



STC Test Report

Date : 2016-08-10
No. : HP298536

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- Applicant** : Meffert's Puzzles & Games
Room 2008 Remex Centre
42 Wong Chuk Hang Road
Aberdeen Hong Kong

Attn: Uwe Meffert
- Supplier** : MEFFERT'S PUZZLES & GAMES
- Description of Samples** : Three sets of submitted sample said to be:
SKEWB ULTIMATE (see attached photo)
COUNTRY OF ORIGIN: CHINA
COUNTRY OF DESTINATION: USA & EUROPE
BUYER: RECENT TOYS INTL
- Date Samples Received** : 2016-08-03
- Date Tested** : 2016-08-03 to 2016-08-09
- Investigation Requested** : European Standard for Safety of Toys
- EN71-1:2014
- EN71-2:2011+A1:2014
- EN71-3:2013+A1:2014
- Conclusions** : The submitted sample(s) **complied** with the test requirements:

EN71-1:2014 physical and mechanical properties

EN71-2:2011+A1:2014 flammability

EN71-3:2013+A1:2014 Migration of certain elements

WONG Wing-cheung, Benny
Authorized Signatory

Toys & Children's Products Department
For and on behalf of

The Hong Kong Standards and Testing Centre Ltd.



The Hong Kong Standards and Testing Centre Limited
10 Dai Wang Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong

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AGE GRADING:

The sample was appropriately age graded with the marking of "Age 9-99".

AGE GRADING FOR TESTING:

9 years and up.

Test Results :

1. EN71-1:2014 - Part 1: Mechanical and physical properties

<u>Applicable Clause</u>	<u>Description</u>	<u>Result</u>
4	<u>General requirements</u>	
4.1	Materials cleanliness	Pass
4.7	Edges	Pass
4.8	Points and metallic wires	Pass
7	<u>Markings and instructions for use</u>	
7.1	General	Pass

2. EN71-2:2011+A1:2014 - Part 2: Flammability

<u>Applicable Clause</u>	<u>Description</u>	<u>Result</u>
4.1	General requirements	Pass

3. EN71-3 :2013+A1:2014 - Part 3: Migration of certain elements

Test Method: EN71-3: 2013+A1:2014

Determined by: Determined by: Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer and Inductively Coupled Plasma Mass Spectrometry

3.1 Category III: Scraped-off toy material

Polymeric material (see Note)

- (a) Base: black plastic
- (b) Logo sticker/sticker: white plastic (73mg)

Coating material (see Note)

- (c) Logo sticker: red/yellow/black/purple/pink multicolor coating (15mg)
- (d) Sticker: red coating (17mg)
- (e) Sticker: bluish green coating (21mg)
- (f) Sticker: green coating (24mg)
- (g) Sticker: blue coating (17mg)
- (h) Sticker: white coating (20mg)

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Coating material (see Note)

- (i) Sticker: purple coating (11mg)
- (j) Sticker: light green coating (15mg)
- (k) Sticker: brown coating (19mg)
- (l) Sticker: pink coating (18mg)
- (m) Sticker: light blue coating (18mg)
- (n) Sticker: light purple coating (20mg)

Note: There were insufficient sample to produce the test portion of 100 mg in one sample for soluble element test. According to the Standard, the quantities of the elements were calculated as if 100 mg of test portion had been used. The actual weights of the specified samples used for analysis was shown in brackets.

Elements	Result (mg/kg)			Limit(mg/kg)
	a	b	c	
Aluminium	ND	5	16	70000
Antimony	ND	ND	ND	560
Arsenic	ND	ND	ND	47
Barium	ND	ND	ND	18750
Boron	ND	ND	ND	15000
Cadmium	ND	ND	ND	17
Chromium(III)	ND	ND	0.26	460
Chromium (VI)	ND	ND	ND	0.2
Cobalt	ND	ND	ND	130
Copper	ND	ND	ND	7700
Lead	ND	ND	ND	160
Manganese	ND	ND	ND	15000
Mercury	ND	ND	ND	94
Nickel	ND	ND	ND	930
Selenium	ND	ND	ND	460
Strontium	ND	ND	ND	56000
Tin	ND	ND	0.3	180000
Organic tin	ND	ND	0.3	12
Zinc	ND	ND	ND	46000

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Elements	Result (mg/kg)			Limit(mg/kg)
	d	e	f	
Aluminium	14	15	19	70000
Antimony	ND	ND	ND	560
Arsenic	ND	ND	ND	47
Barium	ND	ND	ND	18750
Boron	ND	ND	ND	15000
Cadmium	ND	ND	ND	17
Chromium(III)	ND	ND	ND	460
Chromium (VI)	ND	ND	ND	0.2
Cobalt	ND	ND	ND	130
Copper	ND	ND	ND	7700
Lead	ND	ND	ND	160
Manganese	ND	ND	ND	15000
Mercury	ND	ND	ND	94
Nickel	ND	ND	ND	930
Selenium	ND	ND	ND	460
Strontium	7	ND	ND	56000
Tin	ND	ND	ND	180000
Organic tin	ND	ND	ND	12
Zinc	ND	ND	ND	46000

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Elements	Result (mg/kg)			Limit(mg/kg)
	g	h	i	
Aluminium	16	15	14	70000
Antimony	ND	ND	ND	560
Arsenic	ND	ND	ND	47
Barium	ND	ND	7	18750
Boron	ND	ND	ND	15000
Cadmium	ND	ND	ND	17
Chromium(III)	ND	ND	ND	460
Chromium (VI)	ND	ND	ND	0.2
Cobalt	ND	ND	ND	130
Copper	ND	ND	ND	7700
Lead	ND	ND	ND	160
Manganese	ND	ND	ND	15000
Mercury	ND	ND	ND	94
Nickel	ND	ND	ND	930
Selenium	ND	ND	ND	460
Strontium	ND	ND	ND	56000
Tin	ND	0.2	0.8	180000
Organic tin	ND	0.2	0.8	12
Zinc	ND	ND	ND	46000

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Elements	Result (mg/kg)			Limit(mg/kg)
	j	k	l	
Aluminium	10	22	26	70000
Antimony	ND	ND	ND	560
Arsenic	ND	ND	ND	47
Barium	ND	ND	12	18750
Boron	ND	ND	ND	15000
Cadmium	ND	ND	ND	17
Chromium(III)	ND	0.11	0.18	460
Chromium (VI)	ND	0.11	ND	0.2
Cobalt	ND	ND	ND	130
Copper	ND	23	ND	7700
Lead	ND	ND	ND	160
Manganese	ND	ND	ND	15000
Mercury	ND	ND	ND	94
Nickel	ND	ND	ND	930
Selenium	ND	ND	ND	460
Strontium	ND	ND	ND	56000
Tin	ND	ND	ND	180000
Organic tin	ND	ND	ND	12
Zinc	ND	14	5	46000

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Elements	Result (mg/kg)		Limit(mg/kg)
	m	n	
Aluminium	16	18	70000
Antimony	ND	ND	560
Arsenic	ND	ND	47
Barium	ND	ND	18750
Boron	ND	ND	15000
Cadmium	ND	ND	17
Chromium(III)	ND	ND	460
Chromium (VI)	ND	ND	0.2
Cobalt	ND	ND	130
Copper	ND	ND	7700
Lead	ND	ND	160
Manganese	ND	ND	15000
Mercury	ND	ND	94
Nickel	ND	ND	930
Selenium	ND	ND	460
Strontium	ND	ND	56000
Tin	0.4	ND	180000
Organic tin	0.4	ND	12
Zinc	11	ND	46000

Remark: ND = Not detected (see Table A)
mg/kg = milligram per kilogram

The Chromium content was reported as Chromium (III) and Chromium (VI). Whenever the result of Chromium exceeded the limit of Chromium (III) and Chromium (VI), confirmation test was performed.

The Tin content was reported as Organic tin unless specified.

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Table A. Detection limit	
Elements	Limit of Detection (mg/kg)
Aluminium	5
Antimony	5
Arsenic	5
Barium	5
Boron	5
Cadmium	2.5
Chromium(III)	0.1
Chromium (VI)	0.1
Cobalt	5
Copper	5
Lead	5
Manganese	5
Mercury	5
Nickel	5
Selenium	5
Strontium	5
Tin	0.2
Organic tin	0.2
Zinc	5

***** End of Test Report *****

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Appendix for Photos of the Submitted Sample





STC Test Report

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by The Hong Kong Standards & Testing Centre Limited (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The Company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the "Clients").
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3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. The Report refers only to the sample tested and does not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report.
5. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
6. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
7. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
8. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
9. Subject to the variable length of retention time for test data and report stored hereinto as to otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of this test report for a period of three years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after the retention period. Under no circumstances shall we be liable for damages of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.
10. Issuance records of the Report are available on the internet at www.stc-group.org. Further enquiry of validity or verification of the Reports should be addressed to the Company.