



PROLUME LIMITED AND BIOTOY LLC

Technical Report: (8814)346-0009

Jan 6, 2015

Date Received: Dec 12, 2014

Page 1 of 15

PROLUME LIMITED AND BIOTOY LLC
SUITE 1404, TUNG WAI COMMERCIAL BUILDING,
109-111 GLOUCESTER ROAD, WAN CHAI, HK

Sample Description: SPLASHLIGHT TOY

- (1.) RED
- (2.) BLUE
- (3.) FUCHSIA

Vendor: PROLUME ASIA LIMITED

Sample Size: N/A

Manufacturer: PROLUME ASIA LIMITED

Style No(s): N/A

Buyer: N/A

SKN/SKU No.: 5148931301

Labeled Age Grade: SUITABLE FOR AGES 8+

PO No.: N/A

Appropriate Age Grade: NOT REQUESTED

Ref #: N/A

Client Specified Age Grade: 8+

Country of Origin: 中国广东省

Grade:

Tested Age Grade: OVER 8 YEARS OF AGE

Country of Destination: 北美, 欧洲, 澳大利亚 & 新西兰, 中国, 日本

UPC Code: N/A

Assortment No.: N/A

Resubmitted Sample Date: JAN 2, 2015

Test Starting Date: DEC 12, 2014

Test Finished Date: JAN 6, 2015

EXECUTIVE SUMMARY:

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

- The mechanical and physical properties requirements of the tested subclauses of the European Standard, "Safety of toys", EN71: Part 1:2014, clauses 1-7.
- The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2011+A1: 2014.
- 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

BUREAU VERITAS SHENZHEN CO.,LTD
DONGGUAN BRANCH

Harvey Xue

Assistant Manager, Analytical Lab

Kay Liu

Manager, Toys Lab

RT/KC

REMARK

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

Report Enquiry: (86) 0769 85935656 Ext. 8819 CPSAnalytical.DG@cn.bureauveritas.com

Business Contact: (86) 0769 85893595

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EXECUTIVE SUMMARY:

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

- The BBP, DBP and DEHP 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.
- The heavy metals requirements of the European "Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste."

The sample(s) was tested to the following requirement(s) and the data provided is for informational purposes only:

- The polycyclic aromatic hydrocarbons (PAHs) content requirement of the client's specification.

Note: At the request of the client, the sample(s) was evaluated for use by children 8+.

Note: 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.

Note: According to TSD 2009/48/EC, manufacturers shall ensure that their toys bear a type, batch, serial or model number or other element allowing their identification, or, where the size or nature of the toy does not allow it, that the required information is provided on the packaging or in a document accompanying the toy.

Note: According to TSD 2009/48/EC, the importer 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. The manufacturers information presented on packaging only.

Note: The European Standard, "Safety of Toys", EN 71 Part 3: 2013, Clause 1- scope states that toys intended for children over the age of six years and their parts are not covered by this part of the standard. Therefore, the samples are exempt from the migration of certain elements requirements of EN 71 Part 3: 2013.



RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the EN71 : Part 1 : 2014, CR 14379:2002 "Classification of toys-Guidelines" prepared by Technical Committee CEN TC 52 and Age Grade Determination Guidelines of the Consumer Product Safety Commission (CPSC).	
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 & 6

Symbol	Explanation				
NM	The sample(s) DOES NOT MEET the requirement of this Subclause				
M	The sample(s) MEET the requirement of this Subclause				
N/A	Not Applicable				
NR	Not Requested				
NE	Not Evaluated				
NT	Not Tested				
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		



RESULTS:

**MECHANICAL & PHYSICAL PROPERTIES
 (EN 71: PART 1 – 2014)**

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	NA
4.3	Flexible plastic sheeting	NA
4.4	Toy Bags	NA
4.5	Glass	NA
4.6	Expanding materials	NA
4.7 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	M
4.8e	Splinters	M
4.9	Protruding parts	NA
4.10.1	Folding and sliding mechanisms	NA
4.10.2	Driving mechanisms	NA
4.10.3	Hinges	NA
4.10.4	Springs	NA
4.11	Mouth actuated toys and other toys intended to be put in the mouth	NA
4.12 & 7.3	Balloons	NA
4.13 & 7.9	Cord of toy kites and other flying toys	NA
4.14.1	Toys which a child can enter	NA
4.14.2 & 7.8	Masks and helmets	NA
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	NA
4.15.1.3	Toys propelled by child – Strength	NA
4.15.1.4	Toys propelled by child – Stability	NA
4.15.1.5	Toys propelled by child – Braking	NA
4.15.1.6	Toys propelled by child - Transmission	NA
4.15.1.7	Toys propelled by child – insertion mark	NA
4.15.1.8	Electrically-driven ride-on toys	NA
4.15.2	Toy bicycles	
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	NA
4.15.2.3	Toy bicycles – Braking	NA
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	NA
4.15.4 & 7.16	Toys not propelled by child	NA
4.15.5 & 7.18	Toy scooters	NA



RESULTS:

Subclause	Requirement	Result
4.16	Heavy immobile toys	NA
4.17.1	Projectiles – General	NA
4.17.2	Projectiles toys without stored energy	NA
4.17.3 & 7.7	Projectile toys with stored energy	NA
4.17.4 & 7.7	Bows and arrows	NA
4.18 & 7.4	Aquatic toys and inflatable toys	NA
4.19 & 7.13 & 7.14	Percussion caps	NA
*4.20.2.1- 4.20.2.8, 4.20.2.10, 4.20.2.12	Acoustics	NA
4.20.2.9, 4.20.2.11 & 7.14	Acoustics – percussion toys & cap-firing toys	NA
4.21	Toys containing a non-electrical heat source	NA
4.22 & 7.2	Small balls	NA
4.23	Magnet	
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	NA
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	NA
4.24	Yo-yo ball	NA
4.25	Toys attached to food	NA
FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS		
5	Cleaning instruction for item intended for child under 3 years of age	NA
5.1	General	NA
5.1a	Small parts – as received	NA
5.1b	Small parts, sharp points, sharp edges – after tests	NA
5.1c	Cross section <2mm metal points & wires	NA
5.1e	Toys contain glue	NA
5.1f	Casing of toys	NA
5.2	Fillings, coverings and seams	NA
5.3	Adhesion of plastic sheeting	NA
5.4 &	Cords on toys	NA
5.4(a)	Cords connected to self-retraction mechanism or in pull along toys	NA
5.4(b) & 7.22	Cords and chains that can form tangled loop or noose	NA
5.4(c) & 7.22	Fixed loop of cords or chains	NA
5.4(d)	Nooses	NA
5.4(e)	Self-retraction mechanism	NA
5.4(f) & 7.11	Toy across cradle, cot or perambulator	NA



RESULTS:

Subclause	Requirement	Result
5.4(g) & 7.22	Cords and chains with free end (exclude pull along toy)	NA
5.4(h)	Cords and chains with free end on pull along toy	NA
5.4(i) & 7.21	Electrical cables	NA
5.5 & 7.12	Liquid filled toys	NA
5.6	Electrically driven toys	NA
5.7	Glass and porcelain	NA
5.8	Shape and size	NA
5.9 & 7.17	Monofilament fibres	NA
5.10	Small balls	NA
5.11	Play figures	NA
5.12	Hemispheric shaped toys	NA
5.13	Suction cups	NA
5.14	Straps intended to be worn fully or partially around the neck	NA
6	Packaging	NA
WARNINGS, INSTRUCTIONS FOR USE		
7	CE Mark	M
7	Manufacturer name and address	M
7	Importer name and address	M
7	Product Identification	M
7.1	General	NA
7.2	Toys not intended for children under 36 months	NA
7.5	Functional toys	NA



RESULTS:

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				



RESULTS:

FLAMMABILITY (EN 71 PART 2: 2011+A1: 2014)

Subclause	Requirement	Result
4.1	Cellulose nitrate	NP
4.1	Surface flash on a piled surface	NA
*4.1	Flammable gases	NA
*4.1	Extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels	NA
4.2	Toys to be worn on the head	NA
4.3	Toy disguise costumes and toys intended to be worn by child in play	NA
4.3	warning on product and packaging (10 - 30 mm/s)	NA
4.4	Toys intended to be entered by a child	NA
4.4	warning on product and packaging (10 – 30 mm/s)	NA
4.5	Soft-filled toys	NA

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 2

Sub-clause	Test Method	Sub-clause	Test Method	Sub-clause	Test Method	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	-	-

* Note: Subclause indicated with * are not accredited.



Tested Component(s) Description List:

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
I001	Red coating	Body	1
I002	Blue coating	Body	2
I003	Fuchsia coating	Body	3
I004	Red plastic	Body	1
I005	Blue plastic	Body	2
I006	Fuchsia plastic	Body	3
I007	Transparent red plastic	Muzzle & connector	1
I008	Transparent blue plastic	Muzzle & connector	2
I009	Transparent fuchsia plastic	Muzzle, air inlet, holder of trigger & connector of tube	3
I010	White plastic	Body	1-3
I011	Transparent plastic with light yellow glue	Holder of muzzle	1-3
I012	Beige soft plastic	Tube	1-3
I013	Transparent fuchsia plastic	Connector of muzzle	3
I014	Light red plastic	Air inlet & holder of trigger	1
I015	Light blue plastic	Air inlet & holder of trigger	2
I016	White soft plastic	Connector of tube	1-3
I017	Matt beige soft plastic	Seal ring	1-3
I018	Transparent plastic	Tube of trigger	1-3
I019	Translucent white soft plastic	Gasket of trigger	1-3
I020	Clear laminated multi-color printed white/brown paper board with adhesive	Color box	1-3
I021	Transparent plastic	Inner box	1-3



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

Test Item(s)	Type	Result	Unit	Conclusion
		Total Cadmium (Cd)		
I001	I	ND	mg/kg	PASS
I002	I	ND	mg/kg	PASS
I003	I	ND	mg/kg	PASS
I004	II	ND	mg/kg	PASS
I005	II	ND	mg/kg	PASS
I006	II	ND	mg/kg	PASS
I007	II	ND	mg/kg	PASS
I008	II	ND	mg/kg	PASS
I009	II	ND	mg/kg	PASS
I010	II	ND	mg/kg	PASS
I011	II	ND	mg/kg	PASS
I012	II	ND	mg/kg	PASS
I013	II	ND	mg/kg	PASS
I014	II	ND	mg/kg	PASS
I015	II	ND	mg/kg	PASS
I016	II	ND	mg/kg	PASS
I017	II	ND	mg/kg	PASS
I018	II	ND	mg/kg	PASS
I019	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 Contents in Toys and Childcare Articles – European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 51

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

Test Parameter:	BBP	DBP	DEHP	SUM	-
Limit (%):	0.1 (Sum of three phthalates)				-
Test Item(s)	Result (%)				Conclusion
I001	ND	ND	ND	ND	PASS
I002	ND	ND	ND	ND	PASS
I003	ND	ND	ND	ND	PASS
I004	ND	ND	ND	ND	PASS
I005	ND	ND	ND	ND	PASS
I006	ND	ND	ND	ND	PASS
I007	ND	ND	ND	ND	PASS
I008	ND	ND	ND	ND	PASS
I009	ND	ND	ND	ND	PASS
I010	ND	ND	ND	ND	PASS
I011	ND	ND	ND	ND	PASS
I012	ND	ND	ND	ND	PASS
I013	ND	ND	ND	ND	PASS
I014	ND	ND	ND	ND	PASS
I015	ND	ND	ND	ND	PASS
I016	ND	ND	ND	ND	PASS
I017	ND	ND	ND	ND	PASS
I018	ND	ND	ND	ND	PASS
I019	ND	ND	ND	ND	PASS

Note / key:

BBP = Butyl benzyl phthalate

ND = Not detected

mg/kg = milligram(s) per kilogram

Detection Limit (%) : Each 0.005

DBP = Dibutyl phthalate

% = percent

DEHP = Di(2-ethylhexyl) phthalate

10000 mg/kg = 1 %



RESULTS:

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 : 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	ND	ND	ND	ND	PASS
I002	ND	ND	ND	ND	PASS
I003	ND	ND	ND	ND	PASS
I004	ND	ND	ND	ND	PASS
I005	ND	ND	ND	ND	PASS
I006	ND	ND	ND	ND	PASS
I007	ND	ND	ND	ND	PASS
I008	ND	ND	ND	ND	PASS
I009	ND	ND	ND	ND	PASS
I010	ND	ND	ND	ND	PASS
I011	ND	ND	ND	ND	PASS
I012	ND	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:

Heavy Metals Content in Packaging – European Council Directive 94/62/EC on Packaging and Packaging Waste

Maximum Allowable Limit:	Sum of Pb, Cd, Hg & CrVI: 100 mg/kg
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Test Item(s)	Result	Unit	Conclusion
	Sum of Pb, Cd, Hg & CrVI		
I020	ND	mg/kg	PASS
I021	ND	mg/kg	PASS

Note / key:

- Pb = Lead
- Hg = Mercury
- ND = Not detected
- mg/kg = milligram(s) per kilogram
- Detection Limit (mg/kg) : Sum 20
- Cd = Cadmium
- CrVI = Hexavalent Chromium

Remark:

- Unless further specified, the reported result(s) of Test Item(s) was (were) performed by total metal(s) content analysis through complete decomposition.



RESULTS:

Polycyclic Aromatic Hydrocarbons (PAHs) Content – Client’s Specification

Test Method : ZEK 01.4-08, solvent extraction and analysis by Gas Chromatograph Mass Spectrometer.
 (Testing and validation of PAHs in products in the course of GS-Mark Certification.)

Client’s Limit :	/
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Test Item (s)	Result			Conclusion
	Detected Analyte (s)	Conc.	Unit	
I001	Naphthalene Sum of all listed PAHs	733.1 733.1	mg/kg	DATA
I002	ND	ND	mg/kg	DATA
I003	ND	ND	mg/kg	DATA
I004	ND	ND	mg/kg	DATA
I005	ND	ND	mg/kg	DATA
I006	ND	ND	mg/kg	DATA
I007	ND	ND	mg/kg	DATA
I008	ND	ND	mg/kg	DATA
I009	ND	ND	mg/kg	DATA
I010	ND	ND	mg/kg	DATA
I011	ND	ND	mg/kg	DATA
I012	ND	ND	mg/kg	DATA

Note / key:

ND = Not detected “>” = Greater than Conc. = Concentration
 mg/kg = milligram(s) per kilogram
 Detection Limit (mg/kg): Each PAHs: 0.2; Sum of all PAHs: 0.2

Remark:

- The list of polycyclic aromatic hydrocarbons is summarized in table of Appendix.

APPENDIX:

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



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Jan 6, 2015
Page 15 of 15

RESULTS:



END OF REPORT