

Report No.: **158277856a 001**

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Client: ONE FOR FUN LIMITED

Contact Information: 3-5 Cambuslang Way, Gateway Office Park, Cambuslang, Glasgow, G32 8ND

Manufacturer's name: USD001

Test item(s): Toys

**Identification/
Model No(s):** ROBOT HAND 48CM
Item no.: SV14191

Sample obtaining method: Sending by customer

Condition at delivery: Test item complete and undamaged.

Sample Receiving date: 2023-09-14

Testing Period: 2023-09-18 to 2023-09-21

Place of testing: Chemical laboratory Hong Kong, Toys laboratory Hong Kong

Test Specification:

Please refer to "Test Result Summary List" on page 2 for details

Other information:

Country of Origin: China

The provided age grade of the item(s) : Not Provided

As per client request, the item(s) was/ were tested for the age of over 3 years.

Packaging provided: No

For and on behalf of
TÜV Rheinland Hong Kong Ltd.



Amenda Yung/
Senior CS Manager

2023-09-25

Date

Name/Position



Wong Yiu Tong , Tommy/
Senior Lab Manager

2023-09-25

Date

Name/Position

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.

This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

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Test Result Summary :**Test Specification:****Test result:**

- | | |
|--|------|
| 1 EN 71-1:2014+A1:2018 Mechanical and physical properties
(As per client request, Clause 7 - Warnings and instructions was excluded in this test report) | PASS |
| 2 EN 71-2:2020 Flammability | PASS |
| 3 EN 71-3:2019+A1:2021 Migration of 19 Elements | PASS |
| 4 Cadmium content according to Annex XVII Entry 23 of Regulation (EC) No 1907/2006 and its amendments | PASS |
| 5 REACH regulation (EC) No. 1907/2006 and its amendment regulations on Annex XVII entry 51 and entry 52 : Phthalates | PASS |
| CPSIA Section 108 as amended by 16 CFR 1307 : Phthalates | PASS |
| California Safe Drinking Water and Toxic Enforcement Act of 1986 (CA Prop 65): DEHP, BBP, DBP, DIDP, DnHP content | PASS |
| 6 ASTM F963-17: Mechanical and physical
(As per client request, Clause 5-Labeling requirements, 6-Instructional Literature, 7-Producer's Marking were excluded in this test report) | PASS |
| 7 ASTM F963-17: Flammability on solids and soft toys | PASS |
| 8 ASTM F963-17 Sect. 4.3.5.2, CPSIA Sect. 101, and Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): Total lead content in substrate materials | PASS |
| 9 ASTM F963-17 Sect. 4.3.5.1 and 4.3.5.2 : Soluble heavy metal | PASS |

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Material List:

Item: ROBOT HAND 48CM

Item no.: SV14191

Material No.	Material	Color	Location
M001	Whole Product	Multicolor	[#Black handle style]-Whole Product; [#Blue handle style]-Whole Product
M002	Plastic	Gray	[#Black handle style]-Inner tape;[#Blue handle style]-Inner tape
M003	Plastic	Grey	[#Black handle style]-Finger, hand; [#Blue handle style]-Finger, hand
M004	Plastic	Yellow	[#Black handle style]-Tube;[#Blue handle style]-Tube
M005	Plastic	Black	[#Black handle style]-Handle;[#Blue handle style]-Button
M006	Plastic	Blue	[#Black handle style]-Button;[#Blue handle style]-Handle
M007	Metal	Silver	[#Black handle style]-Screw;[#Blue handle style]-Screw
M008	Metal	Silver	[#Black handle style]-Axle;[#Blue handle style]-Axle

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1. EN 71-1:2014+A1:2018 Mechanical and physical properties

Test No:	T001
Material No:	M001
4. General requirements	
4.1 Material cleanliness	PASS
4.7 Edges	PASS
4.8 Points and metallic wires	PASS
7. Warnings, markings and instructions for use	
7.1 General	Not Conducted
7.2 Toys not intended for children under 36 months	Not Conducted
7.3 Latex balloons	Not Conducted
7.4 Aquatic toys	Not Conducted
7.5 Functional toys	Not Conducted
7.6 Hazardous sharp functional edges and points	Not Conducted
7.7 Projectile toys	Not Conducted
7.8 Imitation protective masks and helmets	Not Conducted
7.9 Toy kites	Not Conducted
7.10 Roller skates, inline skates, skateboards and certain other ride-on toys	Not Conducted
7.11 Toys otherwise intended to be strung across a cradle, cot, or perambulator	Not Conducted
7.12 Liquid-filled teethingers	Not Conducted
7.13 Percussion caps specifically designed for use in toys	Not Conducted
7.14 Acoustics	Not Conducted
7.15 Toy bicycles	Not Conducted
7.16 Toys intended to bear the mass of a child	Not Conducted
7.17 Toys comprising monofilament fibres	Not Conducted
7.18 Toy scooters	Not Conducted
7.19 Rocking horses and similar toys	Not Conducted
7.20 Magnetic/ electrical experimental sets	Not Conducted
7.21 Toys with electrical cables exceeding 300 mm in length	Not Conducted

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7.22 Toys with cords or chains intended for children of 18 months and over but under 36 months	Not Conducted
7.23 Toys intended to be attached to a cradle, cot or perambulator	Not Conducted
7.24 Sledges with cords for pulling	Not Conducted
7.25 Flying toys	Not Conducted
7.26 Improvised projectiles	Not Conducted

The clause and/or sub-clause would be indicated only in the test report whichever applicable. The comprehensive result report is available upon request.

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2. EN 71-2:2020 Flammability**Test result:**

Test No:	T001
Material No.	M001
4.1 General requirements	PASS

The clause and/or sub-clause would be indicated only in the test report whichever applicable. The comprehensive result report is available upon request.

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3. EN 71-3:2019+A1:2021 Migration of 19 Elements

Test Method: with reference to EN 71-3:2019+A1:2021, analyzed by ICP-OES / ICP-MS / LC-ICP-MS/IC-UV/GC-MS.

3) For scraped-off toy materials:
Test Result:

Test No.				T001	T002	T003
Material No.				M002	M003	M004
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL	< RL
Mass of trace amount #	mg	--	--	-	-	-

Abbreviation:

- < = less than
- RL = Reporting Limit
- mg/kg denotes milligram per kilogram
- mg denotes milligram
- [^] denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.6 mg/kg) or the components were confirmed to be pure metal

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Test Result:

Test No.				T004	T005
Material No.				M005	M006
Test Parameter	Unit	RL	Regulatory Requirement	Result	Result
Aluminium (Al)	mg/kg	10	28,130	< RL	< RL
Antimony (Sb)	mg/kg	5	560	< RL	< RL
Arsenic (As)	mg/kg	5	47	< RL	< RL
Barium (Ba)	mg/kg	2.5	18,750	< RL	< RL
Boron (B)	mg/kg	10	15,000	< RL	< RL
Cadmium (Cd)	mg/kg	1	17	< RL	< RL
Chromium III (Cr(III))	mg/kg	10	460	< RL	< RL
Chromium VI (Cr(VI))	mg/kg	0.045	0.053	< RL	< RL
Cobalt (Co)	mg/kg	2.5	130	< RL	< RL
Copper (Cu)	mg/kg	2.5	7,700	< RL	< RL
Lead (Pb)	mg/kg	2.5	23	< RL	< RL
Manganese (Mn)	mg/kg	2.5	15,000	< RL	< RL
Mercury (Hg)	mg/kg	2.5	94	< RL	< RL
Nickel (Ni)	mg/kg	2.5	930	< RL	< RL
Selenium (Se)	mg/kg	10	460	< RL	< RL
Strontium (Sr)	mg/kg	2.5	56,000	< RL	< RL
Tin (Sn)	mg/kg	1.0	180,000	< RL	< RL
Organic Tin [^]	mg/kg	0.2	12	-	-
Zinc (Zn)	mg/kg	10	46,000	< RL	< RL
Mass of trace amount #	mg	--	--	-	-

Abbreviation:

- < = less than
- RL = Reporting Limit
- mg/kg denotes milligram per kilogram
- mg denotes milligram
- [^] denotes Organic tin are not necessary to be determined when the Tin concentration is less than calculated limit (3.6 mg/kg) or the components were confirmed to be pure metal

Remark:

- * Categorization of toys materials is based on the material texture. According to point H.11 of Annex H to EN 71-3:2019+A1:2021 / BS EN 71-3:2019+A1:2021, cosmetic materials with dry, brittle, powder like or pliable texture such as lipstick and eyeshadow are considered as category I materials. However, as a reminder, it cannot preclude the possibility that some national enforcement authorities might take a more stringent action to treat cosmetic materials as sticky and evaluate according to category II requirement as they are intended to be applied on skin and retained for long time.
- ** For any test portion containing grease, oil, wax or similar material, such materials would have been removed with isooctane by using Soxhlet extraction.
- **** The highlighted result was found to be more than the maximum permissible limit.
- # According to EN 71-3:2019+A1:2021, if the weight of a test portion of toy material is less than 10mg, the analysis of migration of certain elements would not be required. If the weight of a test portion of toy material is between 10mg and 100mg, the analytical results would be calculated as though 100mg of the test portion had been used.

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4.Total Cadmium Content

Test Method: EN 1122:2001 (method B)

Test Result:

Test No.	Material No.	Test Parameter	Unit	RL	Test Result
T001	M002	Trial 1	mg/kg	10	< RL
		Trial 2	mg/kg	10	-
		Average	mg/kg	10	-
T002	M003 + M004	Trial 1	mg/kg	10	< RL
		Trial 2	mg/kg	10	-
		Average	mg/kg	10	-
T003	M005 + M006	Trial 1	mg/kg	10	< RL
		Trial 2	mg/kg	10	-
		Average	mg/kg	10	-

Abbreviation: < = less than
 RL = Reporting Limit
 mg/kg = milligram per kilogram

Remark:

- * Requirements for Cadmium content according to Annex XVII Entry 23 of Regulation (EC) No 1907/2006 (REACH) and its amendments
 - Mixtures and articles produced from plastic material < 0.01 % (100 mg/kg)
 - Coated / painted articles < 0.1 % (1000 mg/kg)
 - Jewellery components < 0.01 % (100 mg/kg)
 - Paints and varnishes (excluding the applicable exemptions) < 0.01 % (100 mg/kg)
- ** Swiss requirements for cadmium content according to the Switzerland Chemikalien-Risikoreduktions-Verordnung- ChemRRV, 814.81
 - Mixtures and articles produced from plastic material < 0.01 % (100 mg/kg)
 - Articles / objects treated with paints / coating with cadmium is prohibited
 - Paints and varnishes < 0.01 % (100 mg/kg)

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5. Phthalates content

Test Method: Ref. to CPSC-CH-C1001-09.4

Test Result:

Test No. Material No.				T001 M002	T002 M003 + M004	T003 M005 + M006
Test Parameter	CAS NO	Unit	RL	Result	Result	Result
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.01	< RL	< RL	< RL
Dibutyl phthalate (DBP)	84-74-2	%	0.01	< RL	< RL	< RL
Benzylbutyl phthalate (BBP)	85-68-7	%	0.01	< RL	< RL	< RL
Diisobutyl phthalate (DIBP)	84-69-5	%	0.01	< RL	< RL	< RL
Sum (DEHP+DBP+BBP+DIBP)	-	%	0.01	<RL	<RL	<RL
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.01	< RL	< RL	< RL
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.01	< RL	< RL	< RL
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.01	< RL	< RL	< RL
Sum (DINP+ DIDP+ DNOP)	--	%	0.01	<RL	<RL	<RL
Di-n-pentyl phthalate (DnPP)	131-18-0	%	0.01	< RL	< RL	< RL
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.01	< RL	< RL	< RL
Dicyclohexyl phthalate (DCHP)	84-61-7	%	0.01	< RL	< RL	< RL
Conclusion: CPSIA Section 108 as amended by 16 CFR 1307				Pass	Pass	Pass
Conclusion: CA Prop 65 DEHP, BBP, DBP, DIDP and DnHP content				Pass	Pass	Pass
Conclusion: REACH regulation (EC) No. 1907/2006 and its amendment Annex XVII entries 51 and 52				Pass	Pass	Pass

Abbreviation: < = less than
 RL = Reporting Limit
 % = percentage

Remark:

- Requirement of REACH regulation (EC) No. 1907/2006 and its amendment Annex XVII entries 51 and 52:

Parameter	Unit	Maximum Permissible Limit
Plasticised materials in toys and childcare articles, or other articles# place on the market;		
Diethylhexyl phthalate (DEHP) Dibutyl phthalate (DBP) Benzylbutyl phthalate (BBP) Diisobutyl phthalate (DIBP)	%	0.1 (individually or sum of the four phthalates) Effective after 7 July 2020.
Plasticised materials in children's toy and childcare articles which can be placed in the mouth by children:		
Di-n-octyl phthalate (DNOP) Diisodecyl phthalate (DIDP) Diisononyl phthalate (DINP)	%	0.1 (sum of the three phthalates)

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Denote:

Examples of articles that are excluded from the restriction

- 1) Articles exclusively for industrial / agricultural use / use in open air, provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin (i.e. Continuous contact of more than 10 minutes duration or intermittent contact over a period of 30 minutes, per day.)
 - 2) Aircraft and motor vehicles (Directive 2007/46/EC) placed on the market before 7 January 2024, or articles for use exclusively in the maintenance or repair of them
 - 3) Measuring devices for laboratory use;
 - 4) Food contact material and articles within the scope of Regulation (EC) No 1935/2004 or Commission Regulation (EU) No 10/2011
 - 5) Medical devices (Directive 90/385/EEC, 93/42/EEC or 98/79/EC)
 - 6) Electrical and electronic equipment within the scope of Directive 2011/65/EU
 - 7) Immediate packaging of medicinal products (Regulation (EC) No 726/2004, Directive 2001/82/EC or Directive 2001/83/EC)
- Single component with an amount below reporting limit was not considered by the calculation of the sum. In the case of all phthalates were not detected, the result is stated <RL.
 - Requirement of Consumer Product Safety Improvement Act 2008, section 108, as amended by 16 CFR 1307 is summarized below:

Parameter	Unit	Maximum Permissible Limit
Accessible plasticized components in children's toy or childcare article:		
Dibutyl phthalate (DBP), Benzylbutyl phthalate (BBP), Diethylhexyl phthalate (DEHP), Diisononyl phthalate (DINP), Diisobutyl Phthalate (DIBP), Di-n-pentyl Phthalate (DPENP) (DnPP), Di-n-hexyl Phthalate (DHEXP) (DnHP), Dicyclohexyl Phthalate (DCHP)	%	0.1 (each)

- Requirement of Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):DEHP, BBP, DBP, DIDP and DnHP content
1,000ppm (0.1%) each as quoted from County of Alameda Case No. BG-07350969

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6.ASTM F963-17: Mechanical and physical
Test result:

Test No:	T001
Material No:	M001
4. Safety requirements	
4.1 Material Quality (visual check)	PASS
4.7 Accessible edges	PASS
4.9 Accessible points	PASS
4.11 Nails and fasteners	PASS
5. Labeling requirements	
5.1 Federal government requirements	Not Conducted
5.2 Age grading labeling	Not Conducted
5.3 Safety labeling requirements	Not Conducted
5.4 Aquatic toys	Not Conducted
5.5 Crib and playpen toys	Not Conducted
5.6 Mobiles	Not Conducted
5.7 Stroller and carriage toys	Not Conducted
5.8 Toys intended to be assembled by an adult	Not Conducted
5.9 Simulated protective devices	Not Conducted
5.10 Toys with functional sharp edges or points	Not Conducted
5.11 Small objects, small balls, marbles and balloons	Not Conducted
5.12 Toy caps	Not Conducted
5.13 Art materials	Not Conducted
5.16 Promotional materials	Not Conducted
5.17 Magnets	Not Conducted
6. Instructional literature	
6.1 Definition and description	Not Conducted
6.2 Crib and playpen toys	Not Conducted
6.3 Mobiles	Not Conducted
6.4 Toys intended to be assembled by an adult	Not Conducted
6.7 Toys in contact with food	Not Conducted
6.8 Toy chests	Not Conducted
7. Producer's markings	
7.1 Name and address of the producer or the distributor	Not Conducted
7.3 Toy chests	Not Conducted

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Use and Abuse Tests:

The submitted samples were undergone the use and abuse tests in accordance with FHSA 16 CFR and whichever is applicable the tested age grade.

Age Category	Impact Test	Flexure Test	Torque Test	Tension Test	Compression Test
0-18 Months 16 CFR 1500.51	10 x 4.5 ft	120 Arc 30 Cycles 10 lbs	2 in-lbs	10 lbs	20 lbs
19-36 Months 16 CFR 1500.52	4 x 3 ft	120 Arc 30 Cycles 15 lbs	3 in-lbs	15 lbs	25 lbs
37-96 Months 16 CFR 1500.53	4 x 3 ft	120 Arc 30 Cycles 15 lbs	4 in-lbs	15 lbs	30 lbs

The clause and/or sub-clause would be indicated only in the test report whichever applicable. The comprehensive result report is available upon request.

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7.ASTM F963-17: Flammability on solids and soft toys**Test result:**

Test No:	T001
Material No:	M001
4.2 Flammability on solids and soft toys	PASS

The burning rate of the most severe part = IBE

Note: Maximum permissible burning rate = 0.1 Inch/sec.

Abbreviation: IBE = Ignite But Self-extinguish

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8.ASTM F963-17 Sect. 4.3.5.2, CPSIA Sect. 101, and Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) : Total lead content in substrate materials

Test method: CPSC-CH-E1001-08.3 and CPSC-CH-E1002-08.3 (Microwave method)

Test result:

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M002	Lead Content	ppm	10	100	< RL
T002	M003 + M004	Lead Content	ppm	10	100	< RL
T003	M005 + M006	Lead Content	ppm	10	100	< RL
T004	M007 + M008	Lead Content	ppm	10	100	< RL

Abbreviation: < = less than
RL = Reporting Limit
ppm = parts per million

Remark:

- *1 CA Prop. 65 -Total lead content
- Paint or surface coating in products shall not contain more than 0.009% (90 ppm) total lead content
 - Other components in product shall not contain more than 0.01% (100 ppm) total lead content

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9.ASTM F963-17 Sect. 4.3.5.1 and 4.3.5.2 : Soluble heavy metal

Test method: For paint and similar surface-coating materials: ASTM F963-17 Section 8.3.2 - 8.3.4 Method to Dissolve Soluble Matter for Surface Coatings, Preparation of Test Samples and Test Procedures

For substrate: ASTM F963-17 Section 8.3.5 Soluble Element Test Method for Substrate Materials

This requirement applies to the coating and substrate materials which the sample weight is greater than 10 mg

Test result:

Test No.	Material No.	[mg/kg]							
		Sb	As	Ba	Cd	Cr	Pb	Hg	Se
		Maximum Permissible Limit of Any Toy Materials except Modelling Clay							
		60	25	1000	75	60	90	60	500
		Maximum Permissible Limit of Modelling Clay							
		60	25	250	50	25	90	25	500
		RL							
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
T001	M002	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T002	M003	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T003	M004	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T004	M005	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL
T005	M006	< RL	< RL	< RL	< RL	< RL	< RL	< RL	< RL

Abbreviation: < = less than
 RL = Reporting Limit
 mg/kg = milligram per kilogram

Remark:

* Migration results of eight elements shown are the adjusted analytical results

Element	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
Analytical Correction (in %)	60	60	30	30	30	30	50	60

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Sample Photo



- END -

This GTCB is only used for TÜV Rheinland Business Stream Product
Version 5.0/February 2023