

Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 1 of 17

Applicant: HAHOWA CO., Ltd

Contact information: 4D-428 Software Industry Base, Yuehai Street, Nanshan District, Shenzhen, China.

The following sample(s) was (were) submitted and identified by client as:

Sample Description : Jigsaw puzzle series
Item No. : Please refer to next page(s).
Packaging Provided : Yes
Labeled Age Grading : 3+
Requested Age Grading : 3+
Age Group Applied in Testing : 3+
Received Date : Aug. 30, 2023
Testing Period : From Aug. 30, 2023 to Sep. 5, 2023
Test Request : Please refer to next page(s).
Test Result(s) : Please refer to next page(s).

Shen Zhen UONE Test Co., LTD.

Prepared by



Ruth Lai

Checked by



Thea Ye

Approved by



Hedy Xu/ Eric Yang

Remark:Hedy (Chemistry field) + Eric (Physical field)

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 2 of 17

Summary of Test Results (Tested parts are required partially by client):**TEST REQUEST****CONCLUSION**

- | | |
|--|------------------------|
| (1) EN 71-1:2014+A1: 2018 European Standard for Safety of Toys
Mechanical and Physical Properties | PASS |
| (2) Labeling requirement (Washing / Cleaning Label, CE mark, importer / manufacturer
mark, product identification) according to the Directive 2009/48/EC-Safety of toys | See result Page |
| (3) EN 71-2:2020 European Standard for Safety of Toys
Flammability | PASS |
| (4) EN71-3:2019+ A1:2021 European Standard for Safety of Toys
Migration of Certain Elements (Category 3 Scraped-off toy material) | PASS |
-

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 3 of 17

Item No.:
1001,1002,1003,1004,1005,1006,1007,1008,1009,1010,1011,1012,1013,1014,1015,1016,1017,1018,1019,1020,1021,1022,1023,1024,1025,1026,1027,1028,1029,1030,1031,1032,1033,1034,1035,1036,1037,1038,1039,1040,1041,1042,1043,1044,1045,1046,1047,1048,1049,1050,1051,1052,1053,1054,1055,1056,1057,1058,1059,1060,1061,1062,1063,1064,1065,1066,1067,1068,1069,1070,1071,1072,1073,1074,1075,1076,1077,1078,1079,1080,1081,1082,1083,1084,1085,1086,1087,1088,1089,1090,1220,1221,1222,1223,1224,1225,2001,2002,2003,2004,2005,2006,2008,2009,2010,S1001,S1002,1027S,S1028,S1029,S1030,S1031,S1032,S1033,S1034,S1035,S1036,S1037,S1038,S1039,S1040,S1225,ST1001,ST1002,ST1003,ST1004,ST1005,ST1006,ST1007,ST1008,ST1009,T1001,T1002,T1003,T1004,T1005,T1006,T1007,T1008,T1009,T1010,T1011,T1012,HD1080,HD1081,HD1082,HD1083,HD1084,HD1085,T538

Test Material(s) List

Material No.	Description	Remark
1	Green plastic	/
2	White plastic	/
3	White PU with multi-color printing	/
4	Multi-color coating	/
5	White paper with multi-color coating	/
6	Laminated white/gray cardboard with multi-color printing	/
7	White double-sided adhesive	/

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 4 of 17

Test Result(s):

(1) Mechanical and Physical Properties – EN 71-1:2014+A1: 2018

Section	Description	Assessment
4.1	Materials cleanliness	PASS
4.2	Assembly	NA
4.3	Flexible Plastic Sheeting	NA
4.4	Toy Bags	NA
4.5	Glass	NA
4.6	Expanding Materials	NA
4.7	Edges	PASS
4.8	Points and Metallic Wires	PASS
4.9	Protruding Parts	NA
4.10	Parts moving against each other	NA
4.10.1	Folding and sliding mechanisms*	NA
4.10.2	Driving Mechanisms	NA
4.10.3	Hinges	NA
4.10.4	Springs	NA
4.11	Mouth-actuated toys and other toys intended to be put in the mouth*	NA
4.12	Balloon	NA
4.13	Cords of Toy Kites and Other Flying Toys*	NA
4.14	Enclosures	NA
4.14.1	Toys which a child can enter*	NA
4.14.2	Masks and helmets	NA
4.15	Toys intended to bear the mass of a child*	NA
4.15.1	Toys propelled by a child or by other means*	NA
4.15.2	Toy bicycles*	NA
4.15.3	Rocking horses and similar toys*	NA
4.15.4	Toys not propelled by a child*	NA
4.15.5	Toy scooters*	NA

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 5 of 17

Section	Description	Assessment
4.16	Heavy immobile toys*	NA
4.17	Projectiles	NA
4.17.1	General	NA
4.17.2	All projectiles	NA
4.17.2.1	Leading parts	NA
4.17.2.2	Foam shaft projectiles with a suction cup as a leading part	NA
4.17.2.3	Other types of projectile with a suction cup as a leading part	NA
4.17.3	Projectile toys with stored energy	NA
4.17.3.1	Energy limitation	NA
4.17.3.2	Edges	NA
4.17.3.3	Projectiles with a protective cap, cover or tip	NA
4.17.3.4	Impact resistance	NA
4.17.3.5	Improvised projectiles	NA
4.17.4	Certain projectile toys without stored energy	NA
4.17.4.1	Darts	NA
4.17.4.2	Bows and arrows	NA
4.17.4.3	Toy catapults and projectiles propelled by an elastic band	NA
4.17.4.4	Projectile toys without stored energy where the discharge mechanism can store energy, only when held in place by the user	NA
4.18	Aquatic toys and inflatable toys*	NA
4.19	Percussion Caps Specifically Designed for Use in Toys and toys using percussion caps	NA
4.20	Acoustics	NA
4.21	Toys containing a non-electrical heat source	NA
4.22	Small balls	NA
4.23	Magnets	NA
4.24	YoYo-ball	NA
4.25	Toys attached to food	NA
4.26	Toy disguise costumes	NA

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 6 of 17

Section	Description	Assessment
4.27	Flying toys	NA
4.27.1	General	NA
4.27.2	Rotors and propellers on flying toys	NA
4.27.3	Rotors and propellers on remote controlled flying toys	NA
5	Toys intended for Children under 36 months	NA
5.1	General Requirements	NA
5.2	Soft-filled toys and soft-filled parts of a toy	NA
5.3	Plastic sheeting	NA
5.4	Cords, chains and electrical cables in toys	NA
5.4.2	Cords and chains in toys intended for children under 18 months	NA
5.4.2.1	Cords and chains with the potential to tangle	NA
5.4.2.2	Two cords or chains with the potential to tangle	NA
5.4.2.3	Separated cords and chains	NA
5.4.2.4	Free length of cords and chains	NA
5.4.3	Cords and chains in toys intended for children of 18 months or over but under 36 months	NA
5.4.3.1	Cords and chains with the potential to tangle	NA
5.4.3.2	Two cords or chains with the potential to tangle	NA
5.4.3.3	Separated cords and chains	NA
5.4.3.4	Free length of cords and chains	NA
5.4.3.5	Cords and chains not suitable for children under 18 months	NA
5.4.4	Fixed loops, tangled loops and nooses	NA
5.4.5	Cords and chains on pull along toys	NA
5.4.6	Electrical cables	NA
5.4.7	Cross-sectional dimension of certain cords	NA
5.4.8	Self-retracting cords	NA
5.4.9	Toys attached to or intended to be strung across a cradle, cot or perambulator	NA
5.4.9.1	Toys intended to be strung across a cradle, cot or perambulator	NA

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 7 of 17

Section	Description	Assessment
5.4.9.2	Toys otherwise intended to be attached to a cradle, cot or perambulator	NA
5.5	Liquid Filled Toys	NA
5.6	Speed limitation of electrically driven toys*	NA
5.7	Glass and Porcelain	NA
5.8	Shape and Size of certain Toys	NA
5.9	Toys comprising Monofilament Fibres	NA
5.10	Small balls	NA
5.11	Play figures	NA
5.12	Hemispheric shaped toys	NA
5.13	Suction cups	NA
5.14	Straps intended to be worn fully or partially around the neck	NA
5.15	Sledges with cords for pulling	NA
6	Packaging	PASS
7	Warning and Instructions for Use	PASS
7.1	General	PASS
7.2	Warning not intended for Children under 36 months	PASS
7.3	Latex Balloon	NA
7.4	Aquatic Toys	NA
7.5	Functional Toys	NA
7.6	Hazardous sharp Functional Edges and Points	NA
7.7	Projectiles toys	NA
7.8	Imitation protective masks and helmets	NA
7.9	Toy Kites	NA
7.10	Roller skates, inline skates and skateboards	NA
7.10.1	Roller skates, inline skates and skateboards	NA
7.10.2	Ride-on toys without a braking device	NA
7.10.3	Electrically-driven ride-on toys	NA
7.10.4	Instructions for use	NA

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 8 of 17

Section	Description	Assessment
7.11	Toys intended to be strung across a cradle, cot, or perambulator	NA
7.12	Liquid filled teethingers	NA
7.13	Percussion caps specifically designed for use in toys	NA
7.14	Acoustics	NA
7.15	Toy bicycles	NA
7.16	Toys intended to bear the mass of a child	NA
7.17	Toys comprising monofilament fibres	NA
7.18	Toy scooters	NA
7.19	Rocking horses and similar toys	NA
7.20	Magnetic/ electrical experimental set	NA
7.21	Toys with electrical cables exceeding 300 mm in length	NA
7.22	Toys with cords or chains intended for children of 18 months and over but under 36 months	NA
7.23	Toys intended to be attached to a cradle, got or perambulator	NA
7.24	Sledges with cords for pulling	NA
7.25	Flying toys	NA
7.25.1	Flying toys	NA
7.25.2	Remote controlled flying toys	NA
7.26	Improvised projectiles	NA
8.3	Torque Test	NA
8.4	Tension test	NA
8.5	Drop test	NA
8.6	Tip over test	NA
8.7	Impact test	NA
8.8	Compression test	NA
8.9	Soaking test	NA
8.13	Flexure test	NA
8.34	Tension test for magnets	NA

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 9 of 17

Remark: NA = Not Applicable.

“*”= The Test Item(s) was(were) not got CNAS accreditation.

(2) Labeling requirement (Washing/Cleaning Label, CE mark, importer / manufacturer mark (name, address), product identification) according to the Directive 2009/48/EC-Safety of toys

Summary table:

	On product	On packaging
CE mark	Absent	Absent
Manufacturer's Name & Address	Absent	Present
Importer's Name & Address	Absent	Present
Product ID	Absent	Absent

CE mark, importer / manufacturer mark (name, address), product identification	See Remark
<p>Remark1: The manufacturer's name, registered trade name or registered trade mark and the address at which the manufacturer can be contacted must be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy. This requirement applies also to the name and address etc. of any importer.</p>	

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 10 of 17

(3) Flammability – EN 71-2:2020

Section	Test Item	Assessment
4.1	General requirements	PASS
4.2	Toys to be worn on the head	NA
4.2.1	General	NA
4.2.2	Beards, moustaches, wigs, etc., made from pile or flowing elements which protrude 50 mm or more from the surface of the toy	NA
4.2.3	Beards, moustaches, wigs, etc., made from pile or flowing elements which protrude less than 50 mm from the surface of the toy	NA
4.2.4	Full or partial moulded head masks	NA
4.2.5	Toys to be worn on the head, hoods, headdresses including upward protruding items and masks which partially or fully cover the head	NA
4.3	Toys disguise costumes and toys intended to worn by a child in play	NA
4.4	Toys intended to be entered by a child	NA
4.5	Soft-filled toys	NA

Remark: NA = Not Applicable.

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 11 of 17

(4) Migration of Certain Elements

Test Method: With reference to EN71-3:2019+ A1:2021, analyzed by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES), Inductively Coupled Plasma Mass Spectrometer (ICP-MS), Gas Chromatograph-Mass Spectrometry (GC-MS) and Ion Chromatograph.

Substance	MDL (mg/kg)	Test Result (mg/kg)				
		1	2	3	4	5
Aluminium (Al)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Antimony (Sb)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Barium (Ba)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Boron (B)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)	0.2	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(III) (Cr ³⁺)*	2.0	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(VI) (Cr ⁶⁺)*	0.02	N.D.	N.D.	N.D.	N.D.	N.D.
Cobalt (Co)	1.0	N.D.	N.D.	N.D.	N.D.	N.D.
Copper (Cu)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	2.0	N.D.	N.D.	N.D.	N.D.	N.D.
Manganese (Mn)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	1.0	N.D.	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Selenium (Se)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Strontium (Sr)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Tin (Sn)	5.0	N.D.	N.D.	N.D.	N.D.	N.D.
Organic tin☆	0.1	N.D.	N.D.	N.D.	N.D.	N.D.
Zinc (Zn)	5.0	N.D.	N.D.	30	N.D.	N.D.
Conclusion		PASS	PASS	PASS	PASS	PASS

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 12 of 17

Substance	MDL (mg/kg)	Test Result (mg/kg)	
		6	7
Aluminium (Al)	5.0	488	N.D.
Antimony (Sb)	5.0	N.D.	N.D.
Arsenic (As)	0.5	N.D.	N.D.
Barium (Ba)	5.0	12	N.D.
Boron (B)	5.0	N.D.	N.D.
Cadmium (Cd)	0.2	N.D.	N.D.
Chromium(III) (Cr ³⁺)*	2.0	N.D.	N.D.
Chromium(VI) (Cr ⁶⁺)*	0.02	N.D.	N.D.
Cobalt (Co)	1.0	N.D.	N.D.
Copper (Cu)	5.0	N.D.	N.D.
Lead (Pb)	2.0	N.D.	N.D.
Manganese (Mn)	5.0	21	N.D.
Mercury (Hg)	1.0	N.D.	N.D.
Nickel (Ni)	5.0	N.D.	N.D.
Selenium (Se)	5.0	N.D.	N.D.
Strontium (Sr)	5.0	24	N.D.
Tin (Sn)	5.0	N.D.	N.D.
Organic tin☆	0.1	N.D.	N.D.
Zinc (Zn)	5.0	19	N.D.
Conclusion		PASS	PASS

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 13 of 17

The table of Migration Elements limit:

Substance	Limit (mg/kg)		
	Category 1	Category 2	Category 3
	Dry, brittle, powder-like or pliable materials	Liquid or sticky materials	Scraped-off materials
Aluminium (Al)	2250	560	28130
Antimony (Sb)	45	11.3	560
Arsenic (As)	3.8	0.9	47
Barium (Ba)	1500	375	18750
Boron (B)	1200	300	15000
Cadmium (Cd)	1.3	0.3	17
Chromium(III) (Cr ³⁺)	37.5	9.4	460
Chromium(VI) (Cr ⁶⁺)	0.02	0.005	0.053
Cobalt (Co)	10.5	2.6	130
Copper (Cu)	622.5	156	7700
Lead (Pb)	2.0	0.5	23
Manganese (Mn)	1200	300	15000
Mercury (Hg)	7.5	1.9	94
Nickel (Ni)	75	18.8	930
Selenium (Se)	37.5	9.4	460
Strontium (Sr)	4500	1125	56000
Tin (Sn)	15000	3750	180000
Organic tin ☆	0.9	0.2	12
Zinc (Zn)	3750	938	46000

Note:

1. mg/kg = part per million (ppm).
2. N.D. = Not Detected (< MDL).
3. MDL = method detection limit.
4. Calculated concentration of Chromium(III) (Cr³⁺) and Chromium(VI) (Cr⁶⁺) are based on total Chromium.
5. "☆" = Organic tin include Methyl tin, Butyltin, Dibutyl tin, Tributyl tin, Tetra-butyl tin, n-Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin, Triphenyl tin, Dimethyl tin. The migration of organic tin is expressed as tributyltin.
6. "*" = The Test Item(s) was(were) not got CNAS

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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 14 of 17

Remark: The test result(s) is(are) copied from the test report No. U02803230830115-1E, dated Sep. 5, 2023.

Photo(s) of Sample:

The following photo(s) is(are) provided by the customer:



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Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 15 of 17



This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 16 of 17



End of Report

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

Test Report

Report No.: U02806231011116E

Query Password: QW9572

Date: Oct. 16, 2023

Page 17 of 17

Statement

1. The information as listed on the first page of this test report was all provided by the client except the received date, testing period, test result(s) and test request. The client shall be responsible for the representativeness of sample and authenticity of materials, for which UONE shall bear no responsibilities.
2. Unless otherwise stated the results shown in this report refer only the sample(s) tested and does not bear other joint and several liabilities.
3. This report is considered invalidated without the Special Seal for Inspection of the UONE, This report shall not be altered, increased or deleted.
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