



**CENTRE OF TESTING SERVICE
INTERNATIONAL**

OPERATE ACCORDING TO ISO/IEC 17025

TOY SAFETY TEST REPORT

TEST REPORT NUMBER : CTS181206013-TO



CTS (Ningbo) Testing Service Technology Co., Ltd.

Fl.1 & 8 West, Bldg. B, No. 66, Qingyi Rd., Hi-Tech Zone, Ningbo,
Zhejiang, China.

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Date: 21 Dec. 2018

TEST REPORT

Applicant:	H. GROSSMAN LTD.
Address:	HERSCHEL HOUSE, QUAY IND ESTATE, ASHTON ROAD, RUTHERGLEN, GLASGOW, G73 1UB, U.K.
Samples:	TPR TOY
Sample Description:	TPR TOY
Item No.:	SV1309/SV1825/SV13436/SV13686/SV13880/SV13881/S V14637/SV14868
Destination country/area:	Oversea
Sample Quantity:	2 Sets
Date of Sample Received:	06 Dec. 2018
Test Address:	CTS (Ningbo) Testing Service Technology Co., Ltd. Fl.1 & 8 West, Bldg. B, No. 66, Qingyi Rd., Hi-Tech Zone, Ningbo, Zhejiang, China
Testing Period:	06 Dec. 2018 – 21 Dec. 2018
Test Requested:	EN 71-1: 2014+A1:2018 Safety of toys— Part 1: Mechanical and physical properties EN 71-2: 2011+A1:2014 Safety of toys —Part 2: Flammability EN 71-3: 2013+A3:2018 Safety of toys — Part 3: Migration of Certain Elements ANNEX XVII of the REACH Regulation (EC) No.1907/2006 & Amendment No. 552/2009 (formerly known as Directive 2005/84/EC). - the Phthalates content in the submitted sample
Labeled Age Grading:	/
Test Age Grading:	3+
Test Method:	As specified in the above standards
Test Results:	See the attachment in detail



Signature

Name: Hyt

Position: Lab Manager

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Test Results:

(1) Mechanical and Physical Properties

As Specified in European Standard on Safety of Toys EN 71-1: 2014+A1:2018

EN 71-1: 2014+A1:2018			
Clause	Test Item	Remark	Verdict
4	General requirements		—
4.1	Material cleanliness	No stain	P
4.2	Assembly	---	N
4.3	Flexible plastic sheeting	---	N
4.4	Toy bags	---	N
4.5	Glass	---	N
4.6	Expanding materials	---	N
4.7	Edges	---	P
4.8	Points and metallic wires	---	P
4.9	Protruding parts	---	N
4.10	Parts moving against each other	---	N
4.11	Mouth-actuated toys and other toys intended to be put in the mouth	---	N
4.12	Balloons	---	N
4.13	Cords of toy kites and other flying toys	---	N
4.14	Enclosures	---	N
4.15	Toys intended to bear the mass of a child	---	N
4.16	Heavy immobile toys	---	N
4.17	Projectile toys	---	N
4.18	Aquatic toys and inflatable toys	---	N
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	---	N
4.20	Acoustics	---	N
4.21	Toys containing a non-electrical heat source	---	N
4.22	Small balls	---	N
4.23	Magnets	---	N
4.24	Yo-yo balls	---	N
4.25	Toys attached to food	---	N
4.26	Toy Disguise Costumes	---	N

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CTS (Ningbo) Testing Service Technology Co., Ltd.

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EN 71-1: 2014+A1:2018			
Clause	Test Item	Remark	Verdict
4.27	Flying toys	---	N
5	Toys intended for children under 36 months		—
5.1	General requirements	---	N
5.2	Soft-filled toys and soft-filled parts of a toy	---	N
5.3	Plastic sheeting	---	N
5.4	Cords, chains and electrical cables in toys	---	N
5.5	Liquid-filled toys	---	N
5.6	Speed limitation of electrically-driven ride-on toys	---	N
5.7	Glass and porcelain	---	N
5.8	Shape and size of certain toys	---	N
5.9	Toys comprising monofilament fibres	---	N
5.10	Small balls	---	N
5.11	Play figures	---	N
5.12	Hemispheric-shaped toys	---	N
5.13	Suction cups	---	N
5.14	Straps intended to be worn fully or partially around the neck	---	N
5.15	Sledges with cords for pulling	---	N
6	Packaging	---	P
7	Warnings, markings and instructions for use	---	NT

Abbreviation : P = Pass ; N = Not Applicable ; NT= Not Tested (no packaging provided).

Note:

- (1) All test results are only valid for the samples being tested.
- (2) Mechanical and physical properties testing is subcontract item.

TEST REPORT**(2) Flammability Test**

As Specified in European Standard on Safety of Toys EN 71-2: 2011+A1:2014

EN 71-2: 2011+A1:2014			
Clause	Requirement – Test	Remark	Verdict
4	Requirements		—
4.1	General requirements	---	P
4.2	Toys to be worn on the head	---	N
4.3	Toy disguise costumes and toys intended to be worn by a child in play	---	N
4.4	Toys intended to be entered by a child	---	N
4.5	Soft-filled toys	---	N

Abbreviation : P = Pass ; N = Not Applicable

Note:

- (1) All test results are only valid for the samples being tested.
- (2) Flammability properties testing is subcontract item.

TEST REPORT

(3) Migration of Certain Elements

With reference to EN 71-3:2013+A3:2018.

a) Extractable Chromium (VI) – Analysis was performed by IC-UV/VIS.

b) Extractable Organic Tin – Analysis was performed by GC/MS.

c) All other elements – Analysis was performed by Inductively Coupled Argon Plasma –Atomic Emission Spectrometry.

Category III

Sample Description	No.1*	Green rubber(Sticky alien eggs) / Blue rubber(Sticky alien eggs) / Gray rubber(Sticky alien eggs) (mixed)			
	No.2	Black coating (Sticky alien eggs, Alien squeezing beads, Luminous penguin, Sticky frog, One-horned horse finger puppet, Dinosaur hand doll, Unicorn hand doll)			
	No.3	Transparent rubber(Alien squeezing beads)			
Element	Unit	Limit	Result		
			No.1*	No.2	No.3
Extractable Aluminium (Al)	mg/kg	70,000	<50	<50	<50
Extractable Antimony (Sb)	mg/kg	560	<5	<5	<5
Extractable Arsenic (As)	mg/kg	47	<5	<5	<5
Extractable Barium (Ba)	mg/kg	18,750	<50	<50	<50
Extractable Boron (B)	mg/kg	15,000	<50	<50	<50
Extractable Cadmium (Cd)	mg/kg	17	<3	<3	<3
Extractable Chromium (III) (Cr (III))	mg/kg	460	<5	<5	<5
Extractable Chromium (VI) (Cr (VI))	mg/kg	0.2	<0.2	<0.2	<0.2
Extractable Cobalt (Co)	mg/kg	130	<5	<5	<5
Extractable Copper (Cu)	mg/kg	7,700	<50	<50	<50
Extractable Lead (Pb)	mg/kg	23	<5	<5	<5
Extractable Manganese (Mn)	mg/kg	15,000	<50	<50	<50
Extractable Mercury (Hg)	mg/kg	94	<5	<5	<5
Extractable Nickel (Ni)	mg/kg	930	<5	<5	<5
Extractable Selenium (Se)	mg/kg	460	<5	<5	<5
Extractable Strontium (Sr)	mg/kg	56,000	<50	<50	<50
Extractable Tin (Sn)	mg/kg	180,000	<1	<1	<1
Extractable Organic Tin	mg/kg	12	<0.2	<0.2	<0.2
Extractable Zinc (Zn)	mg/kg	46,000	<50	<50	<50

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Sample Description	No.4*	Pink rubber(Luminous penguin) / Purple rubber(Luminous penguin) / Yellow rubber(Luminous penguin) (mixed)			
	No.5*	Green rubber(Luminous penguin) / Blue rubber(Luminous penguin) (mixed)			
	No.6	White coating (Luminous penguin, Sticky frog, One-horned horse finger puppet, Dinosaur hand doll , Unicorn hand doll)			
Element	Unit	Limit	Result		
			No.4*	No.5*	No.6
Extractable Aluminium (Al)	mg/kg	70,000	<50	<50	70
Extractable Antimony (Sb)	mg/kg	560	<5	<5	<5
Extractable Arsenic (As)	mg/kg	47	<5	<5	<5
Extractable Barium (Ba)	mg/kg	18,750	<50	<50	<50
Extractable Boron (B)	mg/kg	15,000	<50	<50	<50
Extractable Cadmium (Cd)	mg/kg	17	<3	<3	<3
Extractable Chromium (III) (Cr (III))	mg/kg	460	<5	<5	<5
Extractable Chromium (VI) (Cr (VI))	mg/kg	0.2	<0.2	<0.2	<0.2
Extractable Cobalt (Co)	mg/kg	130	<5	<5	<5
Extractable Copper (Cu)	mg/kg	7,700	<50	<50	<50
Extractable Lead (Pb)	mg/kg	23	<5	<5	<5
Extractable Manganese (Mn)	mg/kg	15,000	<50	<50	<50
Extractable Mercury (Hg)	mg/kg	94	<5	<5	<5
Extractable Nickel (Ni)	mg/kg	930	<5	<5	<5
Extractable Selenium (Se)	mg/kg	460	<5	<5	<5
Extractable Strontium (Sr)	mg/kg	56,000	<50	<50	<50
Extractable Tin (Sn)	mg/kg	180,000	<1	<1	<1
Extractable Organic Tin	mg/kg	12	<0.2	<0.2	<0.2
Extractable Zinc (Zn)	mg/kg	46,000	<50	<50	<50

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Sample Description	No.7	Yellow coating (Luminous penguin, Dinosaur hand doll)			
	No.8	Green rubber (Sticky frog)			
	No.9	Dark green coating (Sticky frog)			
Element	Unit	Limit	Result		
			No.7	No.8	No.9
Extractable Aluminium (Al)	mg/kg	70,000	<50	<50	<50
Extractable Antimony (Sb)	mg/kg	560	<5	<5	<5
Extractable Arsenic (As)	mg/kg	47	<5	<5	<5
Extractable Barium (Ba)	mg/kg	18,750	<50	<50	<50
Extractable Boron (B)	mg/kg	15,000	<50	<50	<50
Extractable Cadmium (Cd)	mg/kg	17	<3	<3	<3
Extractable Chromium (III) (Cr (III))	mg/kg	460	<5	<5	<5
Extractable Chromium (VI) (Cr (VI))	mg/kg	0.2	<0.2	<0.2	<0.2
Extractable Cobalt (Co)	mg/kg	130	<5	<5	<5
Extractable Copper (Cu)	mg/kg	7,700	<50	<50	<50
Extractable Lead (Pb)	mg/kg	23	<5	<5	<5
Extractable Manganese (Mn)	mg/kg	15,000	<50	<50	<50
Extractable Mercury (Hg)	mg/kg	94	<5	<5	<5
Extractable Nickel (Ni)	mg/kg	930	<5	<5	<5
Extractable Selenium (Se)	mg/kg	460	<5	<5	<5
Extractable Strontium (Sr)	mg/kg	56,000	<50	<50	<50
Extractable Tin (Sn)	mg/kg	180,000	<1	<1	<1
Extractable Organic Tin	mg/kg	12	<0.2	<0.2	<0.2
Extractable Zinc (Zn)	mg/kg	46,000	<50	<50	<50

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Sample Description	No.10*	Pink rubber (One-horned horse finger puppet) / Purple rubber (One-horned horse finger puppet) / White rubber (One-horned horse finger puppet) (mixed)			
	No.11*	Silver gray coating (One-horned horse finger puppet, Unicorn hand doll) / Dark purple coating (One-horned horse finger puppet, Unicorn hand doll)/ Pink coating (One-horned horse finger puppet, Unicorn hand doll) (mixed)			
	No.12*	Red rubber (Dinosaur hand doll) / Green rubber (Dinosaur hand doll) (mixed)			
Element	Unit	Limit	Result		
			No.10*	No.11*	No.12*
Extractable Aluminium (Al)	mg/kg	70,000	<50	238	<50
Extractable Antimony (Sb)	mg/kg	560	<5	<5	<5
Extractable Arsenic (As)	mg/kg	47	<5	<5	<5
Extractable Barium (Ba)	mg/kg	18,750	<50	<50	<50
Extractable Boron (B)	mg/kg	15,000	<50	<50	<50
Extractable Cadmium (Cd)	mg/kg	17	<3	<3	<3
Extractable Chromium (III) (Cr (III))	mg/kg	460	<5	<5	<5
Extractable Chromium (VI) (Cr (VI))	mg/kg	0.2	<0.2	<0.2	<0.2
Extractable Cobalt (Co)	mg/kg	130	<5	<5	<5
Extractable Copper (Cu)	mg/kg	7,700	<50	<50	<50
Extractable Lead (Pb)	mg/kg	23	<5	<5	<5
Extractable Manganese (Mn)	mg/kg	15,000	<50	<50	<50
Extractable Mercury (Hg)	mg/kg	94	<5	<5	<5
Extractable Nickel (Ni)	mg/kg	930	<5	<5	<5
Extractable Selenium (Se)	mg/kg	460	<5	<5	<5
Extractable Strontium (Sr)	mg/kg	56,000	<50	<50	<50
Extractable Tin (Sn)	mg/kg	180,000	<1	<1	<1
Extractable Organic Tin	mg/kg	12	<0.2	<0.2	<0.2
Extractable Zinc (Zn)	mg/kg	46,000	<50	<50	<50

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Sample Description	No.13	Red coating (Dinosaur hand doll)			
	No.14	White rubber (Unicorn hand doll)			
	No.15	Light blue coating (Unicorn hand doll)			
Element	Unit	Limit	Result		
			No.13	No.14	No.15
Extractable Aluminium (Al)	mg/kg	70,000	<50	<50	<50
Extractable Antimony (Sb)	mg/kg	560	<5	<5	<5
Extractable Arsenic (As)	mg/kg	47	<5	<5	<5
Extractable Barium (Ba)	mg/kg	18,750	<50	<50	<50
Extractable Boron (B)	mg/kg	15,000	<50	<50	<50
Extractable Cadmium (Cd)	mg/kg	17	<3	<3	<3
Extractable Chromium (III) (Cr (III))	mg/kg	460	<5	<5	<5
Extractable Chromium (VI) (Cr (VI))	mg/kg	0.2	<0.2	<0.2	<0.2
Extractable Cobalt (Co)	mg/kg	130	<5	<5	<5
Extractable Copper (Cu)	mg/kg	7,700	<50	<50	<50
Extractable Lead (Pb)	mg/kg	23	<5	<5	<5
Extractable Manganese (Mn)	mg/kg	15,000	<50	<50	<50
Extractable Mercury (Hg)	mg/kg	94	<5	<5	<5
Extractable Nickel (Ni)	mg/kg	930	<5	<5	<5
Extractable Selenium (Se)	mg/kg	460	<5	<5	<5
Extractable Strontium (Sr)	mg/kg	56,000	<50	<50	<50
Extractable Tin (Sn)	mg/kg	180,000	<1	<1	<1
Extractable Organic Tin	mg/kg	12	<0.2	<0.2	<0.2
Extractable Zinc (Zn)	mg/kg	46,000	<50	<50	<50

Note

- : 1. <= less than
2. 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 colouring pencils, chalk, crayons, modelling 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

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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).

3. The tested part of the sample was specified by client.
4. EN71-3 mixed data is for reference only.
- 5.* The samples was/were analyzed as mixing sample in one testing as applicant's request. The above results was/were only given as the informality value.

TEST REPORT

(4)Phthalates Test

4.1 Test Requested

As specified by applicant, to determine Phthalates content in the submitted sample in accordance with Phthalates content requirement in ANNEX XVII of the REACH Regulation (EC) No.1907/2006 & Amendment No. 552/2009 (formerly known as Directive 2005/84/EC).

4.2 Test Method

With reference to EPA 3540C and EPA 8270D: Solvent extraction, followed by analysis using Gas Chromatography-Mass Spectrometry.

4.3 Results

Sample Description		Result (%)			Total (%)	Maximum Allowable Limit (%)
		DEHP	DBP	BBP		
No.1*	Green rubber(Sticky alien eggs) / Blue rubber(Sticky alien eggs) / Gray rubber(Sticky alien eggs) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.2	Black coating (Sticky alien eggs, Alien squeezing beads, Luminous penguin, Sticky frog, One-horned horse finger puppet, Dinosaur hand doll , Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.3	Transparent rubber(Alien squeezing beads)	N.D.	N.D.	N.D.	N.D.	0.1
No.4*	Pink rubber(Luminous penguin) / Purple rubber(Luminous penguin) / Yellow rubber(Luminous penguin) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.5*	Green rubber(Luminous penguin) / Blue rubber(Luminous penguin) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.6	White coating (Luminous penguin, Sticky frog, One-horned horse finger puppet, Dinosaur hand doll , Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.7	Yellow coating (Luminous penguin, Dinosaur hand doll)	0.027	N.D.	N.D.	0.027	0.1
No.8	Green rubber (Sticky frog)	N.D.	N.D.	N.D.	N.D.	0.1
No.9	Dark green coating (Sticky frog)	N.D.	N.D.	N.D.	N.D.	0.1

TEST REPORT

Sample Description		Result (%)			Total (%)	Maximum Allowable Limit (%)
		DEHP	DBP	BBP		
No.10*	Pink rubber (One-horned horse finger puppet) / Purple rubber (One-horned horse finger puppet) / White rubber (One-horned horse finger puppet) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.11*	Silver gray coating (One-horned horse finger puppet, Unicorn hand doll) / Dark purple coating (One-horned horse finger puppet, Unicorn hand doll) / Pink coating (One-horned horse finger puppet, Unicorn hand doll) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.12*	Red rubber (Dinosaur hand doll) / Green rubber (Dinosaur hand doll) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.13	Red coating (Dinosaur hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.14	White rubber (Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.15	Light blue coating (Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1

Sample Description		Result (%)			Total (%)	Maximum Allowable Limit (%)
		DINP	DNOP	DIDP		
No.1*	Green rubber(Sticky alien eggs) / Blue rubber(Sticky alien eggs) / Gray rubber(Sticky alien eggs) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.2	Black coating (Sticky alien eggs, Alien squeezing beads, Luminous penguin, Sticky frog, One-horned horse finger puppet, Dinosaur hand doll, Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.3	Transparent rubber(Alien squeezing beads)	N.D.	N.D.	N.D.	N.D.	0.1
No.4*	Pink rubber(Luminous penguin) / Purple rubber(Luminous penguin) / Yellow rubber(Luminous penguin) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.5*	Green rubber(Luminous penguin) / Blue rubber(Luminous penguin) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1

TEST REPORT

Sample Description		Result (%)			Total (%)	Maximum Allowable Limit (%)
		DINP	DNOP	DIDP		
No.6	White coating (Luminous penguin, Sticky frog, One-horned horse finger puppet, Dinosaur hand doll, Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.7	Yellow coating (Luminous penguin, Dinosaur hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.8	Green rubber (Sticky frog)	N.D.	N.D.	N.D.	N.D.	0.1
No.9	Dark green coating (Sticky frog)	N.D.	N.D.	N.D.	N.D.	0.1
No.10*	Pink rubber (One-horned horse finger puppet) / Purple rubber (One-horned horse finger puppet) / White rubber (One-horned horse finger puppet) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.11*	Silver gray coating (One-horned horse finger puppet, Unicorn hand doll) / Dark purple coating (One-horned horse finger puppet, Unicorn hand doll) / Pink coating (One-horned horse finger puppet, Unicorn hand doll) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.12*	Red rubber (Dinosaur hand doll) / Green rubber (Dinosaur hand doll) (mixed)	N.D.	N.D.	N.D.	N.D.	0.1
No.13	Red coating (Dinosaur hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.14	White rubber (Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1
No.15	Light blue coating (Unicorn hand doll)	N.D.	N.D.	N.D.	N.D.	0.1

Note : 1. N.D.=Not Detected (<MDL)

2. The tested part of the sample was specified by client.

3.* The samples was/were analyzed as mixing sample in one testing as applicant's request. The above results was/were only given as the informality value.

4. The method detect limit for each Phthalates are:

Method Detect Limit		
Phthalates	DEHP (Di- (2-ethylhexyl)phthalate)	0.005%
	DBP (Dibutyl phthalate)	0.005%
	BBP (Benzyl butyl phthalate)	0.005%
	DINP (Di-isononyl phthalate)	0.005%
	DNOP (Di-n-octyl phthalate)	0.005%
	DIDP (Di-isodecyl phthalate)	0.005%

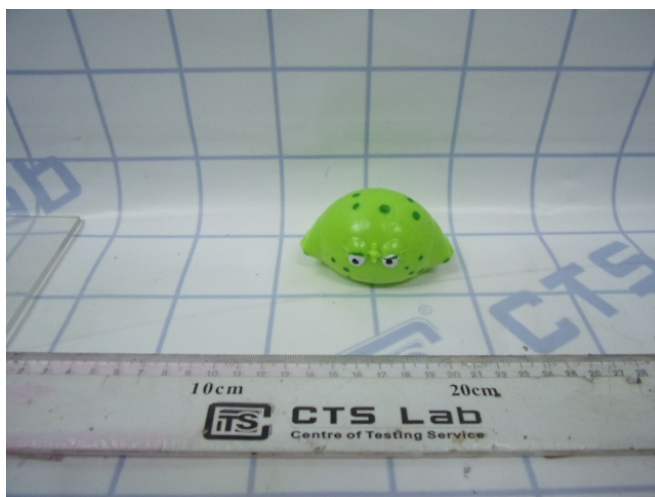
TEST REPORT

APPENDIX

PHOTO OF THE SUBMITTED SAMPLE(S)



External view 1



External view 2

TEST REPORT

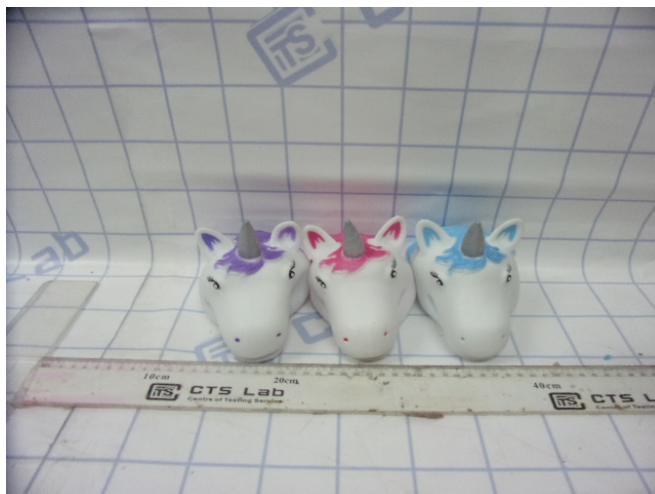


External view 3



External view 4

TEST REPORT

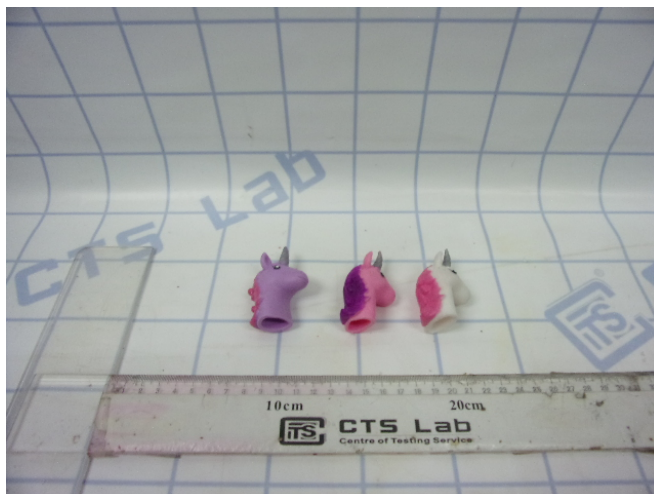


External view 5



External view 6

TEST REPORT



External view 7

-----end of report-----