Test Report

Report No. SCL01G057603

Applicant JINLISEN METAL BOX MANUFACTORY CO., LTD
Address YINGPING ROAD, QINGXI TOWN, DONGGUAN, CHINA

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

Sample Name	tin box
Item No.	SD5, SD7
Country of Origin	China
Exported to	U.S.A
Client Specified Age Grading	Not stated
Labeled Age Grading	Ages 4 and up
Age Group Applied in Testing	Over 3 years
Sample Received Date	Dec. 01, 2014
Sample Tested Date	Dec. 01, 2014 to Dec. 10, 2014

Test Conducted:

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

Tested by Carey

Reviewed by Linghu

Approved by Victor Wang

Date 2014-12-10

Victor Wang
Lab Manager

No. T166700789

Centre Testing International (Shenzhen) Co., Ltd. Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

CENTRE TESTING INTERNATIONAL CTI SZ03

Test Report

Executive Summary:

TEST REQUEST	CONCLUSION
European Standard on Safety of Toys	
- EN 71-1:2011+ A3:2014 Mechanical and Physical Properties	PASS
- EN 71-2:2011+A1:2014 Flammability of Toys	PASS
- EN 71-3:2013 Migration of certain elements	PASS

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

Test Report

▼ **Mechanical and physical properties**

As specified in European Standard on Safety of Toys EN 71 part 1:2011+ A3:2014.

Clause	Description	Assessment
4	General requirements	
4.1	Material cleanliness.....	Pass
4.7	Edges	Pass
4.8	Points and metallic wires	Pass
4.10	Parts moving against each other:	
	4.10.3 Hinges ..... (Not applicable to products with a hinged part that has a mass less than 250g.)	N/A
7	Warnings and instructions for use	
	--CE marking requirement	Pass
	--Manufacturer and importer's name or registered name/trade mark and address	See Remark 1
	Remark 1: The manufacturer's name registered trade name or registered trade mark and the address at which the manufacture can be contacted must be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy. This requirement applies also to the name and address etc. of any importer.	
	--Product Identification: type, batch, serial or model number or other element	Pass
7.1	General	N/A
7.2	Toys not intended for children under 36 months ..... (Remark 2: No small part was found before and after test.)	N/A

N/A = Not Applicable

Note:

- Only applicable clause(s) was/ were shown.

Test Report

▼ **Flammability of Toys**

As specified in European Standard on Safety of Toys EN 71 part 2:2011 +A1:2014.

Clause	Description	Assessment
4	Requirements	
4.1	General ……..... (The following materials shall not be used in the manufacture of toys except as provided in EN 71-2:2011+A1:2014 : Celluloid, materials with the same behaviour in fire as celluloid, materials with a piled surface which produce surface flash, flammable gases, extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels.)	Pass

Note:

- Only applicable clause(s) was/ were shown.

Test Report

▼**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
	(1)	(2)	(3)	(mg/kg)	(mg/kg)
Aluminium (Al)	110	ND	75	50	70000
Antimony (Sb)	ND	ND	ND	5	560
Arsenic (As)	ND	ND	ND	5	47
Barium (Ba)	ND	ND	ND	50	18750
Boron (B)	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	1	17
Chromium (Cr) #1	7.8	ND	2.6	0.2	--
Chromium (III) #2	7.8	--	2.6	--	460
Chromium (VI)	ND	ND	ND	0.001	0.2
Cobalt (Co)	ND	ND	ND	5	130
Copper (Cu)	ND	ND	ND	50	7700
Lead (Pb)	ND	ND	ND	5	160
Manganese (Mn)	ND	ND	ND	50	15000
Mercury (Hg)	ND	ND	ND	5	94
Nickel (Ni)	ND	ND	ND	5	930
Selenium (Se)	ND	ND	ND	5	460
Strontium (Sr)	55	ND	87	50	56000
Tin (Sn) #3	144	ND	3016	2	180000
Organic tin (TBT) #4	ND	ND	ND	0.05	12
Zinc (Zn)	135	ND	ND	50	46000

Tested Component(s):

(1) Multi-color coating(surface)

(2) Black plastic(handle)

(3) Transparent lacquer(lining)

Test Report

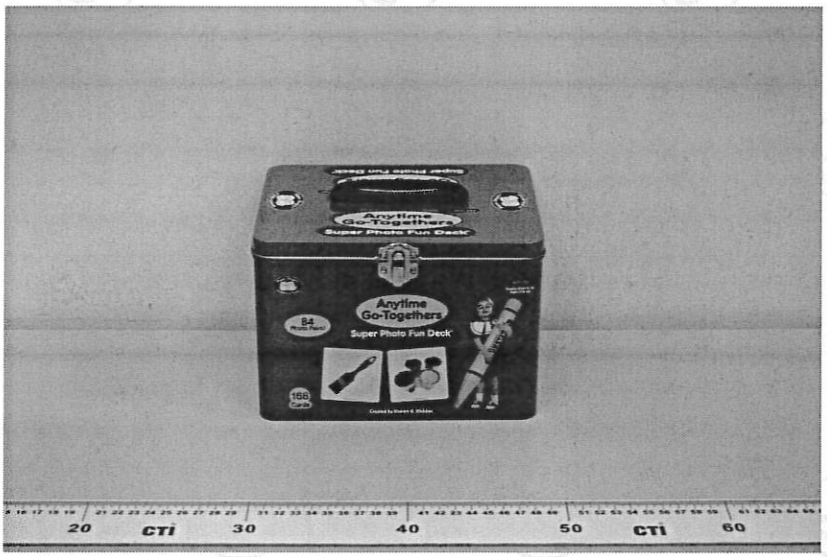
Remark:

- 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)

Test Report

Photo of the sample



*** End of Report ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.