

Note:

% w/w = Percent by weight

LT = Less than

ND = Not detected (Reporting Limit = 0.015 % w/w)

Composite results are based on specimen of least mass resulting in highest potential concentration.

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DETAILED RESULTS:

Canadian Toys Regulations SOR/2011-17 as Amended, Item 23 – Total Heavy Metal Screening in Stickers, Films and Surface Coating Materials

Test Method: ASTM F963-17 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Leachable Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Antimony (Sb)	ND	ND	---	---	---	1000
Total Arsenic (As)	ND	ND	---	---	---	1000
Total Barium (Ba)	ND	ND	---	---	---	1000
Total Cadmium (Cd)	ND	ND	---	---	---	1000
Total Lead (Pb)	ND	ND	---	---	---	90*
Total Mercury (Hg)	ND	ND	---	---	---	10*
Total Selenium (Se)	ND	ND	---	---	---	1000
Conclusion	PASS	PASS	---	---	---	

Note:

ppm (Parts per million) = mg/kg (Milligrams per kilogram)

LT = Less than

ND = Not detected (Reporting Limit: Pb, Hg = 10 ppm; Sb, As, Ba, Cd, Se = 50 ppm)

Composite results are based on specimen of least mass resulting in highest potential concentration.

Remark:

*Total limit

The results of total elements screening did not exceed the limits of leachable elements, therefore further analysis of leachable elements was not conducted.

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DETAILED RESULTS:

Canadian Surface Coating Materials Regulations SOR/2016-193, Total Lead in Stickers, Films and Surface Coating Materials

Test Method: CPSC-CH-E-1003-09.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Total Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Lead (Pb)	ND	ND	---	---	---	90
Conclusion	PASS	PASS	---	---	---	

Note:
 ppm (Parts per million) = mg/kg (Milligrams per kilogram)
 LT = Less than
 ND = Not detected (Reporting Limit = 20 ppm)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

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DETAILED RESULTS:

Canadian Surface Coating Materials Regulations SOR/2016-193, Total Mercury in Paints and Surface Coatings

Test Method: ASTM F963-17 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1+2	3+4	---	---	---	Total Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Mercury (Hg)	ND	ND	---	---	---	10
Conclusion	PASS	PASS	---	---	---	

Note:
 ppm (Parts per million) = mg/kg (Milligrams per kilogram)
 LT = Less than
 ND = Not detected (Reporting Limit = 10 ppm)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

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DETAILED RESULTS:

Mexican Environmental Health NOM-252-SSA1-2011, Total Elements Screening from Toys and School Supplies

Test Method: ASTM F963-17 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Toy Material except Modelling Clay

Specimen No.	1+2	3+4	---	---	---	Soluble Limit (ppm)
Test Item	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	Result (ppm)	
Total Antimony (Sb)	ND	ND	---	---	---	60
Total Arsenic (As)	ND	ND	---	---	---	25
Total Barium (Ba)	ND	ND	---	---	---	1000
Total Cadmium (Cd)	ND	ND	---	---	---	75
Total Chromium (Cr)	ND	ND	---	---	---	60
Total Lead (Pb)	ND	ND	---	---	---	90
Total Mercury (Hg)	ND	ND	---	---	---	60
Total Selenium (Se)	ND	ND	---	---	---	500
Conclusion	PASS	PASS	---	---	---	

Note:
 ppm (Parts per million) = mg/kg (Milligrams per kilogram)
 LT = Less than
 ND = Not detected (Reporting Limit: Sb, As, Ba, Cd, Cr, Pb, Hg = 20 ppm; Se = 50 ppm)
 Composite results are based on specimen of least mass resulting in highest potential concentration

Remark:
 The total heavy metals screening results do not exceed the soluble heavy metal limits, therefore, further soluble analyses were not conducted.

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SPECIMEN DESCRIPTION:

Specimen No.	Specimen Description	Location
1	Transparent ink	Raw material (M87 style)
2	Translucent yellow ink	Raw material (M74F style)
3	Translucent ink	Raw material (G1 style)
4	Translucent deep yellow ink	Raw material (Fi style)

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SAMPLE PHOTO:



-End Report-

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