



**BUREAU
VERITAS**

TEST REPORT

NINGBO MERRYART GLOW-TECH CO.,LTD

Technical Report: (3222)146-0463

Jun 27,2022

Date Received: May.26,2022

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ALEX PENG
NINGBO MERRYART GLOW-TECH CO.,LTD
NO.8 LIXIN RD.,XIAO GANG IND.PARK BEILUN
DIST.,NINGBO,CHINA

SAMPLE INFORMATION:

Sample Description:	GLOW STICK SAMPLES	Sample Quantity:	N/A
Vendor:	N/A	Style No(s):	N/A
Manufacturer:	N/A	SKN/SKU No.:	N/A
Buyer:	N/A	PO No.:	N/A
Labeled Age Grade:	3+	Ref #:	N/A
Appropriate Age Grade:	N/A	Country of Origin:	N/A
Client Specified Age Grade:	OVER 3 YEARS OF AGE	Assortment No.:	N/A
Tested Age Grade:	OVER 3 YEARS OF AGE	Country of Destination:	N/A
UPC Code:	N/A	Color :	N/A

EXECUTIVE SUMMARY:

TEST REQUESTED	CONCLUSION
The mechanical and physical properties requirements of the tested subclauses of the European Standard, "Safety of toys", EN71: Part 1:2014+A1:2018, clauses 1-7.	PASS See note 2&3
The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2020	PASS
Polycyclic Aromatic Hydrocarbons (PAHs) Content – Regulation (EC) No. 1907/2006 Annex XVII Entry 50, Point 5	PASS
Phthalates Content – Reference to regulation (EC) No. 1907/2006 Annex XVII Entry 51 & 52	PASS
Total Cadmium Content in Plastic Material - European Parliament and Council Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with its Latest Amendment, Entry 23	PASS
Migration of Certain Elements – BS EN71-3:2019+A1:2021	PASS

Note:

- 1.The sample is tested as "Over 3 years of age" per the client's request .
- 2.No relevant packaging was provided with the submitted sample(s), consequently, evaluation of the labeling requirements of this European Standard, "Safety of toys", EN71: Part 1:2014+A1:2018, clauses 7, was not conducted.
- 3.The submitted sample **contains /releases** small part **as-received /after abuse**, thus,according to EN71: Part 1:2014+A1:2018,the following small part warning is required.

"Warning! Not suitable for children under 36 months.Small parts.Chocking hazard.

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APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the EN71: Part 1:2014+A1:2018, European Union Guidance Documents, CEN ISO/TR 8124-8:2016 Safety of toys - Part 8: Age determination guidelines and Age Determination Guidelines: Relating Children's Ages to Toy Characteristics and Play Behavior, September, 2002

Note : The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing.

Note : If the client does not specify an age grade for testing or request Bureau Veritas Consumer Products Services, Inc. to determine an appropriate age grade, the labeled age grade will be used for testing.

EXPLANATION OF THE ABBREVIATIONS FOR PART 1. 2

Symbol	Explanation				
NM	The samples are NOT IN COMPLIANCE WITH the requirement of this Subclause				
M	The samples are IN COMPLIANCE WITH the requirement of this Subclause				
N/A	Not Applicable				
NR	Not Requested				
NE	Not Evaluated				
NP	None Present				
P	Present				
R	Refer to Comment Section of this report				
Symbol	Language Present	Symbol	Language Present	Symbol	Language Present
B	Belgian language	G	German language	PR	Portuguese language
D	Danish language	GR	Greek language	S	Spanish language
E	English language	H	Dutch language	SD	Swedish language
F	Finnish language	I	Italian language	SZ	Swiss language
FR	French language	N	Norwegian language		



**MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1:2014+A1 :2018)**

Subclause	Requirement	Result
4.1	Material cleanliness	M
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 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	M
4.8e	Splinters	M
4.9	Protruding parts	N/A
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 & 7.3	Balloons	N/A
4.13 & 7.9	Cord of toy kites and other flying toys	N/A
4.14.1	Toys which a child can enter	N/A
4.14.2 & 7.8	Masks and helmets	N/A
4.15.1	Toys propelled by child	
4.15.1.2 & 7.10.1 & 7.10.2 & 7.10.3 & 7.10.4 & 7.16	Toys propelled by child – Instructions for use	N/A
4.15.1.3	Toys propelled by child – Strength	N/A
4.15.1.4	Toys propelled by child – Stability	N/A
4.15.1.5	Toys propelled by child – Braking	N/A
4.15.1.6	Toys propelled by child - Transmission	N/A
4.15.1.7	Toys propelled by child – insertion mark	N/A
4.15.1.8	Electrically-driven ride-on toys	N/A
4.15.2	Toy bicycles	
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	N/A
4.15.2.3	Toy bicycles – Braking	N/A
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	N/A
4.15.4 & 7.16	Toys not propelled by child	N/A
4.15.5 & 7.18	Toy scooters	N/A
4.16	Heavy immobile toys	N/A
4.17.2	All projectiles	N/A
4.17.3 & 7.7	Projectile toys with stored energy	N/A
4.17.4 & 7.26	Certain projectiles toys without stored energy	N/A
4.18 & 7.4	Aquatic toys and inflatable toys	N/A
4.19 & 7.13 & 7.14	Percussion caps	N/A
*4.20.2.1- 4.20.2.8, 4.20.2.10, 4.20.2.12	Acoustics	N/A



**MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1:2014+A1 :2018)**

Subclause	Requirement	Result
4.20.2.9, 4.20.2.11 & 7.14	Acoustics – percussion toys & cap-firing toys	N/A
4.21	Toys containing a non-electrical heat source	N/A
4.22 & 7.2	Small balls	N/A
4.23	Magnet	
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	N/A
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	N/A
4.24	Yo-yo ball	N/A
4.25	Toys attached to food	N/A
4.26	Toy Disguise Costumes	N/A
4.27.1	Flying toys – General	N/A
4.27.2 & 7.25.1	Rotors and propellers on flying toys	N/A
4.27.3 & 7.25.2	Rotors and propellers on remote controlled flying toys	N/A
	FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS	
5.1	General	N/A
5.1a	Small parts – as received	N/A
5.1b	Small parts, sharp points, sharp edges – after tests	N/A
5.1c	Cross section <2mm metal points & wires	N/A
5.1e	Toys contain glue	N/A
5.1f	Casing of toys	N/A
5.2	Fillings, coverings and seams	N/A
5.3	Adhesion of plastic sheeting	N/A
5.4.2	Cords and chains in toys intended for children under 18 months	N/A
5.4.3 & 7.22	Cords and chains in toys intended for children of 18 months or over but under 36 months	N/A
5.4.4	Fixed loops, tangled loops and nooses	N/A
5.4.5	Cords and chains on pull along toys	N/A
5.4.6 & 7.21	Electrical cables	N/A
5.4.7	Cross-sectional dimension of certain cords	N/A
5.4.8	Self-retracting cords	N/A
5.4.9 & 7.11 & 7.23	Toys attached to or intended to be strung across a cradle, cot or perambulator	N/A
5.5 & 7.12	Liquid filled toys	N/A
5.6	Electrically driven toys	N/A
5.7	Glass and porcelain	N/A
5.8	Shape and size	N/A
5.9 & 7.17	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 & 7.24	Sledges with cords for pulling	N/A
6	Packaging	N/A



**MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1:2014+A1 :2018)**

Subclause	Requirement	Result
WARNINGS, INSTRUCTIONS FOR USE		
7.1	General	SEE NOTE 2
7.2	Toys not intended for children under 36 months	SEE NOTE 2&3
7.5	Functional toys	SEE NOTE 2

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 1

Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method
4.3	8.25.1	4.14.2	8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.11, 8.12	4.17.3	8.24.1	5.3	8.4.2.1, 8.25
4.5	8.5, 8.7, 8.11, 8.12	4.15.1.3	8.11, 8.12, 8.21, 8.22	4.17.4	8.24.2	5.4	8.20, 8.36, 8.38, 8.39, 8.40
4.6	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.14	4.15.1.4	8.23.1	4.18	8.2, 8.3, 8.4.2.1	5.5	8.15
4.7	8.11	4.15.1.5	8.26.1	4.20	8.28	5.6	8.29
4.8	8.12, 8.13	4.15.1.8	8.29	4.21	8.30	5.8	8.16
4.9	8.4.2.3, 8.11, 8.12	4.15.2.4	8.26.2	4.22	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.32	5.10	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9, 8.32
4.10.1	8.18.2, 8.18.3	4.15.3	8.21, 8.23.1	4.23	8.2, 8.3, 8.4.2.1, 8.4.2.2, 8.5, 8.6, 8.7, 8.8, 8.34, 8.35	5.11	8.33
4.10.2	8.5, 8.6, 8.7, 8.11, 8.12	4.15.4	8.21, 8.23.1	4.24	8.37	5.12	8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9,
4.11	8.2, 8.3, 8.4.2.1, 8.9, 8.17	4.15.5	8.11, 8.12, 8.21, 8.22, 8.26.3, 8.27	4.25	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32.1	5.13	8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32
4.13	8.19	4.16	8.23.2	5.1	8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.9, 8.11, 8.12		
4.14.1	8.31.1, 8.31.2	4.17.1	8.4.2.3				

FLAMMABILITY (EN 71 PART 2: 2020)

Subclause	Requirement	Result
4.1	Cellulose nitrate	NP
4.1	Highly flammable solids	NP
4.1	Surface flash on a piled surface	N/A
4.1	Flammable gases	N/A
4.1	Extremely flammable liquids, highly flammable liquids, flammable liquids	N/A



FLAMMABILITY (EN 71 PART 2: 2020)

Subclause	Requirement	Result
	and flammable gels	
4.2	Toys to be worn on the head	N/A
4.3	Toy disguise costumes and toys intended to be worn by child in play	N/A
4.3	warning on product and packaging (10 - 30 mm/s)	N/A
4.4	Toys intended to be entered by a child	N/A
4.4	warning on product and packaging (10 – 30 mm/s)	N/A
4.5	Soft-filled toys	N/A

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 2

Sub-clause	Test Method						
4.2.2	5.2	4.2.4	5.3	4.3	5.4	4.5	5.5
4.2.3	5.3	4.2.5	5.4	4.4	5.4	-	-



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Tested Component(s) Breakdown List

Test Item	Description	Location	Style
1	Transparent plastic	Pentagram	-
2	Translucent plastic	handle	-
3	Translucent plastic	Glo-stick	-
4	Translucent plastic	-	-
5	White plastic	-	-
6	Transparent plastic	-	-
7	Translucent plastic	-	-
8	Translucent plastic	-	-
9	Translucent soft plastic	-	-
10	Orange plastic	-	-
11	Translucent orange plastic	-	-
12	Translucent orange plastic	-	-
13	Translucent orange plastic	-	-
14	Yellow plastic	-	-
15	Yellow plastic	-	-
16	Green plastic	-	-
17	Green plastic	-	-
18	Green plastic	-	-
19	Green soft plastic	-	-
20	Yellow soft plastic	-	-
21	Orange plastic	-	-
22	Blue plastic	-	-
23	Blue plastic	-	-
24	Blue plastic	-	-
25	Red plastic	-	-
26	Red plastic	-	-
27	Black plastic	-	-
28	Black plastic	-	-
29	Black soft plastic	Foot	-
30	Black plastic	handle	-
31	Purple soft plastic	-	-
32	Purple plastic	-	-
33	Pink plastic	-	-
34	Red plastic	-	-
35	Black soft plastic	-	-
36	transparent plastic with glue	-	-
37	Translucent plastic	-	-
38	Translucent plastic with multicolor coating	-	-



Polycyclic Aromatic Hydrocarbons (PAHs) Content – Regulation (EC) No. 1907/2006 Annex XVII Entry 50, Point 5

Test Method : With reference to test method mentioned in German AfPS GS 2019:01 PAK.

Parameter	Unit	Result				Maximum Allowable Limit
		1+2+3	4+5+6	7+8+9	10+11+12	
Benzo (a) anthracene	mg/kg	ND	ND	ND	ND	0.5
Chrysene	mg/kg	ND	ND	ND	ND	0.5
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (e) pyrene	mg/kg	ND	ND	ND	ND	0.5
Benzo (a) pyrene	mg/kg	ND	ND	ND	ND	0.5
Dibenzo (a,h) anthracene	mg/kg	ND	ND	ND	ND	0.5
Conclusion	-	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result				Maximum Allowable Limit
		13+14+15	16+17+18	19+20+21	22+23+24	
Benzo (a) anthracene	mg/kg	ND	ND	ND	ND	0.5
Chrysene	mg/kg	ND	ND	ND	ND	0.5
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (e) pyrene	mg/kg	ND	ND	ND	ND	0.5
Benzo (a) pyrene	mg/kg	ND	ND	ND	ND	0.5
Dibenzo (a,h) anthracene	mg/kg	ND	ND	ND	ND	0.5
Conclusion	-	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result				Maximum Allowable Limit
		25+26+27	28+29+30	31+32+33	34+35+36	
Benzo (a) anthracene	mg/kg	ND	ND	ND	ND	0.5
Chrysene	mg/kg	ND	ND	ND	ND	0.5
Benzo (b) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (j) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (k) fluoranthene	mg/kg	ND	ND	ND	ND	0.5
Benzo (e) pyrene	mg/kg	ND	ND	ND	ND	0.5
Benzo (a) pyrene	mg/kg	ND	ND	ND	ND	0.5
Dibenzo (a,h) anthracene	mg/kg	ND	ND	ND	ND	0.5
Conclusion	-	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Maximum Allowable Limit
		37+38	



Benzo (a) anthracene	mg/kg	ND	0.5
Chrysene	mg/kg	ND	0.5
Benzo (b) fluoranthene	mg/kg	ND	0.5
Benzo (j) fluoranthene	mg/kg	ND	0.5
Benzo (k) fluoranthene	mg/kg	ND	0.5
Benzo (e) pyrene	mg/kg	ND	0.5
Benzo (a) pyrene	mg/kg	ND	0.5
Dibenzo (a,h) anthracene	mg/kg	ND	0.5
Conclusion	-	PASS	-

Note / Key:

ND = Not detected mg/kg = milligram(s) per kilogram = ppm = part(s) per million

Detection Limit (mg/kg):

For individual testing - Each of the listed PAHs(mg/kg) : 0.2

For composite testing - Each of the listed PAHs(mg/kg) : 0.1

Phthalates Content – Reference to regulation (EC) No. 1907/2006 Annex XVII Entry 51 & 52

Test Method : Reference to EN 14372:2004.

Parameter	Unit	Result			Maximum Allowable Limit
		1+2+3	4+5+6	10+11+12	
A. For toys and childcare articles	-	-	-	-	-
DBP	mg/kg	ND	ND	ND	-
BBP	mg/kg	ND	ND	ND	-
DEHP	mg/kg	ND	ND	ND	-
DiBP	mg/kg	ND	ND	ND	-
Sum of DBP, BBP, DEHP, DiBP	mg/kg	ND	ND	ND	1000
B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)	-	-	-	-	-
DnOP	mg/kg	ND	ND	ND	-
DINP	mg/kg	ND	ND	ND	-
DIDP	mg/kg	ND	ND	ND	-
Sum of DNOP, DIDP, DINP	mg/kg	ND	ND	ND	1000
Conclusion	-	PASS	PASS	PASS	-

Parameter	Unit	Result				Maximum Allowable Limit
		13+14+15	16+17+18	19+20+21	22+23+24	
A. For toys and childcare articles	-	-	-	-	-	-



DBP	mg/kg	ND	ND	ND	ND	-
BBP	mg/kg	ND	ND	ND	ND	-
DEHP	mg/kg	ND	ND	ND	ND	-
DiBP	mg/kg	ND	ND	ND	ND	-
Sum of DBP, BBP, DEHP, DIBP	mg/kg	ND	ND	ND	ND	1000
B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)	-	-	-	-	-	-
DnOP	mg/kg	ND	ND	ND	ND	-
DINP	mg/kg	ND	ND	ND	ND	-
DIDP	mg/kg	ND	ND	ND	ND	-
Sum of DNOP, DIDP, DINP	mg/kg	ND	ND	ND	ND	1000
Conclusion	-	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result				Maximum Allowable Limit
		25+26+27	28+29+30	31+32+33	34+35+36	
A. For toys and childcare articles	-	-	-	-	-	-
DBP	mg/kg	ND	ND	ND	ND	-
BBP	mg/kg	ND	ND	ND	ND	-
DEHP	mg/kg	ND	ND	ND	ND	-
DiBP	mg/kg	ND	ND	ND	ND	-
Sum of DBP, BBP, DEHP, DIBP	mg/kg	ND	ND	ND	ND	1000
B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)	-	-	-	-	-	-
DnOP	mg/kg	ND	ND	ND	ND	-
DINP	mg/kg	ND	ND	ND	ND	-
DIDP	mg/kg	ND	ND	ND	ND	-
Sum of DNOP, DIDP, DINP	mg/kg	ND	ND	ND	ND	1000
Conclusion	-	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Maximum Allowable Limit
		37+38	
A. For toys and childcare articles	-	-	-
DBP	mg/kg	ND	-
BBP	mg/kg	ND	-



DEHP	mg/kg	ND	-
DiBP	mg/kg	ND	-
Sum of DBP, BBP, DEHP, DIBP	mg/kg	ND	1000
B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children (See remark)	-	-	-
DnOP	mg/kg	ND	-
DINP	mg/kg	ND	-
DIDP	mg/kg	ND	-
Sum of DNOP, DIDP, DINP	mg/kg	ND	1000
Conclusion	-	PASS	-

Note / Key:

ND = Not Detected

Conc. = Concentration

Detection Limit (%): Each 0.005

% = percentage

List of Phthalates Content – Reference To Regulation (EC) No. 1907/2006 Annex XVII Entry 51 & 52

No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Dibutyl phthalate (DBP)	84-74-2	5	Di-iso-nonyl phthalate (DINP)	28553-12-0
2	Butylbenzylphthalate (BBP)	85-68-7	6	Di-iso-decyl phthalate (DIDP)	26761-40-0
3	Di-2-ethylhexyl phthalate (DEHP)	117-81-7	7	Diisobutyl phthalate	84-69-5
4	Di-n-octyl phthalate (DNOP)	117-84-0	-	-	-

Total Cadmium Content in Plastic Material - European Parliament and Council Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with its Latest Amendment, Entry 23

Test Method : EN 1122: 2001, Method B
The sample is digested with acid, then analyzed by AAS.

Maximum Limit:	100 mg/kg
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Parameter	Result	Unit	Conclusion
1+2+3	ND	mg/kg	PASS
4+5+6	ND	mg/kg	PASS
7+8+9	ND	mg/kg	PASS
10+11+12	ND	mg/kg	PASS
13+14+15	ND	mg/kg	PASS
16+17+18	ND	mg/kg	PASS
19+20+21	ND	mg/kg	PASS
22+23+24	ND	mg/kg	PASS
25+26+27	ND	mg/kg	PASS
28+29+30	ND	mg/kg	PASS
31+32+33	ND	mg/kg	PASS
34+35+36	ND	mg/kg	PASS



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37+38	ND	mg/kg	PASS
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Note / Key:

ND = Not Detected
kilogram

mg/kg = milligram per

MDL = Method Detection Limit

Detection Limit (mg/kg): 10

Migration of Certain Elements – BS EN71-3:2019+A1:2021

Test Method: BS EN71-3:2019+A1:2021 , Section 8.

Analyte	Limit: (mg/kg)	Result (mg/kg)				
		Sample ID				
		Type III	1	2	3	4
B	15000	ND	ND	ND	ND	ND
Al	28130	ND	ND	ND	ND	ND
Cr III	460	ND	ND	ND	ND	ND
Cr VI	0.053	ND	ND	ND	ND	ND
Mn	15000	ND	ND	ND	ND	ND
Co	130	ND	ND	ND	ND	ND
Ni	930	ND	ND	ND	ND	ND
Cu	7700	ND	ND	ND	ND	ND
Zn	46000	ND	ND	ND	ND	ND
As	47	ND	ND	ND	ND	ND
Se	460	ND	ND	ND	ND	ND
Sr	56000	ND	ND	ND	ND	ND
Cd	17	ND	ND	ND	ND	ND
Sn	180000	ND	ND	ND	ND	ND
Organic tin	12	ND	ND	ND	ND	ND
Sb	560	ND	ND	ND	ND	ND
Ba	18750	ND	ND	ND	ND	ND
Hg	94	ND	ND	ND	ND	ND
Pb	23	ND	ND	ND	ND	ND
Conclusion		Pass	Pass	Pass	Pass	Pass

Analyte	Limit: (mg/kg)	Result (mg/kg)				
		Sample ID				
		Type III	6	7	8	9
B	15000	ND	ND	ND	ND	ND
Al	28130	ND	ND	ND	ND	ND
Cr III	460	ND	ND	ND	ND	ND
Cr VI	0.053	ND	ND	ND	ND	ND
Mn	15000	ND	ND	ND	ND	ND
Co	130	ND	ND	ND	ND	ND
Ni	930	ND	ND	ND	ND	ND
Cu	7700	ND	ND	ND	ND	ND
Zn	46000	ND	ND	ND	ND	ND
As	47	ND	ND	ND	ND	ND



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Se	460	ND	ND	ND	ND	ND
Sr	56000	ND	ND	ND	ND	ND
Cd	17	ND	ND	ND	ND	ND
Sn	180000	ND	ND	ND	ND	ND
Organic tin	12	ND	ND	ND	ND	ND
Sb	560	ND	ND	ND	ND	ND
Ba	18750	ND	ND	ND	ND	ND
Hg	94	ND	ND	ND	ND	ND
Pb	23	ND	ND	ND	ND	ND
Conclusion		Pass	Pass	Pass	Pass	Pass

Analyte	Limit: (mg/kg)	Result (mg/kg)				
		Sample ID				
		Type III	11	12	13	14
B	15000	ND	ND	ND	ND	ND
Al	28130	ND	ND	ND	ND	ND
Cr III	460	ND	ND	ND	ND	ND
Cr VI	0.053	ND	ND	ND	ND	ND
Mn	15000	ND	ND	ND	ND	ND
Co	130	ND	ND	ND	ND	ND
Ni	930	ND	ND	ND	ND	ND
Cu	7700	ND	ND	ND	ND	ND
Zn	46000	ND	ND	ND	ND	ND
As	47	ND	ND	ND	ND	ND
Se	460	ND	ND	ND	ND	ND
Sr	56000	ND	ND	ND	ND	ND
Cd	17	ND	ND	ND	ND	ND
Sn	180000	ND	ND	ND	ND	ND
Organic tin	12	ND	ND	ND	ND	ND
Sb	560	ND	ND	ND	ND	ND
Ba	18750	ND	ND	ND	ND	ND
Hg	94	ND	ND	ND	ND	ND
Pb	23	ND	ND	ND	ND	ND
Conclusion		Pass	Pass	Pass	Pass	Pass

Analyte	Limit: (mg/kg)	Result (mg/kg)				
		Sample ID				
		Type III	16	17	18	19
B	15000	ND	ND	ND	ND	ND
Al	28130	ND	ND	ND	ND	ND
Cr III	460	ND	ND	ND	ND	ND
Cr VI	0.053	ND	ND	ND	ND	ND
Mn	15000	ND	ND	ND	ND	ND
Co	130	ND	ND	ND	ND	ND
Ni	930	ND	ND	ND	ND	ND
Cu	7700	ND	ND	ND	ND	ND
Zn	46000	ND	ND	ND	ND	ND



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As	47	ND	ND	ND	ND	ND
Se	460	ND	ND	ND	ND	ND
Sr	56000	ND	ND	ND	ND	ND
Cd	17	ND	ND	ND	ND	ND
Sn	180000	ND	ND	ND	ND	ND
Organic tin	12	ND	ND	ND	ND	ND
Sb	560	ND	ND	ND	ND	ND
Ba	18750	ND	ND	ND	ND	ND
Hg	94	ND	ND	ND	ND	ND
Pb	23	ND	ND	ND	ND	ND
Conclusion		Pass	Pass	Pass	Pass	Pass

Analyte	Limit: (mg/kg)	Result (mg/kg)				
		Sample ID				
		Type III	21	22	23	24
B	15000	ND	ND	ND	ND	ND
Al	28130	ND	ND	ND	ND	ND
Cr III	460	ND	ND	ND	ND	ND
Cr VI	0.053	ND	ND	ND	ND	ND
Mn	15000	ND	ND	ND	ND	ND
Co	130	ND	ND	ND	ND	ND
Ni	930	ND	ND	ND	ND	ND
Cu	7700	ND	ND	ND	ND	ND
Zn	46000	ND	ND	ND	ND	ND
As	47	ND	ND	ND	ND	ND
Se	460	ND	ND	ND	ND	ND
Sr	56000	ND	ND	ND	ND	ND
Cd	17	ND	ND	ND	ND	ND
Sn	180000	ND	ND	ND	ND	ND
Organic tin	12	ND	ND	ND	ND	ND
Sb	560	ND	ND	ND	ND	ND
Ba	18750	ND	ND	ND	ND	ND
Hg	94	ND	ND	ND	ND	ND
Pb	23	ND	ND	ND	ND	ND
Conclusion		Pass	Pass	Pass	Pass	Pass

Analyte	Limit: (mg/kg)	Result (mg/kg)				
		Sample ID				
		Type III	26	27	28	29
B	15000	ND	ND	ND	ND	ND
Al	28130	ND	ND	ND	ND	ND
Cr III	460	ND	ND	ND	ND	ND
Cr VI	0.053	ND	ND	ND	ND	ND
Mn	15000	ND	ND	ND	ND	ND
Co	130	ND	ND	ND	ND	ND
Ni	930	ND	ND	ND	ND	ND
Cu	7700	ND	ND	ND	ND	ND



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Zn	46000	ND	ND	ND	ND	ND
As	47	ND	ND	ND	ND	ND
Se	460	ND	ND	ND	ND	ND
Sr	56000	ND	ND	ND	ND	ND
Cd	17	ND	ND	ND	ND	ND
Sn	180000	ND	ND	ND	ND	ND
Organic tin	12	ND	ND	ND	ND	ND
Sb	560	ND	ND	ND	ND	ND
Ba	18750	ND	ND	ND	ND	ND
Hg	94	ND	ND	ND	ND	ND
Pb	23	ND	ND	ND	ND	ND
Conclusion		Pass	Pass	Pass	Pass	Pass

Analyte	Limit: (mg/kg)	Result (mg/kg)				
		Sample ID				
		Type III	31	32	33	34
B	15000	ND	ND	ND	ND	ND
Al	28130	ND	ND	ND	ND	ND
Cr III	460	ND	ND	ND	ND	ND
Cr VI	0.053	ND	ND	ND	ND	ND
Mn	15000	ND	ND	ND	ND	ND
Co	130	ND	ND	ND	ND	ND
Ni	930	ND	ND	ND	ND	ND
Cu	7700	ND	ND	ND	ND	ND
Zn	46000	ND	ND	ND	ND	ND
As	47	ND	ND	ND	ND	ND
Se	460	ND	ND	ND	ND	ND
Sr	56000	ND	ND	ND	ND	ND
Cd	17	ND	ND	ND	ND	ND
Sn	180000	ND	ND	ND	ND	ND
Organic tin	12	ND	ND	ND	ND	ND
Sb	560	ND	ND	ND	ND	ND
Ba	18750	ND	ND	ND	ND	ND
Hg	94	ND	ND	ND	ND	ND
Pb	23	ND	ND	ND	ND	ND
Conclusion		Pass	Pass	Pass	Pass	Pass

Analyte	Limit: (mg/kg)	Result (mg/kg)		
		Sample ID		
		Type III	36	37
B	15000	ND	ND	ND
Al	28130	ND	ND	ND
Cr III	460	ND	ND	ND
Cr VI	0.053	ND	ND	ND
Mn	15000	ND	ND	ND
Co	130	ND	ND	ND
Ni	930	ND	ND	ND



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Cu	7700	ND	ND	ND
Zn	46000	ND	ND	ND
As	47	ND	ND	ND
Se	460	ND	ND	ND
Sr	56000	ND	ND	ND
Cd	17	ND	ND	ND
Sn	180000	ND	ND	ND
Organic tin	12	ND	ND	ND
Sb	560	ND	ND	ND
Ba	18750	ND	ND	ND
Hg	94	ND	ND	ND
Pb	23	ND	ND	ND
Conclusion		Pass	Pass	Pass

Note / Key:

Req. = Requirement mg/kg = milligram per kilogram

Remark:

- If combined Cr content exceeds 0.02mg/kg in I mat., 0.005 mg/kg in II mat., or 0.053mg/kg in III mat., confirmation Cr(VI) by IC-ICP-MS or IC-UV/VIS, Cr(III)=Combined Cr – Cr(VI).
- *Result(s) of organic tin was (were) reported as soluble tin content.
- The European Commission proposed to amend the maximum allowable limit(s) of migratable aluminium of European Parliament and Council Directive 2009/48/EC in particular regarding to Annex II, Part III, Point 13 in order to ensure the alignment to the scientific evidence from The Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) and increase children`s safety. See details in Comment.



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SAMPLE REFERENCE PHOTO:





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