

**Test Report** No.T51910220032JP Date: MAR 12, 2019 Page 1 of 5

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:

**BRONZE 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 11, 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 Brai

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<br>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) | ND        | 50   | 46000                |  |

#### **Specimen Description:**

1. Bronze 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  | 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<br>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. Bronze 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)  |
| Bronze 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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