



財團法人台灣玩具暨兒童用品研發中心

TAIWAN CHILDREN'S COMMODITIES R & D CENTER

10F., No.61, Dongxing Rd., Xinyi District, Taipei City 110, Taiwan (R.O.C.)

110台北市信義區東興路61號10樓 TEL:(02)8768-2901 FAX:(02)8768-2909

www.ttrd.org.tw

E-mail:service@ttrd.org.tw

==TEST REPORT==

NO.: 10604092E

DATE: Jul 12, 2017

Applicant: GOOD KIDS TOY CO., LTD.

Address: No.463, Xidong Rd., Sanxia Dist., New Taipei City 237, Taiwan (R.O.C.)

Type of Product: Plastic Racket / SYS148

Age Grading: FOR 3 YEARS AND UP.

Country of Product: MADE IN TAIWAN.

Type of investigation required:

1. According to European standard EN 71

Part 1:2014,

Part 2:2011+A1:2014,

Part 3:2013+A1:2014

2. Phthalate (Annex XVII Items 51 & 52 Of The REACH Regulation (EC) No. 1907/2006).

Conclusion: 1. The submitted samples comply with the applicable mechanical physical, flammability and migration for certain elements test requirement European EN 71 Part 1, 2, 3.
2. Phthalates in toys and childcare articles comply with Annex XVII Items 51 & 52 Of The REACH Regulation (EC) No. 1907/2006 to Restrictions.

THIS TEST REPORT IS VALID ONLY TO THE SAMPLES TESTED.

TAIWAN CHILDREN'S COMMODITIES RESEARCH AND DEVELOPMENT CENTER

ALEX CHANG
TESTING SECTION ENGINEER

M.Y.WU
TESTING SECTION CHIEF

S.P.HUANG
GENERAL MANAGER

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TEST RESULTS: Age grading for children 3 years and up.

EN 71 Part 1 : 2014- Mechanical and physical properties

CLAUSE	TESTING ITEM	ASSESSMENT
4.1	Material	P
4.7	Edges	P
4.8	Points and wires	P
7.1	General	P
7.2	Toys not for children under 36 months	P

EN 71 Part 2: 2011+A1:2014 Flammability of Toys

CLAUSE	TESTING ITEM	ASSESSMENT
4.1	General	P

Remarked: P=Passed NS=Non-States F=Failed Fuc=Function



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EN 71 Part 3: 2013+A1:2014- 19 Toxic Element Migration Test

(A) Test result

Category III : Scraped-off

Element determination : By ICP-MS Spectrometers								
Test amounts shown are in mg/kg								
ELEMENTA	A	B	C	D	E	F	DL	LIMIT
ALUMINIUM(Al)	6.39	4.91	7.67	6.54	5.08	7.10	0.5	70000
ANTIMONY(Sb)	ND	ND	ND	ND	ND	ND	0.5	560
ARSENIC(As)	ND	ND	ND	ND	ND	ND	0.5	47
BARIUM(Ba)	0.25	0.21	0.22	0.22	0.21	0.23	0.5	18750
BORON(B)	2.58	2.37	2.32	4.27	3.23	3.00	0.5	15000
CADMIUM(Cd)	ND	ND	ND	ND	ND	ND	0.2	17
CHROMIUM(III) (Cr III)	ND	ND	ND	ND	ND	ND	0.005	460
CHROMIUM(VI) (Cr VI)	ND	ND	ND	ND	ND	ND	0.005	0.2
COBALT(Co)	ND	ND	ND	ND	ND	ND	0.5	130
COPPER(Cu)	0.28	0.32	0.78	0.33	0.25	0.35	0.5	7700
LEAD(Pb)	ND	0.49	0.46	0.15	ND	0.20	0.5	160
MANGANESE(Mn)	0.28	0.25	0.29	0.25	0.26	0.30	0.5	15000
MERCURY(Hg)	ND	ND	ND	ND	ND	ND	0.5	94
NICKEL(Ni)	ND	ND	ND	ND	ND	ND	0.5	930
SELENIUM(Se)	ND	ND	ND	ND	ND	ND	0.5	460
STRONTIUM(Sr)	3.01	1.67	1.81	1.70	1.67	1.83	0.5	56000
TIN(Sn)	0.18	ND	ND	ND	0.42	ND	0.5	180000
ORGANIC TIN	ND	ND	ND	ND	ND	ND	-	12
ZINC(Zn)	3.62	13.06	15.47	5.21	4.00	8.45	0.5	46000



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Element determination : By ICP-MS Spectrometers								
Test amounts shown are in mg/kg								
ELEMENTA	G	H	I	J	K	L	DL	LIMIT
ALUMINIUM(Al)	6.06	5.16	6.27	7.52	5.05	5.19	0.5	70000
ANTIMONY(Sb)	ND	ND	ND	ND	ND	ND	0.5	560
ARSENIC(As)	ND	ND	ND	ND	ND	ND	0.5	47
BARIUM(Ba)	0.26	0.21	0.28	0.23	0.22	0.21	0.5	18750
BORON(B)	2.50	2.01	2.95	4.34	2.47	1.38	0.5	15000
CADMIUM(Cd)	ND	ND	ND	ND	ND	ND	0.2	17
CHROMIUM(III) (Cr III)	ND	ND	ND	ND	ND	ND	0.005	460
CHROMIUM(VI) (Cr VI)	ND	ND	ND	ND	ND	ND	0.005	0.2
COBALT(Co)	ND	ND	ND	ND	ND	ND	0.5	130
COPPER(Cu)	0.30	0.29	0.31	0.35	0.61	0.31	0.5	7700
LEAD(Pb)	0.36	0.31	0.49	0.40	0.30	0.40	0.5	160
MANGANESE(Mn)	0.32	0.24	0.28	0.32	0.29	0.31	0.5	15000
MERCURY(Hg)	ND	ND	ND	ND	ND	ND	0.5	94
NICKEL(Ni)	ND	ND	ND	ND	ND	ND	0.5	930
SELENIUM(Se)	ND	ND	ND	ND	ND	ND	0.5	460
STRONTIUM(Sr)	1.96	1.59	1.72	1.97	1.68	1.82	0.5	56000
TIN(Sn)	ND	ND	ND	ND	ND	ND	0.5	180000
ORGANIC TIN	ND	ND	ND	ND	ND	ND	-	12
ZINC(Zn)	11.96	8.35	10.23	10.00	8.10	11.03	0.5	46000



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Element determination : By ICP-MS Spectrometers								
Test amounts shown are in mg/kg								
ELEMENTA	M	N	O	P	Q	R	DL	LIMIT
ALUMINIUM(Al)	6.63						0.5	70000
ANTIMONY(Sb)	2.69						0.5	560
ARSENIC(As)	ND						0.5	47
BARIUM(Ba)	0.44						0.5	18750
BORON(B)	1.48						0.5	15000
CADMIUM(Cd)	ND						0.2	17
CHROMIUM(III) (Cr III)	ND						0.005	460
CHROMIUM(VI) (Cr VI)	ND						0.005	0.2
COBALT(Co)	ND						0.5	130
COPPER(Cu)	0.64						0.5	7700
LEAD(Pb)	0.34						0.5	160
MANGANESE(Mn)	0.68						0.5	15000
MERCURY(Hg)	ND						0.5	94
NICKEL(Ni)	ND						0.5	930
SELENIUM(Se)	ND						0.5	460
STRONTIUM(Sr)	3.86						0.5	56000
TIN(Sn)	ND						0.5	180000
ORGANIC TIN	ND						-	12
ZINC(Zn)	9.47						0.5	46000

A: Plastic: red..... W: 0.4741 g.

B: Plastic: yellow..... W: 0.4298 g.

C: Plastic: blue..... W: 0.4522 g.

D: Plastic: green..... W: 0.4738 g.

E: Plastic: orange..... W: 0.4289 g.

F: Plastic: purple..... W: 0.4199 g.

G: Soft plastic: red..... W: 0.4508 g.

H: Soft plastic: yellow..... W: 0.4652 g.

I: Soft plastic: blue..... W: 0.4828 g.



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J: Soft plastic: green..... W: 0.4313 g.

K: Soft plastic: orange W: 0.4350 g.

L: Soft plastic: purple W: 0.4384 g.

M: Cloth..... W: 0.4206 g.

Remarks: -Unless specified, determination of Chromium (III), Chromium(VI) and Organic tin was based on elemental analysis.

-Organic tin test result was expressed as tributyl tin.

mg/kg = milligram per kilogram

ND = Not detected

DL = Detection limit

(B) Categories of various toy materials

Category I: Dry, brittle, powder like or pliable

Solid toy material from which powder-like material is released during playing and semi-solid materials that may also leave residues on the hands during play. The material can be ingested. Contamination of the hands with the material may contribute to the oral exposure of the material, (e.g. the cores of coloring pencils, chalk, crayons, modeling clays and plaster).

Category II: Liquid or sticky

Fluid or viscous toy material, which can be ingested or to which dermal exposure may occur during playing, (e.g. liquid paints, finger paints, liquid ink in pens, glue sticks, slimes, bubble solution).

Category III : Scraped-off

Solid toy material with or without a coating, which can be ingested as a result of biting, tooth scraping, sucking or licking, (e.g. coatings, lacquers, plastics, paper, textiles, glass, ceramic, metallic, wooden, bone, leather and other materials).



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2. The Phthalates contents:

Phthalates contents determination: By Gas Chromatographic-Mass Spectrometric (GC-MS).

(1).Plasticized material in toys and childcare articles:

CLAUSE	LIMIT	SAMPLE A	SAMPLE B	SAMPLE C
DIETHYL HEXYL PHTHALATE (DEHP)		ND	ND	ND
DIBUTYL PHTHALATE (DBP)		ND	ND	ND
BENZYL BUTYL PHTHALATE (BBP)		ND	ND	ND
SUN OF DEHP,DBP & BBP	0.1	ND	ND	ND

CLAUSE	LIMIT	SAMPLE D	SAMPLE E	SAMPLE F
DIETHYL HEXYL PHTHALATE (DEHP)		ND		
DIBUTYL PHTHALATE (DBP)		ND		
BENZYL BUTYL PHTHALATE (BBP)		ND		
SUN OF DEHP,DBP & BBP	0.1	ND		

(2).Plasticized material in toys and childcare articles which can be placed in the mouth by children

CLAUSE	LIMIT	SAMPLE A	SAMPLE B	SAMPLE C
DI-(ISO-NONYL)PHTHALATE (DINP)		ND	ND	ND
DI-(ISO-DECYL)PHTHALATE (DIDP)		ND	ND	ND
DI-(N-OCTYL)PHTHALATE (DNOP)		ND	ND	ND
SUM OF DINP, DIDP & DNOP	0.1	ND	ND	ND

CLAUSE	LIMIT	SAMPLE D	SAMPLE E	SAMPLE F
DI-(ISO-NONYL)PHTHALATE (DINP)		ND		
DI-(ISO-DECYL)PHTHALATE (DIDP)		ND		
DI-(N-OCTYL)PHTHALATE (DNOP)		ND		
SUM OF DINP, DIDP & DNOP	0.1	ND		

A: Plastic: red, yellow, blue W: 2.6245 g.

B: Plastic: green, orange, purple W: 2.6026 g.

C: Soft plastic: red, yellow, blue W: 2.6537 g.

D: Soft plastic: green, orange, purple..... W: 2.6401 g.



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THE MANUFACTURERS SENT THIS SAMPLE TO TCC FOR INSPECTING.

THE REPORT SHOULD BE ATTACHED WITH THE PICTURE OF PRODUCT, OTHERWISE INVALID.

