

Test Report

Report No. SCL01G067975

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Applicant NEWRICH PRINTING CO., LTD

Address NO.139, FUMINROAD, GUANLAN TOWN, SHENZHEN, CHINA

Report on the submitted sample(s) said to be:

Sample Name	BLACK PAWS
Item No.	GB GAMES
Supplier	SENYUE SULIAO
Country of Origin	CHINA
Exported to	Europe, U.S.A
Sample Received Date	Jan. 04, 2015
Sample Tested Date	Jan. 04, 2015 to Jan. 07, 2015

Test Conducted:

As requested by the applicant, for details refer to next page(s)

Tested by Carey

Reviewed by Mark

Approved by Victor Wang

Date 2015-01-07

Victor Wang
Lab Manager

No. T166704967



Centre Testing International (Shenzhen) Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

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Executive Summary:

TEST REQUEST

- 1) US Consumer Product Safety Improvement Act of 2008 (CPSIA) with amendment (H.R.2715)
 - Lead in surface-coatings and similar materials of children's products
 - Lead in substrate materials of children's products
 - Phthalates in children's toys and child care articles
- 2) ASTM F963-11 Standard Consumer Safety Specification for Toy Safety
 - Clause 4.3.5 Heavy elements – Total Lead content
 - Clause 4.3.5 Heavy elements – Migration of certain elements
- 3) European Standard on Safety of Toys
 - EN 71-3:2013 Migration of certain elements

CONCLUSION

N/A
PASS
PASS
PASS
PASS
PASS

N/A = Not Applicable

***** For Further Details, Please Refer To the Following Page(s) *****

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1) US CPSIA WITH AMENDMENT (H.R.2715)

▼ Lead in surface-coating and similar materials of children’s products..... N/A

As specified in Consumer Product Safety Improvement Act of 2008 (CPSIA) and 16 CFR Ch.II part 1303 of Consumer Product Safety Commission of U.S.A, method CPSC-CH-E1003-09.1 was used and total lead content was determined by ICP-OES and/or AAS.

N/A = **Not Applicable** (as received, there was no paint or similar surface-coating material on the submitted sample(s), so it is not applicable to the requirement of this standard)

▼ Lead in substrate materials of children’s products

As specified in Consumer Product Safety Improvement Act of 2008 (CPSIA), method(s) CPSC-CH-E1001-08.3/CPSC-CH-E1002-08.3 were used and total lead content was determined by ICP-OES and/or AAS.

<u>Tested Item</u>	<u>Result (mg/kg)</u>	<u>MDL</u>	<u>Limit</u>
	Black plastic	(mg/kg)	(mg/kg)
Total Lead (Pb)	ND	5	100

Remark:

- mg/kg = parts per million = ppm
- ND = Not Detected (less than MDL)
- MDL = Method Detection Limit

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▼ Phthalates in children's toys and childcare articles

As specified in Consumer Product Safety Improvement Act of 2008 (CPSIA), method CPSC-CH-C1001-09.3 was used and phthalates were determined by gas chromatograph with mass spectrometry (GC-MS).

<u>Tested Item</u>	<u>Result (mg/kg)</u>	<u>MDL</u> (mg/kg)	<u>Limit</u> (mg/kg)
	Black plastic		
Di-2-ethylhexyl Phthalate (DEHP)	ND	30	1000
Dibutyl Phthalate (DBP)	ND	30	1000
Benzybutyl Phthalate (BBP)	ND	30	1000

<u>Tested Item</u>	<u>Result (mg/kg)</u>	<u>MDL</u> (mg/kg)	<u>Limit</u> (mg/kg)
	Black plastic		
Diisononyl Phthalate (DINP)	ND	50	1000
Di-n-octyl Phthalate (DNOP)	ND	30	1000
Diisodecyl Phthalate (DIDP)	ND	50	1000

Remark:

- mg/kg = parts per million = ppm
- ND = Not Detected (less than MDL)
- MDL = Method Detection Limit
- 1000mg/kg = 0.1%

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2) ASTM F963-11

▼ Heavy elements test - Total Lead content

As specified in ASTM F963-11 standard consumer safety specification for toy safety clause 4.3.5, acid digestion methods specified in clause 8.3 were used and total Lead content was determined by ICP-OES and/or AAS.

Toy substrate materials:

<u>Tested Item</u>	<u>Result (mg/kg)</u>	<u>MDL</u>	<u>Limit</u>
	Black plastic	(mg/kg)	(mg/kg)
Total Lead (Pb)	ND	5	100

Remark:

- mg/kg = parts per million = ppm
- ND = Not Detected (less than MDL)
- MDL = Method Detection Limit

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▼ Heavy elements test - Migration of certain elements

As specified in ASTM F963-11 standard consumer safety specification for toy safety clause 4.3.5, acid extraction methods specified in clause 8.3 were used and toxic elements content were determined by ICP-OES.

Tested Item	Result (mg/kg)	MDL	Limit
	Black plastic	(mg/kg)	(mg/kg)
Soluble Antimony (Sb)	ND	5	60
Soluble Arsenic (As)	ND	2.5	25
Soluble Barium (Ba)	ND	5	1000
Soluble Cadmium (Cd)	ND	5	75
Soluble Chromium (Cr)	ND	2.5	60
Soluble Lead (Pb)	ND	5	90
Soluble Mercury (Hg)	ND	2.5	60
Soluble Selenium (Se)	ND	5	500

Remark:

- mg/kg = parts per million = ppm
- ND = Not Detected (less than MDL)
- MDL = Method Detection Limit
- Results shown of soluble elements are of adjusted analytical results by subtracting analytical correction factor.
- Filter paper was used instead of 0.45µm membrane filter in lab testing.

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3) EUROPEAN STANDARD ON SAFETY OF TOYS

▼ Migration of certain elements

As specified in European standard on safety of toys EN 71-3:2013 - Migration of certain elements, acid extraction method was used and toxic elements content were determined by ICP-OES, ICP-MS, HPLC-ICP-MS and GC-MS.

Category III: scraped-off toy material

Tested Item	Result (mg/kg)	MDL	Limit
	Black plastic	(mg/kg)	(mg/kg)
Aluminium (Al)	ND	50	70000
Antimony (Sb)	ND	5	560
Arsenic (As)	ND	5	47
Barium (Ba)	ND	50	18750
Boron (B)	ND	50	15000
Cadmium (Cd)	ND	1	17
Chromium (Cr) ^{#1}	ND	0.2	--
Chromium (III) ^{#2}	--	--	460
Chromium (VI)	ND	0.001	0.2
Cobalt (Co)	ND	5	130
Copper (Cu)	ND	50	7700
Lead (Pb)	ND	5	160
Manganese (Mn)	ND	50	15000
Mercury (Hg)	ND	5	94
Nickel (Ni)	ND	5	930
Selenium (Se)	ND	5	460
Strontium (Sr)	ND	50	56000
Tin (Sn) ^{#3}	ND	2	180000
Organic tin (TBT) ^{#4}	ND	0.05	12
Zinc (Zn)	ND	50	46000

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Remark:

- mg/kg = parts per million = ppm
- ND = Not Detected (less than MDL)
- MDL = Method Detection Limit
- Filter paper was used instead of membrane filter in lab testing.
- ^{#1} Chromium (Cr) content can be used for screen test for hexavalent chromium and trivalent chromium analysis and to show compliance with the requirement of EN 71-3:2013.
- ^{#2} Chromium (Cr) = Hexavalent chromium (Cr (VI)) + Trivalent chromium (Cr (III)), where the chromium content exceeded the limits of hexavalent chromium and/or trivalent chromium, then hexavalent chromium was analyzed by HPLC-ICP-MS and trivalent chromium content was calculated using the formula.
- ^{#3} Tin (Sn) content can be used for screen test for organic tins analysis to show compliance with the requirement of EN 71-3:2013.
- ^{#4} The migration of organic tin is expressed as tributyltin (TBT). where the tin content exceeded the limit of organic tin, ten organic tins listed in table were determined by GC-MS and the client should be noted there are other organic tins may be present in toy materials.

Organic tins tested under EN 71-3:2013
Methyl tin (MeT)
Butyl tin (BuT)
Dibutyl tin (DBT)
Tributyl tin (TBT)
Tetrabutyl tin (TeBT)
n-Octyl tin (MOT)
Di-n-octyl tin (DOT)
Di-n-propyl tin (DProT)
Diphenyl tin (DPhT)
Triphenyl tin (TPhT)

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Photo of the sample



*** End of Report ***

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