



BTL DIFFUSION

Technical Report: (8820)007-0075

Date Received: Jan 7, 2020

Jan 14, 2020

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BTL DIFFUSION
16, RUE ANATOLE MOUSSU-ZA MÉRÉ NORD EST
78490 MÉRÉ, FRANCE

Sample Description:	ACTIVITY SPIRAL - JUNGLE , ACTIVITY SPIRAL - FARM , PLAY MAT – JUNGLE , PLAY MAT – FARM		
Vendor:	N/A	Sample Size:	15
Manufacturer:	N/A	Style No(s):	302856, 302863, 302818, 302825
Labeled Age Grade:	NOT RECORD	SKN/SKU No.:	NOT PROVIDE
Appropriate Age Grade:	NOT REQUESTED	PO No.:	NOT PROVIDE
Client Specified Age Grade:	0+	Ref #:	NOT PROVIDE
Tested Age Grade:	ALL AGES	Country of Origin:	NOT PROVIDE
UPC Code:	N/A	Assortment No.:	NOT PROVIDE
		Country of Destination:	USA, EUROPE, CANADA
		Buyer:	BTL DIFFUSION
Test Starting Date:	JAN 7, 2020	Test Finished Date:	JAN 14, 2020

EXECUTIVE SUMMARY:

The tested component sample(s) MEETS the following requirement(s):

- The migration of certain elements in Category III - Scraped off toy material requirements of the European Standard, "Safety of Toys", EN 71 Part 3: 2019.
- The cadmium content requirement of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 23.

To be continued

BUREAU VERITAS SHENZHEN CO.,LTD
DONGGUAN BRANCH

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REMARK

If there are questions or concerns on this report, please contact the following persons:

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EXECUTIVE SUMMARY:

The tested component sample(s) MEETS the following requirement(s):

- The BBP, DBP, DEHP and DIBP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 51.
- The DNOP, DINP and DIDP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 52.
- Short Chain Chlorinated Paraffins (SCCPs) Content - European Parliament and Council Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs) (recast), Annex I, Part A
- The Polycyclic Aromatic Hydrocarbons (PAHs) Content requirement of German Product Safety Commission GS Specification AfPS GS 2014:01 PAK, "Testing and validation of PAHs in products in the course of GS-Mark Certification".
- The total lead content in substrate requirements of ASTM F963-17, "Standard consumer safety specification for toy safety", Section 4.3.5.2(2)(a).
- The soluble heavy metals content in substrate requirements of ASTM F963-17, "Standard Consumer Safety Specification for Toy Safety," Section 4.3.5.2(2)(b).
- The total lead content of 100ppm requirements in substrate materials (Consumer Products Safety Improvement Act (CPSIA) of 2008).
- The phthalates (BBP, DBP, DEHP, DINP, DIBP, DPENP, DHEXP & DCHP) content requirements of the Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 108(a) and 108(c), 16 CFR 1307).
- The soluble heavy metals content in plastic requirement of Canada Consumer Product Safety Act, Toys Regulations, SOR/2011-17 Sec. 27(a) with Amendment in SOR/2016-302.
- The total lead content requirements of the Canada Consumer Product Safety Act, Consumer Products Containing Lead Regulations SOR/2018-83.
- The phthalates content requirement of the client's specification with reference to Canada Consumer Product Safety Act with reference to the Hazardous Products Act, Phthalate Regulations, SOR/2016-188.
- The lead content requirement of the client's specification with reference to California proposition 65.
- The phthalates content requirement of the client's specification with reference to California proposition 65.
- The phthalates content requirement of the client's specification.
- The bisphenol A (BPA) content requirement of the client's specification.

Note: At the request of client, test(s) was conducted on the certain component(s) of the submitted samples(s) / submitted component(s).

Note: The composite test sample(s) of the submitted samples was prepared in the manner requested by the client, when subject to the test performed.



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Tested Component(s) Description List:

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I001	Green soft plastic	Leaf	-
I002	Orange soft plastic	Carrot	-
I003	Green plastic	Ring	-
I004	Orange plastic	Ring	-
I005	Yellow plastic	Ring	-



RESULTS:

Migration of Certain Elements –European Standard EN 71 Part 3: 2019

Test Method: European Standard EN 71 Part 3: 2019, Section 9.

Class: Category III - Scraped off toy material

Analyte	Requirement (mg/kg)	Result (mg/kg)			
		Test Item(s)			
	Category III	I002	I005	-	-
Aluminium (Al)	70000	2	LT 2	-	-
Arsenic (As)	47	LT 2	LT 2	-	-
Boron (B)	15000	LT 2	LT 2	-	-
Barium (Ba)	18750	LT 2	LT 2	-	-
Cadmium (Cd)	17	LT 2	LT 2	-	-
Cobalt (Co)	130	LT 2	LT 2	-	-
Chromium III (Cr III)	460	LT 0.053	LT 0.053	-	-
Chromium VI (Cr VI)	0.053				
Copper (Cu)	7700	LT 2	LT 2	-	-
Mercury (Hg)	94	LT 2	LT 2	-	-
Manganese (Mn)	15000	LT 2	3	-	-
Nickel (Ni)	930	LT 2	LT 2	-	-
Lead (Pb)	23	LT 2	LT 2	-	-
Antimony (Sb)	560	LT 2	LT 2	-	-
Selenium (Se)	460	LT 2	LT 2	-	-
Tin (Sn)	180000	LT 2	LT 2	-	-
Organic tin	12	LT 2	LT 2	-	-
Strontium (Sr)	56000	LT 2	LT 2	-	-
Zinc (Zn)	46000	LT 2	5	-	-
Mass of trace amount (gram)		-	-	-	-
Conclusion		PASS	PASS	-	-



RESULTS:

mg/kg = milligrams per kilogram (ppm=parts per million)

LT = Less Than

Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg

= Verified results (see note)

Remark:

- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.
- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.

Note:

If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method

- Chromium VI: EN71 part 3:2019, Annex H by Gas Chromatography – Mass Spectroscopy analysis.
- Organic tin: EN71 part 3:2019, Annex G by Gas Chromatography – Mass Spectroscopy analysis.



RESULTS:

Total Cadmium Content – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 23

Test Method : BS EN 1122: 2001, Method B or Acid digestion followed by Atomic Absorption Spectrophotometry or Inductively Coupled Plasma Spectrometry.

Maximum Allowable Limit :	Type I	Paints on Painted Article: 1000 mg/kg
	Type II	Plastics: 100 mg/kg
	Type III	Metals in Jewellery: 100 mg/kg
	Type IV	Wet Paints: 100 mg/kg

Test Item(s)	Type	Result	Unit	Conclusion
		Total Cadmium (Cd)		
I001+I002+I003	II	ND	mg/kg	PASS

Note / key:

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) : 10



RESULTS:

BBP/DBP/DEHP/DIBP Contents in Toys and Childcare Articles – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 51

Test Method : With referenced to EN 14372:2004 Section 6.3.2, sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer

Test Parameter:	BBP	DBP	DEHP	DIBP	SUM	-
Limit (%):	0.1 (Sum of Four phthalates)					-
Test Item(s)	Result (%)					Conclusion
I001+I002	ND	ND	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate
DEHP = Di(2-ethylhexyl) phthalate
ND = Not detected
mg/kg = milligram(s) per kilogram
Detection Limit (%) : Each 0.005

DBP = Dibutyl phthalate
DIBP = Diisobutyl phthalate
% = percent
10000 mg/kg = 1 %

DNOP/DINP/DIDP Contents in Toys and Childcare Articles which can be placed in the Mouth by the Children – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 52

Test Method : With referenced to EN 14372:2004 Section 6.3.2, sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer

Test Parameter:	DIDP	DINP	DNOP	SUM	-
Limit (%):	0.1 (Sum of three phthalates)				-
Test Item(s)	Result (%)				Conclusion
I001+I002	ND	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	ND	PASS

Note / key:

DNOP = Di-n-octyl phthalate
ND = Not detected
mg/kg = milligram(s) per kilogram
Detection Limit (%) : Each 0.005

DINP = Di-iso-nonyl phthalate
% = percent

DIDP = Di-iso-decyl phthalate
10000 mg/kg = 1 %



RESULTS:

Short Chain Chlorinated Paraffins (SCCPs) Content - European Parliament and Council Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs) (recast), Annex I, Part A

Test Method : Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer Negative Chemical Ionization (GC-MS/NCI).

Maximum Allowable Limit :	1500 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Short Chain Chlorinated Paraffins (SCCPs)		
I001+I002+I004	ND	mg/kg	PASS

Note / key:

ND = Not detected
* = Average of duplicate analyses
mg/kg = milligrams per kilogram (ppm=parts per million)
Detection Limit (mg/kg) : 30

Remark:

Short chain chlorinated paraffins (SCCPs) is also known as alkanes C10-C13, chloro.
Plastics and leather material(s) of product(s) are applicable to be tested only.
Without applying to this limit, exemption can granted to:
(a) Conveyor belts in the mining industry and dam sealants containing SCCPs already in use before or on December 4, 2015; and
(b) Articles containing SCCPs other than those referred to in (a) already in use before or on July 10, 2012.
Test result(s) was (were) quantified by using 59 % chlorine content in SCCPs standard mixture.

RESULTS:

Polycyclic Aromatic Hydrocarbons (PAHs) Content – German Product Safety Commission GS Specification AfPS GS 2014:01 PAK

Test Method : With reference to test method mentioned in German AfPS GS 2014:01 PAK

Type (See Comment for the List of Types)	I	IIa	IIb	IIIa	IIIb
Test Parameter(s)	Limit ^[a] (mg/kg)				
Each of Benzo (a) pyrene, Benzo (e) pyrene, Benzo (a) anthracene, Benzo (b) fluoranthene, Benzo (j) fluoranthene, Benzo (k) fluoranthene, Chrysene, Dibenzo (a,h) anthracene, Benzo (g,h,i) perylene and Indeno (1,2,3-cd) pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Naphthalene	< 1	< 2	< 2	< 10	< 10
Sum of Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Pyrene, Anthracene and Fluoranthene (Sum of No.11 to No.17 of listed PAHs)	< 1	< 5	< 10	< 20	< 50
Sum of all listed PAHs	< 1	< 5	< 10	< 20	< 50

Test Item(s)	Type	Result			Conclusion
		Detected Analyte(s)	Conc.	Unit	
I002	IIa	ND	ND	mg/kg	PASS

Note / key:

ND = Not detected
mg/kg = milligram(s) per kilogram
Detection Limit (mg/kg): Each PAHs: 0.2; Sum of all PAHs: 0.2

">" = More than
"<" = Less than
Conc. = Concentration

Remark:

- The list of polycyclic aromatic hydrocarbons is summarized in table of Appendix.
- Plasticized and rubberized prints, coatings and plastic materials of product are applicable to be tested.
- ^[a] Denotes as this (these) limit(s) applies to product(s) with GS-Mark dated on or after July 01, 2015.

List of Types [Categories defined in German AfPS GS 2014:01 PAK] :		
Category	Category Description(s)	Type
1	Category 1: Materials intended for mouth contact or materials in toys with intended long-term skin contact for more than 30 seconds	I
2	Category 2: Materials which are not covered in Category 1 with foreseeable contact to skin longer than 30 seconds (Long-term skin contact) or repeated short-term skin contact	IIa ^[a] or IIb ^[b]
3	Category 3: Materials which are not covered in Category 1 or Category 2 with foreseeable skin contact up to 30 seconds (Short-term skin contact)	IIIa ^[a] or IIIb ^[b]
^[a] denotes as toys according to European Parliament and Council Directive 2009/48/EC ^[b] denotes as other products according to German ProdSG		



RESULTS:

APPENDIX:

List of Polycyclic Aromatic Hydrocarbons (PAHs) [German AfPS GS 2014:01 PAK] :					
No.	Name of Analyte(s)	CAS-No.	No.	Name of Analyte(s)	CAS-No.
1	Benzo (a) pyrene	50-32-8	10	Indeno (1,2,3-cd) pyrene	193-39-5
2	Benzo (e) pyrene	192-97-2	11	Acenaphthylene	208-96-8
3	Benzo (a) anthracene	56-55-3	12	Acenaphthene	83-32-9
4	Benzo (b) fluoranthene	205-99-2	13	Fluorene	86-73-7
5	Benzo (j) fluoranthene	205-82-3	14	Phenanthrene	85-01-8
6	Benzo (k) fluoranthene	207-08-9	15	Pyrene	129-00-0
7	Chrysene	218-01-9	16	Anthracene	120-12-7
8	Dibenzo (a,h) anthracene	53-70-3	17	Fluoranthene	206-44-0
9	Benzo (g,h,i) perylene	191-24-2	18	Naphthalene	91-20-3
CAS-No. = Chemical Abstracts Service registry number					



RESULTS:

Total Lead Content in Substrate – ASTM International Standard ASTM F963-17, Section 4.3.5.2(2)(a)

Test Method : ASTM International Standard ASTM F963-17, Section 8.3.1 and Annex A7.

Maximum Allowable Limit :	100 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I001+I002	ND	mg/kg	PASS
I003+I004+I005	ND	mg/kg	PASS

Note / key:

ND = Not detected
mg/kg = milligram(s) per kilogram
Detection Limit (mg/kg) : 10



RESULTS:

Soluble Heavy Metals Content in Substrate –ASTM F963-17, Section 4.3.5.2(2)(b)

Test Method : ASTM International Standard ASTM F963-17, Section 8.3.5 (Excluding 8.3.5.5(3))

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se
Max. Limit Type I (mg/kg)	25	1000	75	60	60	90	60	500
Max. Limit Type II (mg/kg)	25	250	50	25	25	90	60	500
Analytical Correction (%)	60	30	30	30	50	30	60	60

Analyte	As	Ba	Cd	Cr	Hg	Pb	Sb	Se	Mass of Trace Amount	Conclusion
Test Item(s)	Result (mg/kg)								(g)	
Type I: Substrate other than modeling clay										
I002	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS
I005	ND	ND	ND	ND	ND	ND	ND	ND	-	PASS

Note / key:

As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium
 Hg = Mercury Pb = Lead Sb = Antimony Se = Selenium
 ND = Not detected g = gram(s) % = percent
 mg/kg = milligram(s) per kilogram (ppm=parts per million)
 Detection Limit (mg/kg) :
 For Type I – As : 2.5; Ba : 100; Cd : 7.5; Each (Cr, Hg, & Sb) : 6.0; Pb : 9.0; Se : 50
 For Type II – Each (As, Cr & Hg) : 2.5; Ba : 25; Cd : 5.0; Sb : 6.0; Pb : 9.0; Se : 50

Remark:

- Textiles (natural or synthetic) are exempted for lead content requirement according to clarification of Toy Industry Association for ASTM F963-17. The lead content analysis result of corresponding material herein is for client's reference only.



RESULTS:

Total Lead Content in Substrate Materials – Consumer Product Safety Improvement Act (CPSIA) of 2008 Sec. 101(a)(2)

Test Method : U.S. CPSC-CH-E1002-08.3:2012 and U.S. CPSC-CH-E1001-08.3:2012

Maximum Allowable Limit :	100 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I001+I002	ND	mg/kg	PASS
I003+I004+I005	ND	mg/kg	PASS

Note / key:

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) : 10



RESULTS:

PHthalates Content in Children's Toys and Child Care Articles (Consumer Product Safety Improvement Act (CPSIA) of 2008, Section 108(a) and 108(c), 16 CFR 1307)

Test Method : With reference to U. S. CPSC-CH-C1001-09.4 (January 17, 2018)

Test Parameter:	BBP	DBP	DEHP	DINP	DIBP	DPENP	DHEXP	DCHP	-
Limit (%):	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-
Test Item(s)	Result (%)								Conclusion
I001+I002	ND	ND	ND	ND	ND	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	ND	ND	ND	ND	ND	PASS

Note / key:

DEHP = Di(2-ethylhexyl) phthalate

DHEXP(DnHP) = Di-n-hexyl phthalate

DPENP(DnPP) = Di-n-pentyl phthalate

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005

DBP = Dibutyl phthalate

DIBP = Di-iso-butyl phthalate

DCHP = Dicyclohexyl phthalate

% = percent

BBP = Butyl benzyl phthalate

DINP = Di-iso-nonyl phthalate

10000 mg/kg = 1 %



RESULTS:

Soluble Heavy Metals Content in Plastic Materials - Canada Consumer Product Safety Act (CCPSA), S.C. 2010, c. 21, Toys Regulations SOR/2011-17 with its Latest Amendment, Section 27 (a)

Analyte	As	Ba	Cd	Cr	Hg	Sb	Se
Max. Limit (mg/kg)	25	1000	75	60	60	60	500
Analytical Correction (%)	60	30	30	30	50	60	60

Analyte	As	Ba	Cd	Cr	Hg	Sb	Se	Conclusion
Test Item(s)	Result (mg/kg)							
I002	ND	ND	ND	ND	ND	ND	ND	PASS
I005	ND	ND	ND	ND	ND	ND	ND	PASS

Note / key:

As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium
 Hg = Mercury Pb = Lead Sb = Antimony Se = Selenium
 ND = Not detected g = gram(s) % = percent
 mg/kg = milligram(s) per kilogram
 Soluble (Sb 6; As 2.5; Cd 7.5; Se 50; Ba 100; Cr 6)

TOTAL LEAD CONTENT (Canada Consumer Product Safety Act – Consumer Products Containing Lead Regulations SOR/2018-83)

Test Method : Health Canada, Product Safety Laboratory, Reference Manual, Book 5-Laboratory Policies and Procedures, Method C-02.2(2016)

Maximum Allowable Limit :	90 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I001+I002	ND	mg/kg	PASS
I003+I004+I005	ND	mg/kg	PASS

Note / key:

ND = Not detected
 mg/kg = milligram(s) per kilogram
 Detection Limit (mg/kg) :10



RESULTS:

Phthalates Content – Client's Specification with reference to Canada Consumer Product Safety Act with reference to the Hazardous Products Act, Phthalate Regulations, SOR/2016-188

Test Method : Sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer.

Test Parameter:	BBP	DBP	DEHP	-
Limit (%):	0.1	0.1	0.1	-
Test Item(s)	Result (%)			Conclusion
I001+I002	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate

DBP = Dibutyl phthalate

DEHP = Di(2-ethylhexyl) phthalate

ND = Not detected

% = percent

10000 mg/kg = 1 %

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005

Phthalates Content – Client's Specification with reference to Canada Consumer Product Safety Act with reference to the Hazardous Products Act, Phthalate Regulations, SOR/2016-188

Test Method : Sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer.

Test Parameter:	DNOP	DINP	DIDP	-
Limit (%):	0.1	0.1	0.1	-
Test Item(s)	Result (%)			Conclusion
I001+I002	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	PASS

Note / key:

DNOP = Di-n-octyl phthalate

DINP = Di-iso-nonyl phthalate

DIDP = Di-iso-decyl phthalate

ND = Not detected

% = percent

10000 mg/kg = 1 %

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005



RESULTS:

Total Lead Content – Client's Specification with reference to California proposition 65

Test Method : Acid digestion followed by Atomic Absorption Spectrophotometry or Inductively Coupled Plasma Spectrometry.

Client's Limit :	90 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Total Lead (Pb)		
I001+I002	ND	mg/kg	PASS
I003+I004+I005	ND	mg/kg	PASS

Note / key:

ND = Not detected
mg/kg = milligram(s) per kilogram
Detection Limit (mg/kg) : 10

Phthalates Content – Client's Specification with reference to California proposition 65

Test Method : With reference to U. S. CPSC-CH-C1001-09.4 (January 17, 2018)

Test Parameter:	BBP	DBP	DEHP	DIBP	DINP	DIDP	DnHP	-
Limit (%):	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-
Test Item(s)	Result (%)							Conclusion
I001+I002	ND	ND	ND	ND	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	ND	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate DBP = Dibutyl phthalate DEHP = Di(2-ethylhexyl) phthalate
DIBP = Diisobutyl phthalate DINP = Di-iso-nonyl phthalate DIDP = Di-iso-decyl phthalate
DnHP = Di-n-hexyl phthalate
ND = Not detected % = percent 10000 mg/kg = 1 %
mg/kg = milligram(s) per kilogram
Detection Limit (%) : Each 0.005



RESULTS:

Phthalates Content – Client's Specification

Test Method : With reference to U. S. CPSC-CH-C1001-09.4 (January 17, 2018)

Test Parameter:	BBP	DBP	DEHP	DnHP (DHEXP)	DIBP	DMEP (BMEP)	DHNUP	-
Limit (%):	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-
Test Item(s)	Result (%)							Conclusion
I001+I002	ND	ND	ND	ND	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	ND	ND	ND	ND	PASS

Test Parameter:	DIHP-A	DPP	DIPP	PIPP	DnPP (DPENP)	DIHP-B	-
Limit (%):	0.1	0.1	0.1	0.1	0.1	0.1	-
Test Item(s)	Result (%)						Conclusion
I001+I002	ND	ND	ND	ND	ND	ND	PASS
I003+I004+I005	ND	ND	ND	ND	ND	ND	PASS

Test Parameter:	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate	-
Limit (%):	0.1	-
Test Item(s)	Result (%)	Conclusion
I001+I002	ND	PASS
I003+I004+I005	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate DBP = Dibutyl phthalate DEHP = Di(2-ethylhexyl) phthalate
 DnHP = Di-n-hexyl phthalate DIBP = Di-iso-butyl phthalate DnHP(DHEXP) = Di-n-hexyl phthalate
 DIPP= Di-iso-pentyl phthalate
 DnPP(DPENP) = Di-n-pentyl phthalate
 PIPP=N-pentyl iso-pentyl phthalate
 DMEP(BMEP)=Di-methoxy-ethyl phthalate
 DHNUP=1,2-benzenedicarboxylic acid, di-C7-11 branched and linear alkyl esters
 DIHP-A =1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)
 DIHP-B =1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear
 DPP=1,2-benzenedicarboxylic acid, dipentylester, branched and linear
 ND = Not detected % = percent 10000 mg/kg = 1 %
 mg/kg = milligram(s) per kilogram
 Detection Limit (%) : Each 0.005



RESULTS:

Bisphenol A (BPA) Content – Client's Specification

Test Method : Sample was extracted with organic solvent and then analyzed by ultra performance liquid chromatography with tandem mass spectrometry (UPLC-MS-MS).

Client's Limit :	0.1 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Bisphenol A (BPA)		
I001	ND	mg/kg	PASS

Note / key:

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (mg/kg) : 0.1

RESULTS:



END OF REPORT