Page 1 of 29

eurofins

75743-1240

Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 1 of 29

# **TEST REPORT**

**APPLICANT** : OOLY, LLC

**ADDRESS** 3923 Oceanic Drive, Suite 100 Oceanside, CA 92056

**SAMPLE DESCRIPTION** Stampables Scented Markers - Set of 18

ITEM NO. 130-070

**BUYER** OOLY, LLC

**COUNTRY OF ORIGIN** China

**COUNTRY OF DESTINATION** USA, Canada, Europe and Asia

AGE REQUESTED ON APPLICATION FORM Not suitable for 4 and under

**LABELED AGE GRADE** 4+

**AGE GRADE APPLIED IN TESTING** : Over 4 Years

**SAMPLE RECEIVED DATE** : 15-Nov-2019

**SAMPLE RESUBMISSION DATE** 26-Nov-2019

**TURN AROUND TIME** : 15-Nov-2019 to 29-Nov-2019



Date : 29-Nov-2019 Page : 2 of 29

The following test item(s) was/were performed on selected sample(s) and/or component(s) confirmed by applicant

TEST REQUESTED	TEST METHOD/REGULATION	RESULT		
Physical and Mechanical Hazards	CPSC Regulations	Pass		
Flammability Test	CPSC Regulations-1500.3(c)(6)(vi)	Pass		
Total Lead Content in Paint / Surface Coating	US 16 CFR 1303	Pass		
Phthalates Content	CPSC 16 CFR part 1307	Pass		
Total Lead Content in Paint / Surface Coating	US CPSIA, Section 101	Pass		
Total Lead Content in Substrate	US CPSIA, Section 101	Pass		
Phthalates Content	US CPSIA, Section 108	Pass		
Total Lead Content	US California Proposition 65	Pass		
Phthalates Content	US California Proposition 65	Pass		
TPCH - Toxics in Packaging Clearinghouse (formerly CONEG)	US TPCH Legislation	Pass		
Mechanical and Physical Properties	EN71 Part 1:2014+A1:2018	Pass		
Labeling Requirement	Directive 2009/48/EC	See Test Result		
Flammability of Toys	EN71 Part 2:2011+A1:2014	Pass		
Migration of Certain Elements	EN71 Part 3:2019	Pass		
Total Cadmium Content	REACH Annex XVII, Entry 23	Pass		
Polycyclic Aromatic Hydrocarbons (PAHs)	REACH Annex XVII, Entry 50	Pass		
Phthalates Content	REACH Annex XVII, Entry 51 & 52, (EU) 2018/2005	Pass		
Packaging and Packaging Waste	Directive 94/62/EC Pass			

Eurofins (Shanghai) contact information

Customer service: OlivaLiu@eurofins.com/ 021-36202801

Sales specialist: MariaJohnson@eurofins.com / 858-5687175 / 858-3549036 Sales specialist: Martylmler@eurofins.com / 858-568-7175 / 858-243-2464

Signed for and on behalf of

Eurofins Product Testing Service (Shanghai) Co., Ltd

Joyce Liu Lab Manager

Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins Product Testing Service (Shanghai) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. If you happen to have any comments, please do it by sending email to <u>info.sh@eurofins.com</u> and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins Product Testing Service (Shanghai) Co., Ltd. If you happen to have any complaints, please do it by sending email to <u>chinacomplaint@eurofins.com</u> and referring to this report number.



Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 3 of 29

# **SAMPLE PHOTO**



EFSH19101903-CG-01



Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 4 of 29

# **COMPONENT LIST**

Component No.	Component
1	White coating on plastic
2	Red ink (stamp)
3	Pink ink (stamp)
4	Orange ink (stamp)
5	Rose red ink (stamp)
6	Yellow ink (stamp)
7	Dark green ink (stamp)
8	Green ink (stamp)
9	Blue ink (stamp)
10	Light brown ink (stamp)
11	Dark blue ink (stamp)
12	Purple ink (stamp)
13	Black ink (stamp)
14	Pink ink (pen)
15	Red ink (pen)
16	Rose red ink (pen)
17	Orange ink (pen)
18	Dark green ink (pen)
19	Yellow ink (pen)
20	Light blue ink (pen)
21	Green ink (pen)
22	Flesh color ink (pen)
23	Jade green ink (pen)
24	Light brown ink (pen)
25	Blue ink (pen)
26	Brown ink (pen)
27	Dark blue ink (pen)
28	Grey ink (pen)
29	Purple ink (pen)
30	Black ink (pen)
31	Peach pink ink (pen)
32	Transparent plastic (cap)
33	White plastic (end closure)
34	Pink plastic excluding coating (barrel)
35	Red plastic excluding coating (barrel)
36	Rose red plastic excluding coating (barrel)
37	Orange plastic excluding coating (barrel)
38	Green plastic excluding coating (barrel)
39	Yellow plastic excluding coating (barrel)
40	Light blue plastic excluding coating (barrel)
41	Green plastic excluding coating (barrel)
42	Flesh color plastic excluding coating (barrel)
43	Jade green plastic excluding coating (barrel)
44	Light brown plastic excluding coating (barrel)
45	Blue plastic excluding coating (barrel)
46	Brown plastic excluding coating (barrel)
47	Dark blue plastic excluding coating (barrel)
48	Grey plastic excluding coating (barrel)
49	Purple plastic excluding coating (barrel)
50	Black plastic excluding coating (barrel)



Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 5 of 29

# **COMPONENT LIST**

Component No.	Component
51	Peach pink plastic excluding coating (barrel)
52	Transparent plastic box
53	White paper sticker with transparent plastic film and underlying multi-color coating (box)
54	Foam (stamp)
55	Felt pen tip
56	Transparent plastic film (packaging)



Date : 29-Nov-2019 Page : 6 of 29

# **TEST RESULT**

### **Physical and Mechanical Hazards**

Test Request: The Mechanical Hazards Requirements of 16 CFR 1500, after Use and Abuse Tests.

Description	Result
	As Received & Normal Use (1500.50)
The use and abuse tests conducted are:	Impact Test (1500.53(b)) Torque Test (1500.53(e))
	Tension Test (1500.53(f))
16 CFR 1500.47 &1500.86(a)(6) – Sound Pressure Level produced by	N/A
toy cap	14/74
16 CFR 1501 – Small Parts	N/A
16 CFR 1500.48 – Sharp Points	Р
16 CFR 1500.49 – Sharp Edges	N/A
16 CFR 1510 – Rattles	N/A
16 CFR 1511 – Pacifier	N/A

#### Remark:

P - Pass

NA - Not Applicable

### **Flammability Test**

Test Request: As per U.S. code of federal regulations title 16 CFR 1500.3(c)(6)(vi) for flammable solid, tested

by the method described in 16 CFR 1500.44.

Sample	Limit	Result
Stampables Scented Markers - Set of 18	0.1 inch/second	Pass

## **Total Lead Content in Paint / Surface Coating**

Test Request: Total lead content as specified in US 16 CFR 1303

Test Method: CPSC-CH-E1003-09.1

The sample was acid digested, and total lead content was determined by ICP-OES.

	ested Item(s)	Unit	Limit	MDL	Result
•	ested itelli(s)	Ollit	Lillin	IVIDL	1
Total Le	ead(Pb)	mg/kg	90	10	ND

#### Remark:

mg/kg = milligram per kilogram MDL = method detection limit ND = Not detected, less than MDL



Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 7 of 29

# **TEST RESULT**

## **Phthalates Content**

Test Request: Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates as

specified in CPSC 16 CFR part 1307.

Test Method: CPSC-CH-C1001-09.3

Tested Item(s)	CAS No	CAS No. Unit		MDL	Result		
resteu item(s)	CAS NO.	Oilit	Unit Limit		1	2+3+4	5+6+7
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND	ND
Dicyclohexyl phthalate(DCHP)	84-61-7	%	0.1	0.005	ND	ND	ND
Diisobutyl phthalate(DIBP)	84-69-5	%	0.1	0.005	ND	ND	ND
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND

Tested Item(s)	CAS No	CAS No. Unit		MDL	Result			
rested itelli(s)	CAS NO.	Oilit	Limit	MIDE	8+9+10	11+12+13	17+18+19	
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND	
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND	ND	
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND	ND	
Dicyclohexyl phthalate(DCHP)	84-61-7	%	0.1	0.005	ND	ND	ND	
Diisobutyl phthalate(DIBP)	84-69-5	%	0.1	0.005	ND	ND	ND	
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND	
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL		Result	
rested item(s)	CAS NO.	CAS NO. UIII		MIDE	26+27+28	29+30+31	32+33+34
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND	ND
Dicyclohexyl phthalate(DCHP)	84-61-7	%	0.1	0.005	ND	ND	ND
Diisobutyl phthalate(DIBP)	84-69-5	%	0.1	0.005	ND	ND	ND
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND



Date : 29-Nov-2019 Page : 8 of 29

# **TEST RESULT**

Tested Item(s)	CAS No	CAS No. Unit		MDL	Result			
resteu item(s)	CAS NO.			MIDE	35+36+37	44+45+46	50+51+52	
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND	
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND	ND	
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND	ND	
Dicyclohexyl phthalate(DCHP)	84-61-7	%	0.1	0.005	ND	ND	ND	
Diisobutyl phthalate(DIBP)	84-69-5	%	0.1	0.005	ND	ND	ND	
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND	
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result	
rested item(s)	CAS NO.	Onit			53	54
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Di-n-pentyl phthalate (DPENP)	131-18-0	%	0.1	0.005	ND	ND
Di-n-hexyl phthalate (DHEXP)	84-75-3	%	0.1	0.005	ND	ND
Dicyclohexyl phthalate(DCHP)	84-61-7	%	0.1	0.005	ND	ND
Diisobutyl phthalate(DIBP)	84-69-5	%	0.1	0.005	ND	ND
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND

### Remark:

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.



Date : 29-Nov-2019 Page : 9 of 29

# **TEST RESULT**

## **Total Lead Content In Paint and Other Similar Surface Coatings**

Test Request: Total lead in paint/ similar surface coatings as specified in US Consumer Product Safety

Improvement Act 2008 (CPSIA), Section 101

Test Method: CPSC-CH-E1003-09.1

The sample was acid digested, and total lead content was determined by ICP-OES.

Tosted Item(s)	Linit	Limit	MDL	Result
Tested Item(s)	Unit	Lillin	MIDL	1
Total Lead	mg/kg	90	10	ND

#### Remark:

mg/kg = milligram per kilogram
MDL = method detection limit
ND = Not detected, less than MDL

### **Total Lead Content in Substrate**

Test Request: Total lead in substrate as specified in US Consumer Product Safety Improvement Act 2008

(CPSIA), Section 101

Test Method: CPSC-CH-E1002-08.3

The sample was acid digested, and total lead content was determined by ICP-OES.

Tosted Item(s)	Unit	Limit	MDI		Result				
Tested Item(s)	Unit	Limit	MDL	2+3+4	8+9+10	11+12+13	14+15+16	20+21+22	
Total Lead(Pb)	mg/kg	100	10	ND	ND	10	ND	ND	

Tested Item(s)	Unit	Limit	MDL		Result				
rested item(s)	Onit	Limit	MDL	23+24+25	29+30+31	32+33+34	38+39+40	41+42+43	
Total Lead(Pb)	mg/kg	100	10	ND	ND	ND	ND	ND	

Tested Item(s)	Unit	Limit	MDL		Res	sult	
	Onit	Lillin	MIDL	47+48+49	50+51+52	53	54
Total Lead(Pb)	mg/kg	100	10	ND	ND	ND	ND

#### Remark:

mg/kg = milligram per kilogram MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.



Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 10 of 29

# **TEST RESULT**

### **Phthalates Content**

Phthalates Content as specified in US Consumer Product Safety Improvement Act 2008 Test Request:

(CPSIA), Section 108

CPSC-CH-C1001-09.3 Test Method:

Tested Item(s)	CAS No.	Unit	Unit Limit		Result			
rested item(s)	CAS NO: OIII		Liiiit	MDL	1	2+3+4	5+6+7	
For toys and childcare articles								
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND	
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND	
Additional requirements for toys ar	d childcare articl	es, whic	h can be	e placed ii	n the mouth b	oy children		
Diisononyl phthalate (DINP)	68515-48-0	%	0.1	0.005	ND	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND	ND	
Di-iso-decylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result		
resteu item(s)	CA3 140.	Offic	Liiiit	MIDE	8+9+10	11+12+13	
For toys and childcare articles							
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	
Additional requirements for toys ar	nd childcare articl	es, whic	h can be	e placed in	n the mouth by child	dren	
Diisononyl phthalate (DINP)	68515-48-0	%	0.1	0.005	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND	
Di-iso-decylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result		
rested item(s)	CAS NO.	Offic	Liiiii	MIDE	17+18+19	26+27+28	
For toys and childcare articles							
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	
Additional requirements for toys ar	nd childcare artic	les, whic	h can be	e placed ii	n the mouth by child	dren	
Diisononyl phthalate (DINP)	68515-48-0	%	0.1	0.005	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND	
Di-iso-decylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result		
rested item(s)	CAS NO.	Oilit	Liiiii	WIDL	29+30+31	32+33+34	
For toys and childcare articles							
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	
Additional requirements for toys an	nd childcare articl	es, whic	h can be	e placed ii	n the mouth by child	dren	
Diisononyl phthalate (DINP)	68515-48-0	%	0.1	0.005	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND	
Di-iso-decylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	



Date : 29-Nov-2019 Page : 11 of 29

# **TEST RESULT**

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result		
rested item(s)	GAGING: GI		Liiiiii	MIDE	35+36+37	44+45+46	
For toys and childcare articles							
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	
Additional requirements for toys ar	nd childcare artic	les, whic	h can be	e placed ii	n the mouth by child	dren	
Diisononyl phthalate (DINP)	68515-48-0	%	0.1	0.005	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND	
Di-iso-decylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL	Res	sult
rested item(s)	0.10.10.			WIDL	50+51+52	53
For toys and childcare articles						
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND
Additional requirements for toys ar	nd childcare articl	es, whic	h can be	e placed in	n the mouth by child	dren
Diisononyl phthalate (DINP)	68515-48-0	%	0.1	0.005	ND	ND
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND	ND
Di-iso-decylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result 54
For toys and childcare articles					-
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND
Di-2-ethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND
Additional requirements for toys ar	d childcare articl	es, whic	h can be	e placed ii	n the mouth by children
Diisononyl phthalate (DINP)	68515-48-0	%	0.1	0.005	ND
Di-n-octylphthalate (DNOP)	117-84-0	%	0.1	0.005	ND
Di-iso-decylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND

### Remark:

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.



Date : 29-Nov-2019 Page : 12 of 29

# **TEST RESULT**

## **Total Lead Content**

Test Request: Total lead content as specified in US California Proposition 65

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996

Acid digestion/ microwave digestion method was used and total lead content was determined

by ICP-OES.

Tested Item(s)	Unit	Limit	MDL	Result
rested item(s)	Oilit	Liiiit	IVIDE	1
Total Lead(Pb)	mg/kg	90	10	ND

Tested Item(s)	Linit	Limit	MDL		Result					
rested itelli(s)	Item(s) Unit Limit MDL	2+3+4	8+9+10	11+12+13	14+15+16	20+21+22				
Total Lead(Pb)	mg/kg	100	10	ND	ND	10	ND	ND		

Tested Item(s)	Unit	Limit	MDL	Result					
rested item(s)	Onit	Liiiit	MDL	23+24+25   29+30+31   32+33+34   38+39+40   41+42+43					
Total Lead(Pb)	mg/kg	100	10	ND	ND	ND	ND	ND	

Tested Item(s)	Unit	Limit	MDL	Result					
rested itelli(s)	Offic	Lillin	MIDL	47+48+49	50+51+52	53	54		
Total Lead(Pb)	mg/kg	100	10	ND	ND	ND	ND		

#### Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

The limit(s) was/were referred from various court cases.

Compliance with the above stated limit(s) does not show compliance with Proposition 65 or a guarantee against possible legal action but provides a relative level of assurance against potential lawsuits.



Date : 29-Nov-2019 Page : 13 of 29

# **TEST RESULT**

## **Phthalates Content**

Test Request: Phthalates Content as specified in US California Proposition 65

Test Method: EPA 3550C:2007, EPA 8270E:2018, solvent extraction and quantification by GC-MS.

Tested Item(s)	CAS No.	Unit	Limit	MDL		Result	
rested item(s)	OAO NO.	10.		WIDE	1	2+3+4	5+6+7
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	ND
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.1	0.005	ND	ND	ND

Tested Item(s)	CAS No.	AS No. Unit		MDL	Result			
rested item(s)	CAS NO. UIII		Limit	MIDL	8+9+10	11+12+13	17+18+19	
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	ND	
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.1	0.005	ND	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL		Result	
resteu item(s)	CAS NO.	Oilit		MIDE	26+27+28	29+30+31	32+33+34
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	ND
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.1	0.005	ND	ND	ND

Tested Item(s)	CASNO	CAS No. Unit		MDL	Result			
rested item(s)	CAS NO.	Oilit	Limit	MIDL	35+36+37	44+45+46	50+51+52	
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND	ND	
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.1	0.005	ND	ND	ND	



Date : 29-Nov-2019 Page : 14 of 29

# **TEST RESULT**

Tested Item(s)	CAS No. Unit		Unit Limit N		Result	
rested item(s)	CAS NO.	Oilit	Lilling	MDL	53	54
Dibutylphthalate (DBP)	84-74-2	%	0.1	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	0.1	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	0.1	0.005	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	0.1	0.005	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	0.1	0.005	ND	ND
Di-n-hexyl phthalate (DnHP)	84-75-3	%	0.1	0.005	ND	ND

#### Remark:

MDL = method detection limit

ND = Not detected, less than MDL

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

The limit(s) was/were referred from various court cases.

Compliance with the above stated limit(s) does not show compliance with Proposition 65 or a guarantee against possible legal action but provides a relative level of assurance against potential lawsuits.



Date : 29-Nov-2019 Page : 15 of 29

# **TEST RESULT**

#### **TPCH - Toxics in Packaging Clearinghouse (formerly CONEG)**

Test Request: Total Lead, Cadmium, Mercury and Chromium content as specified in TPCH legislation.

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996.

Acid digestion/ microwave digestion method was used, analysis of total Lead, Cadmium, Mercury and Chromium was performed by ICP-OES. Chromium VI determination was

performed by UV-Vis Spectrophotometer.

Tooto d Home(a)	I I m i f	1 : :4	MDI	Result
Tested Item(s)	Unit	Limit	MDL	56
Total Lead (Pb)	mg/kg	-	5	ND
Total Cadmium (Cd)	mg/kg	-	5	ND
Total Chromium VI (Cr VI)	mg/kg	-	5	ND
Total Mercury (Hg)	mg/kg	-	5	ND
Total (Pb+Cd+Hg+Cr VI)	mg/kg	100	-	ND

#### Remark:

mg/kg = milligram per kilogram MDL = method detection limit ND = Not detected, less than MDL "-" = Not Regulated

The TPCH legislation has been enacted by California, Connecticut, Florida, Georgia, Illinois, Iowa, Maine, Maryland, Minnesota, Missouri, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, Washington and Wisconsin.



Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 16 of 29

# **TEST RESULT**

## **Mechanical and Physical Properties**

Test Request: As specified in European Standard on Safety of Toys EN71 Part 1:2014+A1:2018

Section	Description	Result
4	General requirements	'
4.1	Material cleanliness (by visual assessment)	Р
4.2	Assembly	N/A
4.3	Flexible plastic sheeting	N/A
4.4	Toy Bags	N/A
4.5	Glass	N/A
4.6	Expanding Materials	N/A
4.7	Edges	Р
4.8	Points and Metallic Wires	Р
4.9	Protruding parts	N/A
4.10	Parts moving against each other	
4.10.1	Folding and sliding mechanisms	N/A
4.10.2	Driving mechanisms	N/A
4.10.3	Hinges	N/A
4.10.4	Springs	N/A
4.11	Mouth-actuated toys and other toys intended to be put in the mouth	N/A
4.12	Balloons	N/A
4.13	Cords of toy kites and other flying toys	N/A
4.14	Enclosures	
4.14.1	Toys which a child can enter	N/A
4.14.2	Masks and helmets	N/A
4.15	Toys intended to bear the mass of a child	
4.15.1	Toys propelled by the child or by other means	N/A
4.15.2	Toy bicycles	N/A
4.15.3	Rocking horses and similar toys	N/A
4.15.4	Toys not propelled by a child	N/A
4.15.5	Toys scooters	N/A
4.16	Heavy immobile toys	N/A
4.17	Projectiles	N/A
4.17.1	General	N/A
4.17.2	All projectiles	N/A
4.17.3	Projectile toy with stored energy	N/A
4.17.4	Certain projectile toys without stored energy	N/A
4.18	Aquatic toys and inflatable toys	N/A
4.19	Percussion caps specifically designed for use in toys and toys using percussion caps	N/A
4.20	Acoustics	
4.20.2.1	General	N/A
4.20.2.2	Close-to-the-ear toys	N/A
4.20.2.3	Table-top or floor toys	N/A
4.20.2.4	Hand-held toys	N/A
4.20.2.5	Toys using headphones or earphones	N/A
4.20.2.6	Rattles	N/A
4.20.2.7	Squeeze toys	N/A
4.20.2.8	Pull-along or push toys	N/A
4.20.2.9	Percussion toys	N/A
4.20.2.10	Wind toys	N/A
4.20.2.11	Cap-firing toys	N/A



Report No. : EFSH19101903-CG-01 Date : 29-Nov-2019 Page : 17 of 29

# **TEST RESULT**

Section	Description	Result
4.20.2.12	Voice toys	N/A
4.21	Toys containing a non-electrical heat source	N/A
4.22	Small balls	N/A
4.23	Magnets	N/A
4.24	Yo-yo balls	N/A
4.25	Toys attached to food	N/A
4.26	Toy disguise costumes	N/A
4.27	Flying toys	N/A
4.27.1	General	N/A
4.27.2	Rotors and propellers on flying toys	N/A
4.27.3	Rotors and propellers on remote controlled flying toys	N/A
5	Toys intended for children under 36 months	1
5.1	General requirements	N/A
5.2	Soft-filled toys and soft-filled parts of a toy	N/A
5.3	Plastic sheeting	N/A
5.4	Cords, chains and electrical cables in toys	N/A
5.5	Liquid-filled toys	N/A
5.6	Speed limitation of electrically-driven ride-on toys	N/A
5.7	Glass and porcelain	N/A
5.8	Shape and size of certain toys	N/A
5.9	Toys comprising monofilament fibres	N/A
5.10	Small balls	N/A
5.11	Play figures	N/A
5.12	Hemispheric-shaped toys	N/A
5.13	Suction cups	N/A
5.14	Straps intended to be worn fully or partially around the neck	N/A
5.15	Sledges with cords for pulling	N/A
6	Packaging	N/A
7	Warnings, markings and instructions for use	11/7
7.1	General	Р
7.2	Toys not intended for children under 36 months	P
7.3	Latex Balloons	N/A
7.4	Aquatic toys	N/A
7.5	Functional Toys	N/A
7.6	Hazardous sharp functional edges and points	N/A
7.7	Projectiles toys	N/A
7.8	Imitation protective masks and helmets	N/A
7.9	Toy kites	N/A
7.10	Roller skates, inline skates, skateboards and certain other ride-on toys	N/A
7.10	Toys intended to be attached to or strung across a cradle, cot, or perambulator	N/A
7.11	Toys intended to be attached to or strung across a cradie, cot, or perambulator  Toys intended to be strung across a cradle, cot, or perambulator	N/A
7.11	Liquid-filled teethers	N/A
7.12	Percussion caps specifically designed for use in toys	N/A
7.13	Acoustics	N/A
7.14	Toys bicycles	N/A
7.15	Toys bicycles  Toys intended to bear the mass of a child	N/A
7.16	Toys comprising monofilament fibres	N/A
7.17	Toys comprising monomament ribres  Toy scooters	N/A
7.10	Rocking horses and similar toys	N/A
7.19	Magnetic/electrical experimental sets	N/A
7.20	Toy with electrical cables exceeding 300mm in length	N/A N/A
7.21		N/A N/A
1.22	Toys with cords or chains intended for children of 18 months and over but under 36 months	IN/A



Date : 29-Nov-2019 Page : 18 of 29

# **TEST RESULT**

Section	Description	Result
7.23	Toys intended to be attached to a cradle, cot or perambulator	N/A
7.24	Sledges with cords for pulling	N/A
7.25	Flying toys	N/A
7.25.1	Flying toys	N/A
7.25.2	Remote controlled flying toys	N/A
7.26	Improvised projectiles	N/A

#### Remark:

P - Pass

NA - Not Applicable

### **Labeling Requirement**

Test Request: Labeling requirement including Washing/Cleaning instruction, CE mark, importer /

manufacturer name and address, product identification as specified in Directive 2009/48/EC -

Safety of toys

Labeling Content	Observation Result	Location	Conclusion
Washing/Cleaning Instruction	Not Applicable	-	-
CE Mark	Present, Correct form, CE marking (height = 8 mm)	Packaging	Pass
Importer's Name & Address	Not Present	-	Pass (See Remark)
Manufacturer's Name & Address	Present	Packaging	Pass (See Remark)
Product ID	Present	Packaging	Pass

#### Remark

According to TSD 2009/48/EC, importers shall indicate their name, registered trade name or registered trade mark and the address at which they can be contacted on the toy or, where that is not possible, on its packaging or in a document accompanying the toy.

#### **Flammability of Toys**

Test Request: As specified in European Standard on Safety of Toys EN71 Part 2:2011+A1:2014

Section	Description	Result
4	Requirements	
4.1	General Requirements	Р
4.2	Toys to be worn on the head	N/A
4.3	Toy disguise costumes and toys intended to be worn by a child in play	N/A
4.4	Toys intended to be entered by a child.	N/A
4.5	Soft-filled toys (animals and dolls, etc)	N/A
4.5	(Sample was not tested if its maximum dimension is 150mm or less.)	IN/A

### Remark:

P – Pass

NA - Not Applicable



Date : 29-Nov-2019 Page : 19 of 29

# **TEST RESULT**

### **Migration of Certain Elements**

Test Request: Migration of certain elements as specified in European Standard on Safety of Toys EN71 Part

3:2019

Test Method: General elements, with reference to EN 71 Part 3:2019, analysis was performed by ICP-MS;

Extractable Chromium (VI), with reference to EN 71 Part 3:2019, analysis was performed by

IC-ICP-MS;

Extractable organic tin, with reference to EN 71 Part 3:2019, analysis was performed by

GC-MS.

Took Home/o):						Result				
Test Item(s):	Unit	<b>2</b> * <sup>1</sup>	4	5	7	9	11	12	13	15*1
Category Type		II	Ш	ll	II	ll l	II	II	II	II
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	67	ND	ND	ND	58	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Aluminum (Al)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	ND	ND	-	ND	ND	-	-	ND	ND
Extractable Chromium (III) (Cr III)#3	mg/kg	-	-	2.307	-	-	ND	4.140	-	-
Extractable Chromium (VI) (Cr VI)	mg/kg	-	-	ND	-	-	ND	ND	-	-

#### Note

- #1 Result of Organic Tin is calculated by assuming the extractable Tin content is wholly contributed from tributyltin (TBT) cation unless further specified.
- #2 If the migration of total Chromium is below the maximum limit for Chromium (VI), it can be inferred that the material complies with the requirements for both Chromium(III) and Chromium(VI).
- #3 In particular Chromium (III) is calculated by subtracting the Chromium (VI) concentration from the total chromium concentration.

#### Remarks:

mg/kg = milligram per kilogram

MDL = Method Detection Limit

ND = Not Detected, less than MDL

The test results of component No. 1 was not applicable due to the sample weight of test portion is less than 10 mg. As per client's request, only the appointed materials have been tested.

<sup>\*1</sup> The test result was calculated as if 100 mg of test portion had been used and the sample weight of test portion is less than 100 mg.



Date : 29-Nov-2019 Page : 20 of 29

# **TEST RESULT**

## **Migration of Certain Elements**

Test Request: Migration of certain elements as specified in European Standard on Safety of Toys EN71 Part

3:2019

Test Method: General elements, with reference to EN 71 Part 3:2019, analysis was performed by ICP-MS;

Extractable Chromium (VI), with reference to EN 71 Part 3:2019, analysis was performed by

IC-ICP-MS:

Extractable organic tin, with reference to EN 71 Part 3:2019, analysis was performed by

GC-MS.

Test Item(s):					Re	sult			
rest item(s):	Unit	16	18	21	23	24	26* <sup>1</sup>	27	29
Category Type		II	II	II	II	II	II	II	П
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	79	ND	ND	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Aluminum (Al)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	-	ı	ND	ND	-	ND	-	-
Extractable Chromium (III) (Cr III)#3	mg/kg	2.389	ND	-	-	ND	-	ND	3.167
Extractable Chromium (VI) (Cr VI)	mg/kg	ND	ND	-	-	ND	-	ND	ND

## Note:

- #1 Result of Organic Tin is calculated by assuming the extractable Tin content is wholly contributed from tributyltin (TBT) cation unless further specified.
- #2 If the migration of total Chromium is below the maximum limit for Chromium (VI), it can be inferred that the material complies with the requirements for both Chromium(III) and Chromium(VI).
- #3 In particular Chromium (III) is calculated by subtracting the Chromium (VI) concentration from the total chromium concentration.

### Remarks:

mg/kg = milligram per kilogram

MDL = Method Detection Limit

ND = Not Detected, less than MDL

\*1 The test result was calculated as if 100 mg of test portion had been used and the sample weight of test portion is less than 100 mg.

As per client's request, only the appointed materials have been tested.



Date : 29-Nov-2019 Page : 21 of 29

# **TEST RESULT**

## **Migration of Certain Elements**

Test Request: Migration of certain elements as specified in European Standard on Safety of Toys EN71 Part

3:2019

Test Method: General elements, with reference to EN 71 Part 3:2019, analysis was performed by ICP-MS;

Extractable Chromium (VI), with reference to EN 71 Part 3:2019, analysis was performed by

IC-ICP-MS:

Extractable organic tin, with reference to EN 71 Part 3:2019, analysis was performed by

GC-MS.

Test Item(s):					Re	sult			
rest item(s).	Unit	30* <sup>1</sup>	32	33	35	36	38	41	43
Category Type		II	III	III	III	III	III	III	Ш
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Aluminum (AI)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium (III) (Cr III)#3	mg/kg	-	-	-	-	-	-	-	-
Extractable Chromium (VI) (Cr VI)	mg/kg	-	-	-	-	-	-	-	-

### Note:

- #1 Result of Organic Tin is calculated by assuming the extractable Tin content is wholly contributed from tributyltin (TBT) cation unless further specified.
- #2 If the migration of total Chromium is below the maximum limit for Chromium (VI), it can be inferred that the material complies with the requirements for both Chromium(III) and Chromium(VI).
- #3 In particular Chromium (III) is calculated by subtracting the Chromium (VI) concentration from the total chromium concentration.

### Remarks:

mg/kg = milligram per kilogram

MDL = Method Detection Limit

ND = Not Detected, less than MDL

\*1 The test result was calculated as if 100 mg of test portion had been used and the sample weight of test portion is less than 100 mg.

As per client's request, only the appointed materials have been tested.



Date : 29-Nov-2019 Page : 22 of 29

# **TEST RESULT**

## **Migration of Certain Elements**

Test Request: Migration of certain elements as specified in European Standard on Safety of Toys EN71 Part

3:2019

Test Method: General elements, with reference to EN 71 Part 3:2019, analysis was performed by ICP-MS;

Extractable Chromium (VI), with reference to EN 71 Part 3:2019, analysis was performed by

IC-ICP-MS

Extractable organic tin, with reference to EN 71 Part 3:2019, analysis was performed by

GC-MS.

Test Item(s):					Re	sult			
rest item(s):	Unit	46	47	49	50	52	53	54	55
Category Type		III	III	III	III	III	III	III	Ш
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	60	ND	ND	ND	365	ND
Extractable Copper (Cu)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Aluminum (Al)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Organic Tin#1	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium#2	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium (III) (Cr III)#3	mg/kg	-	-	-	-	-	-	-	-
Extractable Chromium (VI) (Cr VI)	mg/kg	-	-	-	-	-	-	-	-

## Note:

- #1 Result of Organic Tin is calculated by assuming the extractable Tin content is wholly contributed from tributyltin (TBT) cation unless further specified.
- #2 If the migration of total Chromium is below the maximum limit for Chromium (VI), it can be inferred that the material complies with the requirements for both Chromium(III) and Chromium(VI).
- #3 In particular Chromium (III) is calculated by subtracting the Chromium (VI) concentration from the total chromium concentration.

### Remarks:

mg/kg = milligram per kilogram MDL = Method Detection Limit ND = Not Detected, less than MDL

As per client's request, only the appointed materials have been tested.



Date : 29-Nov-2019 Page : 23 of 29

# **TEST RESULT**

## Limits –MDL per category type:

Test Item(s):	Unit	Limit	MDL	Limit	MDL	Limit	MDL
Category Type				I	I	I	I
Extractable Lead (Pb)	mg/kg	2.0	1.0	0.5	0.2	23	10
Extractable Antimony (Sb)	mg/kg	45	5	11.3	1	560	10
Extractable Arsenic (As)	mg/kg	3.8	0.2	0.9	0.1	47	5
Extractable Barium (Ba)	mg/kg	1500	50	375	10	18750	50
Extractable Cadmium (Cd)	mg/kg	1.3	0.1	0.3	0.05	17	1
Extractable Mercury (Hg)	mg/kg	7.5	0.5	1.9	0.2	94	10
Extractable Selenium (Se)	mg/kg	37.5	2	9.4	1	460	10
Extractable Boron (B)	mg/kg	1200	50	300	10	15000	50
Extractable Cobalt (Co)	mg/kg	10.5	1	2.6	0.2	130	10
Extractable Manganese (Mn)	mg/kg	1200	50	300	10	15000	50
Extractable Strontium (Sr)	mg/kg	4500	50	1125	50	56000	50
Extractable Zinc (Zn)	mg/kg	3750	50	938	50	46000	50
Extractable Copper (Cu)	mg/kg	622.5	10	156	10	7700	50
Extractable Aluminum (Al)	mg/kg	5625	50	1406	50	70000	50
Extractable Nickel (Ni)	mg/kg	75	5	18.8	2	930	10
Extractable Tin (Sn)	mg/kg	15000	50	3750	50	180000	50
Extractable Organic Tin	mg/kg	0.9	0.2	0.2	0.2	12	0.2
Extractable Chromium	mg/kg	-	0.02	-	0.005	-	0.02
Extractable Chromium (III) (Cr III)	mg/kg	37.5	2	9.4	1	460	10
Extractable Chromium (VI) (Cr VI)	mg/kg	0.02	0.02	0.005	0.005	0.053	0.02

Category I: dry, brittle, powder-like or pliable toy material

Category II: liquid or sticky toy material Category III: scrapped-off toy material
"-" = Not Regulated



Date : 29-Nov-2019 Page : 24 of 29

# **TEST RESULT**

### **Total Cadmium Content**

Test Request: Total cadmium content as specified in Commission Regulation (EU) 2016/217 amending entry

23 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: EPA 3050B:1996, EPA 3052:1996, EN 1122:2001 Method B, acid digestion method was used

and total cadmium content was determined by ICP-OES.

Tosted Item(s)	Unit	Limit	MDL	Result
Tested Item(s)	Offic	Lillin	MIDL	1
Total Cadmium(Cd)	%	0.1	0.0005	ND

Tested Item(s)	Unit	Limit	MDL			
rested item(s)	Onit	Lillin	WIDE	32+33+34	38+39+40	47+48+49
Total Cadmium(Cd)	%	0.01	0.0005	ND	ND	ND

Tested Item(s)	Unit	Limit	MDL	Result					
rested item(s)	Unit	Lillin	MIDE	50+51+52	54				
Total Cadmium(Cd)	%	0.01	0.0005	ND	ND	ND			

#### Remark:

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.



Date : 29-Nov-2019 Page : 25 of 29

# **TEST RESULT**

### Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: Polycyclic Aromatic Hydrocarbons (PAHs) content as specified in Regulation (EU) 2015/326

amending entry 50 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: Solvent extraction and quantification by gas chromatography-mass selective detection

(GC-MS) with respect to AfPS GS 2014:01 PAK (PAK=PAHs) requirement.

Tested Item(s)	CAS No. Uni		Jnit Limit	MDL	Result						
rested item(s)	CAS NO.	Offic	Lillin	MIDE	1	4+5	6+7	10+11			
For rubber or plastic of toys or child use articles, will direct contact with skin and mouth.											
Benzo(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND	ND	ND	ND			
Chrysene	218-01-9	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(j)fluoranthene	205-82-3	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND	ND	ND	ND			
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND	ND	ND	ND			

Tested Item(s)	CAS No.	Unit	Limit	MDL		Res	sult			
rested itelli(s)	CAS NO.	01111	Liiiit	MIDL	12+13	14+15	20+21	22+23		
For rubber or plastic of toys or child use articles, will direct contact with skin and mouth.										
Benzo(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND	ND	ND	ND		
Chrysene	218-01-9	mg/kg	0.5	0.2	ND	ND	ND	ND		
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND	ND	ND	ND		
Benzo(j)fluoranthene	205-82-3	mg/kg	0.5	0.2	ND	ND	ND	ND		
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND	ND	ND	ND		
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND	ND	ND	ND		
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND	ND	ND	ND		
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND	ND	ND	ND		

Tested Item(s)	CAS No.	Unit	Limit	MDL		Res	sult				
	CAS NO.	Oiiit		MIDE	26+27	30+31	32+33	34+35			
For rubber or plastic of toys or child use articles, will direct contact with skin and mouth.											
Benzo(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND	ND	ND	ND			
Chrysene	218-01-9	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(j)fluoranthene	205-82-3	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND	ND	ND	ND			
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND	ND	ND	ND			
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND	ND	ND	ND			



Date : 29-Nov-2019 Page : 26 of 29

# **TEST RESULT**

Tested Item(s)	CAS No.	Unit	Unit Limit N	MDL	Result				
rested item(s)	CAS NO.	Oilit				42+43	44+45	46+47	
For rubber or plastic of toys or child use articles, will direct contact with skin and mouth.									
Benzo(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND	ND	ND	ND	
Chrysene	218-01-9	mg/kg	0.5	0.2	ND	ND	ND	ND	
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND	ND	ND	ND	
Benzo(j)fluoranthene	205-82-3	mg/kg	0.5	0.2	ND	ND	ND	ND	
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND	ND	ND	ND	
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND	ND	ND	ND	
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND	ND	ND	ND	
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND	ND	ND	ND	

Tested Item(s)	CAS No.	Unit	Unit Limit			Res	sult		
rested item(s)	OAO NO.	011110		MDL	48+49	50+51	52	53	54
For rubber or plastic of toys or child use articles, will direct contact with skin and mouth.									
Benzo(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND	ND	ND	ND	ND
Chrysene	218-01-9	mg/kg	0.5	0.2	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND	ND	ND	ND	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	0.5	0.2	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND	ND	ND	ND	ND
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND	ND	ND	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND	ND	ND	ND	ND

#### Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.



Date : 29-Nov-2019 Page : 27 of 29

# **TEST RESULT**

## **Phthalates Content**

Test Request: Phthalates content as specified in entry 51&52 of annex XVII of REACH Regulation (EC) No

1907/2006 and its amendment Commission Regulation (EU) 2018/2005.

Test Method: EPA 3550C:2007, EPA 8270E:2018, solvent extraction and quantification by GC-MS.

Tested Item(s)	CAS No. Unit Limit		Limit MDL		Result			
resteu item(s)			Liiiit	MIDE	1	2+3+4	5+6+7	
Dibutylphthalate (DBP)	84-74-2	%	-	0.005	ND	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	-	0.005	ND	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	ND	
Diisobutylphthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	ND	
Sum (DBP + BBP + DEHP + DIBP)	-	%	0.1	Ī	ND	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	ND	
Sum (DNOP + DINP + DIDP)	-	%	0.1	-	ND	ND	ND	

Tested Item(s)	Tested Item(s) CAS No. Unit Limit		Limit	MDL	Result		
resteu item(s)			MIDE	8+9+10	11+12+13		
Dibutylphthalate (DBP)	84-74-2	%	-	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	-	0.005	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	
Diisobutylphthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	
Sum (DBP + BBP + DEHP + DIBP)	-	%	0.1	Ī	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	
Sum (DNOP + DINP + DIDP)	-	%	0.1	-	ND	ND	

Tested Item(s)	CAS No.	CAS No. Unit		mit MDL	Result		
resteu item(s)	OAO NO.	Oilit		WIDE	17+18+19	26+27+28	
Dibutylphthalate (DBP)	84-74-2	%	-	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	-	0.005	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	
Diisobutylphthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	
Sum (DBP + BBP + DEHP + DIBP)	-	%	0.1	Ī	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	
Sum (DNOP + DINP + DIDP)	-	%	0.1	-	ND	ND	



Date : 29-Nov-2019 Page : 28 of 29

# **TEST RESULT**

Tested Item(s)	CAS No. Unit		Unit Limit	MDL	Result		
rested item(s)	OAO NO.	Oiiii		WIDL	29+30+31	32+33+34	
Dibutylphthalate (DBP)	84-74-2	%	-	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	-	0.005	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	
Diisobutylphthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	
Sum (DBP + BBP + DEHP + DIBP)	-	%	0.1	-	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	
Sum (DNOP + DINP + DIDP)	-	%	0.1	_	ND	ND	

Tested Item(s)	CAS No. Unit		Limit	MDL	Result		
rested item(s)	OAO NO.	Oilit		WIDL	35+36+37	44+45+46	
Dibutylphthalate (DBP)	84-74-2	%	-	0.005	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	-	0.005	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	
Diisobutylphthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	
Sum (DBP + BBP + DEHP + DIBP)	-	%	0.1	-	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	
Sum (DNOP + DINP + DIDP)	-	%	0.1	-	ND	ND	

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result			
rested item(s)	CAS NO.	S NO.   OIIII   LIIIIII		MIDE	50+51+52	53	54	
Dibutylphthalate (DBP)	84-74-2	%	-	0.005	ND	ND	ND	
Benzylbutylphthalate (BBP)	85-68-7	%	-	0.005	ND	ND	ND	
Diethylhexylphthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	ND	
Diisobutylphthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	ND	
Sum (DBP + BBP + DEHP + DIBP)	-	%	0.1	Ī	ND	ND	ND	
Di-n-octylphthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	ND	
Diisononylphthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	ND	
Diisodecylphthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	ND	
Sum (DNOP + DINP + DIDP)	-	%	0.1	Ī	ND	ND	ND	

#### Remark

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.



Date : 29-Nov-2019 Page : 29 of 29

# **TEST RESULT**

#### **Packaging and Packaging Waste**

Test Request: Total Lead, Cadmium, Mercury and Chromium VI content as specified in Directive 94/62/EC

and its amendment Directive (EU) 2015/720.

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996

Acid digestion/ microwave digestion method was used, analysis of total Lead, Cadmium, Mercury and Chromium was performed by ICP-OES. Chromium VI determination was

performed by UV-Vis Spectrophotometer.

Tested Item(s)	Unit	Limit	MDL	Result 56
Total Lead (Pb)	mg/kg	_	5	ND
Total Cadmium (Cd)	mg/kg	_	5	ND ND
Total Chromium VI (Cr VI)	mg/kg	_	5	ND ND
Total Mercury (Hg)	mg/kg	-	5	ND
Total (Pb+Cd+Hg+Cr VI)	mg/kg	100	-	ND

#### Remark:

mg/kg = milligram per kilogram MDL = method detection limit ND = Not detected, less than MDL "-" = Not Regulated

\*\*\*END OF THE REPORT\*\*\*