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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:

MIXTURE INK FOR EXTRA PRINTING

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





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Test I	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 paint or similar surface coating materials in submitted sample in accordance with ASTM F963-17 - Standard Consumer Safety Specification on Toy Safety, Clause 4.3.5.1	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 1.5 Paint coating, Vinyl chloride resin coating - Soluble Heavy metals	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





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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)	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)	52	50	46000

## Specimen Description:

1. Black wet paint



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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 4.3.5.1 - Heavy Elements in Paint/Similar Surface Coating 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 1					10		
Migration Limit (ppm)			90	60	25	1000	75	60	60	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. Black wet paint

Note: - ppm = parts per million

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

- MDL = Method Detection Limit

- ND = Not Detected (lower than MDL)

- 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 1.5 Paint coating, Vinyl chloride resin coating applied to the body or the components of the toys (excluding the printing ink used for paper containers)

Test Items		Pb	Sb	As	Ва	Cd	Cr	Hg	Se
MDL (mg/kg)		5 5 2.5 10 5 5 5 10							10
Limit (mg/kg)	( <b>mg/kg</b> ) 90 60 25 1000 75 60 60							60	500
Specimen No.	Mass of trace amount (mg)	Adjusted Migration Result(s) (mg/kg)							
1	/	ND	ND	ND	ND	ND	ND	ND	ND

#### Specimen Description:

1. Black wet paint

Note: - mg/kg = milligram per kilogram

- mg = milligram

- MDL = Method Detection Limit

- ND = Not Detected (lower than MDL)

- / = > 100mg

Remark - Results of soluble elements shown are of the adjusted analytical results





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## Sample Photo:



SGS authenticate the photo on original report only

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

