



## Test Report

No.T51910210064JP

Date: FEB 27, 2019

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JIAN PLASTIC & METAL PRODUCTS LTD  
NO.3-1, SOUTH GAOBU BLVD, GAOBU TOWN, DONGGUAN CITY,  
GUANGDONG PROVINCE, CHINA, ZIP CODE:523278

The following samples were submitted and identified by/on behalf of the client as:

ZINC ALLOY

Buyer : WORLD WIDE  
Manufacturer : CHINA  
Country of Origin : CHINA  
Country of Destination : WORLD WIDE  
Requested Age Grading : 3+  
Sample Receiving Date : FEB 22, 2019  
Testing Period : FEB 22, 2019 TO FEB 26, 2019



SGS-CSTC Testing Technology Services Co., Ltd.  
Shenzhen Branch Testing Center Hardlines

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Test Requested		Conclusion
1.	Directive 2009/48/EC and its amendment Council Directive (EU) 2017/738 – EN 71-3:2013 + A3:2018 – Migration of certain elements (All conclusive testing)  (Selected test items as specified by the applicant, please refer to test result page(s) for details)	PASS
2.	ASTM F963-17 - Standard Consumer Safety Specification on Toy Safety – Heavy Elements content  (Selected test items as specified by the applicant, please refer to test result page(s) for details)	--
	Heavy Elements content in substrate materials in submitted sample in accordance with ASTM F963-17 - Standard Consumer Safety Specification on Toy Safety, Clause 4.3.5.2	PASS
3.	<b>Japan Toy Safety Standard: Part 3: 2016 Second edition</b> <b>(Selected test items as specified by the applicant, please refer to test result page(s) for details)</b>	--
	Clause 1.11 Metals used for toy	PASS

\*\*\*\*\* FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) \*\*\*\*\*

Signed for and on behalf of  
 SGS-CSTC Standards Technical  
 Services Co., Ltd. Shenzhen Branch Testing Center




Qu Ping, Kiky  
 Dept. Manager



SGS-CSTC Standards Technical Services Co., Ltd.  
 Shenzhen Branch Testing Center Hardlines

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**Results:**
**1. Directive 2009/48/EC and its amendment Council Directive (EU) 2017/738 – EN 71-3:2013 + A3:2018 – Migration of certain elements**
Category III: Scraped-off toy material

Method: With reference to EN 71-3:2013 + A3:2018. Analysis of general elements was performed by ICP-OES. Chromium (III) was obtained by calculation, chromium (VI) was analyzed by IC-UV-Vis and organic tin was analyzed by GC-MS.

Test Item(s)	Result(s)	MDL	Permissible Limit
<b>Specimen No.</b>	<b>1</b>	--	--
<b>Mass of trace amount</b> (mg)	--	--	--
Soluble Aluminium (Al) (mg/kg)	123	50	70000
Soluble Antimony (Sb) (mg/kg)	ND	10	560
Soluble Arsenic (As) (mg/kg)	ND	10	47
Soluble Barium (Ba) (mg/kg)	ND	50	18750
Soluble Boron (B) (mg/kg)	ND	50	15000
Soluble Cadmium (Cd) (mg/kg)	ND	5	17
Soluble Chromium (Cr) (mg/kg)	ND	0.15	--
Soluble Chromium (III) (Cr (III)) (mg/kg)	ND	1	460
Soluble Chromium (VI) (Cr (VI)) (mg/kg)	ND	0.12	0.2
Soluble Cobalt (Co) (mg/kg)	ND	10	130
Soluble Copper (Cu) (mg/kg)	ND	50	7700
Soluble Lead (Pb) (mg/kg)	ND	10	23
Soluble Manganese (Mn) (mg/kg)	ND	50	15000
Soluble Mercury (Hg) (mg/kg)	ND	10	94
Soluble Nickel (Ni) (mg/kg)	ND	10	930
Soluble Selenium (Se) (mg/kg)	ND	10	460
Soluble Strontium (Sr) (mg/kg)	ND	50	56000
Soluble Tin (Sn) (mg/kg)	ND	3.0	180000
Soluble Organic Tin -- (mg/kg)	ND	--	12
Soluble Zinc (Zn) (mg/kg)	3714	50	46000

Specimen Description:

1. Silvery metal part



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- Note:
- mg/kg = milligram per kilogram
  - mg = milligram
  - ND = Not Detected (lower than MDL)
  - MDL = Method Detection Limit
  - 1% = 10000 mg/kg = 10000 ppm

**2. ASTM F963-17, Clause 4.3.5.2 – Heavy Elements in Substrate Materials**

Method: With reference to ASTM F963-17 Clause 8.3

Analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Soluble Heavy Metal Content

Test Item(s)				Pb	Sb	As	Ba	Cd	Cr	Hg	Se
MDL (ppm)				5	5	2.5	10	5	5	5	10
Migration Limit (ppm) -- Other Than Modeling Clays				90	60	25	1000	75	60	60	500
Migration Limit (ppm) -- Modeling Clays				90	60	25	250	50	25	25	500
Specimen No.	Alias No.	Tracing No.	Mass of trace amount (mg)	Adjusted Migration Result(s) (ppm)							
1	2	1	/	ND	ND	ND	ND	ND	ND	ND	ND

Specimen Description:

1. Silvery metal part

- Note:
- ppm = parts per million
  - 1% = 10000 mg/kg = 10000 ppm = 10000 µg/g
  - ND = Not Detected (lower than MDL)
  - MDL = Method Detection Limit
  - Migration results of eight elements shown are of the adjusted analytical results



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### 3. Japan Toy Safety Standard: Part 3: 2016 Second edition

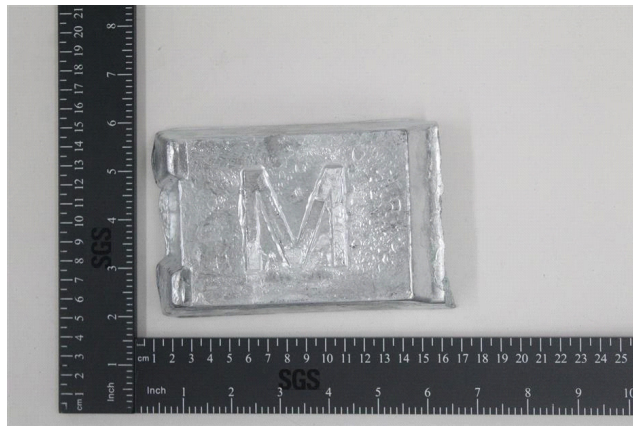
Method: As specified in Japan Toy Safety Standard: Part 3: 2016 Second edition

#### Clause 1.11 Metals used for toy (neither painted nor covered)

Test Item	Pb
MDL (mg/kg)	5
Limit (mg/kg)	90
Specimen Description	Adjusted Migration Result(s) (mg/kg)
1. Silvery metal part	ND

- Note:
- mg/kg = milligram per kilogram
  - MDL = Method Detection Limit
  - ND = Not Detected (lower than MDL)
  - Results shown are of the adjusted analytical result

#### Sample Photo:



SGS authenticate the photo on original report only

\*\*\* End of Report \*\*\*



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