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DONGGUAN JIAN PLASTIC & METAL PRODUCTS LTD.
NO. 6, GAOBU BLVD,GAOBU TOWN, DONGGUAN CITY, GUANGDONG PROVINCE, CHINA 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 15, 2023 Further Information Date : MAR 01, 2023

Testing Period : FEB 15, 2023 TO MAR 01, 2023





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Selected test(s) as requested by the client, please refer to test result page(s) for details:

Test	Conclusion	
1.	Directive 2009/48/EC and its amendment Council Directive (EU) 2017/738, Commission Directive (EU) 2018/725, Commission Directive (EU) 2019/1922 – EN 71-3:2019 + A1:2021 – Migration of certain elements	PASS
2.	ASTM F963-17 - Standard Consumer Safety Specification on Toy Safety – Heavy Elements content	
	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	NOT APPLICABLE (SEE REMARK)
	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

Remark: There were no surface coating found in the said submitted sample.

******* 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:

<u>Directive 2009/48/EC and its amendment Council Directive (EU) 2017/738, Commission Directive (EU) 2018/725, Commission Directive (EU) 2019/1922 – EN 71-3:2019+A1:2021 – Migration of certain elements</u>

Category III: Scraped-off toy material

Method: With reference to EN 71-3:2019+A1:2021. Analysis of general elements was performed by ICP-OES / Chromium (III) was obtained by calculation, chromium (VI) was analyzed by IC-UV-Vis or LC-ICP-MS / 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)	242	50	28130	
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	1		
Soluble Chromium (III)	(Cr (III))	(mg/kg)	ND	1	460	
Soluble Chromium (VI)	(Cr (VI))	(mg/kg)	ND	0.010	0.053	
Soluble Cobalt	(Co)	(mg/kg)	ND	10	130	
Soluble Copper	(Cu)	(mg/kg)	ND	50	7700	
Soluble Lead	(Pb)	(mg/kg)	ND	2.3	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)	4695	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
- + Soluble Chromium is not restricted by EN 71-3:2019+A1:2021, results shown only for reference

The below note(s) is(are) applicable in case the relevant superscript(s) and symbol(s) was(were) shown in the result table:

- * = Exceeds Permissible Limit

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

Method: With reference to CPSC-CH-E1002-08.3 / CPSC-CH-E1001-08.3 / ASTM F963-17 Clause 8.3 / CPSC-CH-E1004-11

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

Soluble Heavy Metal Content

Test Item(s)				Pb	Sb	As	Ва	Cd	Cr	Hg	Se
MDL (ppm)					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	3	1	/	ND	ND	ND	ND	ND	ND	ND	ND

Specimen Description:

1. Silvery metal part



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Room 101-901, Plant 4 & Room 101, Plant 2 & Room 101, Plant 3 & Room 101, Plant 3 & Room 301-901, Plant 3, Jianphao (Bantian) Industrial Plant Area, No.501, Jihua Road, Bantian Cimmunity, Bantian Street, Longgang District, Shenzhen, Guangtong, China 518129 www.sgsgroup.com.cn 中国・广东・深圳市左岗区坂田街道坂田社区吉华路 430 号江瀬(坂田)工业厂区厂房 4 号 101-901、2 号 101、3 号 101、3 号 301-501 邮第:518129 t (86-755) 25328888 sgs.china@sgs.com



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Note: - ppm = parts per million

- μg/component = microgramme per component
- ND = Not Detected (lower than MDL)
- MDL = Method Detection Limit = 10 ppm
- 1% = 10000 mg/kg = 10000 ppm

The below note(s) is(are) applicable in case the relevant superscript(s) and symbol(s) was(were) shown in the result table:

- ^A Test result is over recommended action limit (80% of the regulatory limit). As the result is based on composite test and falls into an uncertain range, where "Pass" or "Fail" cannot be truly defined, "Interim-Fail" is given since the specimen may possibility fail according to the regulatory limit. Individual test is highly recommended to determine the exact Lead content in each component The decision rule has prescribed in the regulation or standard, conformity reporting will base on the standard.
- + Composite test has been performed as per client's request and the results are calculated using the minimum specimen weight
- * Exceeds Permissible Limit

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Remark 2: The statement of conformity has considered the decision rule based on the Guarded acceptance (8.3.2 of ISO/IEC GUIDE 98-4:2012). When the measured value falls within the guard band, only the test data and measurement uncertainty will be reported. The guard band is equal to the expanded measurement uncertainty with a 95% coverage probability(k=2), w = U₉₅. The Probability of False Accept and the Probability of False Reject of the decision rule are 2.5%.

For Upper Tolerance Limit (Tu):

Pass - when the measurement result is below Tu-U95

Fail - when the measurement result is above T_U+U₉₅

Inconclusive - when the measurement result is falling in guard band [Tu-U95, Tu+U95]

For Lower Tolerance Limit (T_L):

Pass - when the measurement result is above T_L+U₉₅

Fail - when the measurement result is below $T_L\text{-}U_{95}$

Inconclusive - when the measurement result is falling in guard band [T_L-U₉₅, T_L+U₉₅]



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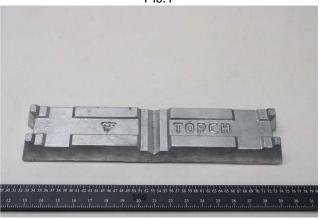
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Sample Picture (As received)

Pic.1



SGS authenticate the photo on original report only

*** End of Report ***



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