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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:

NICKEL PLATED

Buyer : WORLD WIDE

Manufacturer : CHINA

Country of Origin : CHINA

Country of Destination : WORLD WIDE

Requested Age Grading : 3+

Sample Receiving Date : MAR 06, 2019

Testing Period : MAR 06, 2019 TO MAR 12, 2019





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Test	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)	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.	Japan Toy Safety Standard: Part 3: 2016 Second edition (Selected test items as specified by the applicant, please refer to test result page(s) for details)	
	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







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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	
Specimen No.			1			
Mass of trace amount		(mg)				
Soluble Aluminium	(AI)	(mg/kg)	ND	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)	39	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)	ND	50	46000	

Specimen Description:

1. Nickel plated



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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	Ва	Cd	Cr	Hg	Se
MDL (ppm)				5	5	2.5	10	5	5	5	10
Migration Limit (ppm) Other Than Modeling Clays					60	25	1000	75	60	60	500
Migration Limit (ppm) Modeling Clays					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. Nickel plated

Note: - ppm = parts per million

- $1\% = 10000 \text{ mg/kg} = 10000 \text{ ppm} = 10000 \mu\text{g/g}$

- 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
Specimen Description	Result(s) (mg/kg)
1 Nickel plated	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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