

TEST REPORT

Applicant: SUNNYLIFE GROUP PTY LTD
B1 85 DUNNING AVENUE
ROSEBERY
NSW 2018
AUSTRALIA

Number: HKGH0302756302

Date: Sep 06, 2023

Attn: NOLIA CHIU

Sample and Information provided by customer :

Item Name	:	Buddy Float Bands Mermaid
Quantity	:	12 Pieces
Labelled Age Group	:	3-6 YEARS
Packaging Provided	:	Yes
Supplier	:	Digo Creative Enterprise Ltd
Country of Origin	:	China

For and on behalf of :
Intertek Testing Services HK Ltd.



Cindy I.K. Chan
Vice President



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Conclusion:

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

<u>Requirement</u>	<u>Result</u>
(1) EN 13138 - 1: 2021 Buoyant aids for swimming instruction - Part 1 : Safety requirements and test methods for buoyant aids to be worn CE marking ((EU) 2016/425, Article 17) UKCA marking (UK2019 SI696 Schedule 35 Regulation 38)	Pass See note enclosed
(2) EN 71-3 : 2019 + A1 : 2021 - Migration of certain elements	Pass
(3) REACH Regulation (EC) no. 1907/2006, Annex XVII Items 51 & 52, amendment no. 552/2009 & 2018/2005 - Phthalates content	Pass
(4) Regulation (EC) No. 1907/2006 on REACH Annex XVII as amended by Commission Regulation (EU) No. 835/2012 and Commission Regulation (EU) 2016/217 - Cadmium content requirement	Pass
(5) REACH Regulation (EC) No.1907/2006 , Annex XVII Item 63 & Commission regulation (EU) 2015/628 - Lead content requirement	Pass
(6) REACH Regulation (EC) no. 1907/2006 & amendment (EU) no. 1272/2013 Annex XVII Item 50 - Polycyclic aromatic hydrocarbons content	Pass
(7) BS EN71-3:2019 and Directive (EU) 2019/1922 amending 2009/48/EC effective from 20 May 2021 - Migration of certain elements	Pass
(8) REACH Regulation (EC) no. 1907/2006, Annex XVII, Item 51 & 52 & amendment no. 552/2009 & 2018/2005 & The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (S.I. 2019 No. 758) as amended - Phthalates content	Pass
(9) Cadmium Content Requirement in Annex XVII Entry 23 of the REACH Regulation (EC) No 1907/2006 and Amendment (EC) No 552/2009, (EU) No 494/2011, (EU) No 835/2012 and (EU) 2016/217 & The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (S.I. 2019 No. 758) - Cadmium content requirement	Pass



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<u>Requirement</u>	<u>Result</u>
(10) REACH Regulation (EC) No.1907/2006 , Annex XVII Item 63 & Commission regulation (EU) 2015/628 & The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (S.I. 2019 No. 758) - Lead content requirement	Pass
(11) REACH Regulation (EC) no. 1907/2006 & amendment no. 1272/2013, Annex XVII, Item 50 & The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (S.I. 2019 No. 758) as amended - Polycyclic aromatic hydrocarbons content	Pass

Decision Rule(s):

When a statement of conformity to a specification or standard is provided on test report, the decision rule shall be applied. For details, please refer to Intertek's "Decision Rule Document" and is available on Intertek's website. <https://intertekhk.grd.by/decision-rule-doc>.
If decision rule already inlined in the requested specification or standard, Intertek's "Decision Rule Document" is not applicable and indication of "∞" was shown as above table.



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(1) Safety Requirements for Buoyant Aids to be Worn

Test Standard : EN 13138 - 1: 2021 - Buoyant aids for swimming instruction - Part 1 : Safety requirements and test methods for buoyant aids to be worn

Number of sample tested: Three (3) pairs.

Type of swimming aids: Armband.

Intended age group as specified in the packaging : For age 3-6 years old (18-30 kg).

Note:

CE and UKCA marking is not specified in EN 13138-1 but per regulation (EU) 2016/425 and UK2019 SI696 Schedule 35 Regulation 38, the marking shall be affixed visibly, legibly and indelibly to the flotation device.

It was found that the CE and UKCA marking was provided on the flotation device.

Clause	Requirement	Assessment
5.1	General	P
5.2	Conspicuity	P
5.3	Buoyancy	
5.3.1	Buoyancy characteristics of the complete swimming device	P
5.3.2	Residual buoyancy	P
5.4	Fit and positioning	
5.4.1	Adjustability – Class B swimming devices	P
5.4.2	Fastening systems	NA
5.4.3	Retention of function	P
5.4.4	Health and comfort	
5.4.4.1	Innocuousness	P
5.4.4.2	Edges, corners and points	P
5.4.4.3	Attached small parts	P
5.5	Entire assembly and components	
5.5.1	Integrity of the entire assembly of worn swimming devices	P
5.5.2	Thread	NA
5.5.3	Valves, stoppers	P
5.5.4	Protruding parts	P
5.6	Materials – mechanical properties	
5.6.1	Seam strength and durability of inflatable swimming devices	P
5.6.2	Resistance to puncturing	P
5.6.3	Resistance of foam and other inherent buoyant materials to water absorption	NA
5.6.4	Resistance of foam and other inherent buoyant materials to	NA



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Clause	Requirement	Assessment
	compression	
5.7	Markings on swimming devices	
5.7.2	Resistance to chlorinated salt water	P
5.7.3	Resistance of the markings to saliva	P
5.7.4	Resistance of the markings to perspiration	P
5.7.5	Resistance of markings to rubbing	P
7	Warnings and markings	
7.1	General	P#1
7.2	Warnings and markings on the product	P#1
7.3	Information supplied by the manufacturer	P#1
7.4	Consumer information at the point of sale	P#1
8	Safety requirements concerning in-water performance	
8.3	Prevention from sinking	P
8.4	Flotation angle (horizontal, vertical)	P
8.5	Displacement of the swimming device on the body	P
8.6	Retention of function after failure of an air chamber	P

Abbreviation : P = Pass; NA = Not Applicable

Test data:

Clause 5.3.1 Buoyancy characteristics of the complete device

The buoyancy of the submitted samples was measured and recorded as follow:

Style	Measured buoyancy
For ages 3-6 (18-30 kg)	32.0 N

Requirement:

The swimming device shall, with all of its buoyant components, have minimum buoyancy in accordance with following table:

Category of user		Minimum buoyancy for armband per pair
Age years	Mass range (kg)	
3-6	18-30	25 N

Clause 5.3.2 Residual buoyancy

The residual buoyancy of the component was measured and recorded as follow:

Category of user		Deflated chamber #A	Deflated chamber #B
Age years	Mass range (kg)		
3-6	18-30	9.8 N	9.6 N

Requirement: Where a component consists of two or more air chambers, after deflating the one chamber most likely to fail in the component, this component shall provide at least 25 % of the total minimum buoyancy for the swimming device set out in Table 2.

Category of user		25% of the total minimum buoyancy set out in Table 2
Age years	Mass range (kg)	
3-6	18-30	6.25 N



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Clause 5.5.3 Valves, stoppers

The loss of buoyancy was measured and recorded as follow:

Category of user		Loss of buoyancy (%)
Age years	Mass range (kg)	
3-6	18-30	2.4

Requirement: All valves shall ensure that, with any opened stopper, inflatable swimming devices, when tested in accordance with Annex B, shall after a period of 2 min retain at least 80 % of their original buoyancy.

Clause 5.7.2 Resistance to chlorinated salt water

The change in color of the entire submitted sample on grey scale was observed and recorded as follow after the test:

Gray scale	Requirement:
4-5	≥3

Clause 5.7.3 Resistance of marking to saliva

The change in color of the marking on grey scale of the submitted sample was observed and recorded as follow after the test: :

Gray scale	Requirement:
4-5	≥3

Clause 5.7.4 Resistance of markings to perspiration

The change in color of the marking on grey scale of the submitted sample was observed and recorded as follow after the test:

Gray scale	Requirement:
4-5	≥3

Remarks

#1- Only the English version of the marking and/or instructions were assessed. According to the standard, all warnings and instructions for safe use as required by the standard shall be written in the official language of the country in which the product will be sold.

Date sample received : Jun 26, 2023; Aug 14, 2023; Aug 21, 2023

Testing period : Jun 26, 2023 to Aug 01, 2023; Aug 14, 2023 to Aug 29, 2023



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(2) 19 Toxic Element Migration Test

Test Method : EN 71-3 : 2019 + A1 : 2021. Acid extraction method was used and toxic elements content were determined by Inductively Coupled Argon Plasma Spectrometry and Ion Chromatography- Inductively Coupled Plasma-Mass Spectrometry and/or Gas Chromatographic - Mass Spectrometry

Category (III): Scraped-off toy material:

	Result (mg/kg)			Limit (mg/kg)
	(1)	(2)	(3)	
Soluble Aluminium (Al)	<300	<300	<300	28130
Soluble Antimony (Sb)	<10	<10	<10	560
Soluble Arsenic (As)	<10	<10	<10	47
Soluble Barium (Ba)	<10	<10	<10	18750
Soluble Boron (B)	<50	<50	<50	15000
Soluble Cadmium (Cd)	<5	<5	<5	17
Soluble Chromium (III) (Cr III)	<10	<10	<10	460
Soluble Chromium (VI) (Cr VI)	<0.025	<0.025	<0.025	0.053
Soluble Cobalt (Co)	<10	<10	<10	130
Soluble Copper (Cu)	<10	<10	<10	7700
Soluble Lead (Pb)	<10	<10	<10	23
Soluble Manganese (Mn)	<10	<10	<10	15000
Soluble Mercury (Hg)	<10	<10	<10	94
Soluble Nickel (Ni)	<10	<10	<10	930
Soluble Selenium (Se)	<10	<10	<10	460
Soluble Strontium (Sr)	<100	<100	<100	56000
Soluble Tin (Sn)	<10	<10	<10	180000
Soluble Organic tin ++	<5.0	<5.0	<5.0	12
Soluble Zinc (Zn)	<100	<100	<100	46000

mg/kg = milligram per kilogram

++ : Unless the test result was marked with "Δ", Organic tin content was not directly determined and was derived from migration result of total tin.

Organic tin test result was expressed as tributyl tin.

Chromium (III) value was calculated as difference between migration results of total Chromium and Chromium (VI) .

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023

Test Period : Jun 26, 2023 to Jul 06, 2023



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(3) Phthalate Content Test

Test Method : ISO 8124-6 : 2018 method A with internal standard calibration, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Seven Phthalates content:

Compound	Result (% w/w)		Limit (% w/w)
	(1)	(2/3)	
Dibutyl phthalate (DBP)	<0.0100	<0.0100	--
Diethyl hexyl phthalate (DEHP)	<0.0100	<0.0100	--
Benzyl butyl phthalate (BBP)	<0.0100	<0.0100	--
Diisobutyl phthalate (DIBP)	<0.0100	<0.0100	--
Sum of DBP, DEHP, BBP & DIBP	<0.0100	<0.0100	0.1
Diisononyl phthalate (DINP)	<0.0100	<0.0100	--
Di-n-octyl phthalate (DnOP)	<0.0100	<0.0100	--
Diisodecyl phthalate (DIDP)	<0.0100	<0.0100	--
Sum of DINP, DnOP & DIDP	<0.0100	<0.0100	0.1

The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) no. 1907/2006, amendment no. 552/2009 taking into account the (EU) regulation 2018/2005 modifying entry 51 for which the DIBP shall not be placed on the market after 7 July 2020 in toys or childcare articles, individually or in any combination with the first three phthalates which already exist in the entry 51, in a concentration equal to or greater than 0,1 % by weight of the plasticised material.

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023

Test Period : Jun 26, 2023 to Jul 04, 2023



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(4) Cadmium (Cd) Content

Test Method : In House method TC008.TP. Acid digestion method was used and total Cadmium content was determined by Inductively Coupled Argon Plasma Spectrometry.

Tested Component	Result in %, w/w	Limit in %, w/w
(1)	ND	0.1
(2/3)	ND	0.01

ND : Not detected (< 0.0005%)

The above limit was quoted according to Regulation (EC) No. 1907/2006 on REACH Annex XVII as amended by Commission Regulation (EU) No. 835/2012 and Commission Regulation (EU) 2016/217

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023

Test Period : Jun 26, 2023 to Jul 06, 2023



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(5) Lead (Pb) Content

Test Method : Lead content requirement in Commission regulation (EU) 2015/628 amending Annex XVII item 63 of the REACH regulation (EC) No. 1907/2006, acid digestion was used and total Lead content was determined by inductively coupled argon plasma spectrometry.

Lead Content:

Tested Component	Result in %, w/w	Limit in %, w/w
(1)	ND	0.05
(2/3)	ND	0.05

ND : Not detected (< 0.002%)

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023

Test Period : Jun 26, 2023 to Jul 06, 2023



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(6) Polycyclic Aromatic Hydrocarbons (PAH) Content

Test Method : The document AfPS GS 2019:01 PAK issued by the Federal Institute for Occupational Safety and Health, solvent extraction and determined by Gas Chromatographic - Mass Spectrometry (GC/MS).

Compound	Result (ppm)		Limit (ppm)
	(1)	(2/3)	
Benzo(a)pyrene	<0.20	<0.20	0.5
Benzo(e)pyrene	<0.20	<0.20	0.5
Benzo(a)anthracene	<0.20	<0.20	0.5
Chrysene	<0.20	<0.20	0.5
Benzo(b)fluoranthene	<0.20	<0.20	0.5
Benzo(j)fluoranthene	<0.20	<0.20	0.5
Benzo(k)fluoranthene	<0.20	<0.20	0.5
Dibenzo(a,h)anthracene	<0.20	<0.20	0.5

The above limit was quoted according to Annex XVII Items 50 of the REACH Regulation (EC) no. 1907/2006 & amendment (EU) no. 1272/2013 for polycyclic aromatic hydrocarbons (PAH).

ppm = parts per million = mg/kg

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023

Test Period : Jun 26, 2023 to Jul 03, 2023



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(7) 19 Toxic Element Migration Test

Test Method : BS EN71-3:2019. Acid extraction method was used and toxic elements content were determined by Inductively Coupled Argon Plasma Spectrometry and Ion Chromatography- Inductively Coupled Plasma-Mass Spectrometry and/or Gas Chromatographic - Mass Spectrometry

Category (III): Scraped-off toy material:

	Result (mg/kg)			Limit (mg/kg)
	(1)	(2)	(3)	
Soluble Aluminium (Al)	<300	<300	<300	70000 / 28130^
Soluble Antimony (Sb)	<10	<10	<10	560
Soluble Arsenic (As)	<10	<10	<10	47
Soluble Barium (Ba)	<10	<10	<10	18750
Soluble Boron (B)	<50	<50	<50	15000
Soluble Cadmium (Cd)	<5	<5	<5	17
Soluble Chromium (III) (Cr III)	<10	<10	<10	460
Soluble Chromium (VI) (Cr VI)	<0.025	<0.025	<0.025	0.053
Soluble Cobalt (Co)	<10	<10	<10	130
Soluble Copper (Cu)	<10	<10	<10	7700
Soluble Lead (Pb)	<10	<10	<10	23
Soluble Manganese (Mn)	<10	<10	<10	15000
Soluble Mercury (Hg)	<10	<10	<10	94
Soluble Nickel (Ni)	<10	<10	<10	930
Soluble Selenium (Se)	<10	<10	<10	460
Soluble Strontium (Sr)	<100	<100	<100	56000
Soluble Tin (Sn)	<10	<10	<10	180000
Soluble Organic tin ++	<2.0	<2.0	<2.0	12
Soluble Zinc (Zn)	<100	<100	<100	46000

mg/kg = milligram per kilogram



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++ : Unless the test result was marked with "Δ", Organic tin content was not directly determined and was derived from migration result of total tin.

Organic tin test result was expressed as tributyl tin.

Chromium (III) value was calculated as difference between migration results of total Chromium and Chromium (VI) .

^ : The new aluminium migration limit [2250mg/kg for Category (I), 560mg/kg for category (II) and 28130mg/kg for Category (III)] was quoted from directive (EU) 2019/1922 amending 2009/48/EC effective from 20 May 2021.

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

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(8) Phthalate Content Test

Test Method : ISO 8124-6 : 2018 method A with internal standard calibration, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Seven Phthalates content:

Compound	Result (% w/w)		Limit (% w/w)
	(1)	(2/3)	
Dibutyl phthalate (DBP)	<0.0100	<0.0100	--
Diethyl hexyl phthalate (DEHP)	<0.0100	<0.0100	--
Benzyl butyl phthalate (BBP)	<0.0100	<0.0100	--
Diisobutyl phthalate (DIBP)	<0.0100	<0.0100	--
Sum of DBP, DEHP, BBP & DIBP	<0.0100	<0.0100	0.1
Diisononyl phthalate (DINP)	<0.0100	<0.0100	--
Di-n-octyl phthalate (DnOP)	<0.0100	<0.0100	--
Diisodecyl phthalate (DIDP)	<0.0100	<0.0100	--
Sum of DINP, DnOP & DIDP	<0.0100	<0.0100	0.1

The above limit was quoted according to REACH Regulation (EC) no. 1907/2006, Annex XVII, Item 51 & 52 & amendment no. 552/2009 & 2018/2005 & The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (S.I. 2019 No. 758) as amended.

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023

Test Period : Jun 26, 2023 to Jul 04, 2023



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(9) Cadmium (Cd) Content

Test Method : In House method TC008.TP. Acid digestion method was used and total Cadmium content was determined by Inductively Coupled Argon Plasma Spectrometry.

Tested Component	Result in %, w/w	Limit in %, w/w
(1)	ND	0.1
(2/3)	ND	0.01

ND : Not detected (< 0.0005%)

The above limit was quoted according to Annex XVII Entry 23 of the REACH Regulation (EC) No 1907/2006 and Amendment (EC) No 552/2009, (EU) No 494/2011, (EU) No 835/2012 and (EU) 2016/217 & The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (S.I. 2019 No. 758)

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023

Test Period : Jun 26, 2023 to Jul 06, 2023



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(10) Lead (Pb) Content

Test Method : Lead content requirement in Commission regulation (EU) 2015/628 amending Annex XVII item 63 of the REACH regulation (EC) No. 1907/2006, acid digestion was used and total Lead content was determined by inductively coupled argon plasma spectrometry.

Lead Content:

Tested Component	Result in %, w/w	Limit in %, w/w
(1)	ND	0.05
(2/3)	ND	0.05

ND : Not detected (< 0.002%)

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

Date sample received : Jun 26, 2023
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(11) Polycyclic Aromatic Hydrocarbons (PAH) Content

Test Method : The document AfPS GS 2019:01 PAK issued by the Federal Institute for Occupational Safety and Health, solvent extraction and determined by Gas Chromatographic - Mass Spectrometry (GC/MS).

Compound	Result (ppm)		Limit (ppm)
	(1)	(2/3)	
Benzo(a)pyrene	<0.20	<0.20	0.5
Benzo(e)pyrene	<0.20	<0.20	0.5
Benzo(a)anthracene	<0.20	<0.20	0.5
Chrysene	<0.20	<0.20	0.5
Benzo(b)fluoranthene	<0.20	<0.20	0.5
Benzo(j)fluoranthene	<0.20	<0.20	0.5
Benzo(k)fluoranthene	<0.20	<0.20	0.5
Dibenzo(a,h)anthracene	<0.20	<0.20	0.5

The above limit was quoted according to REACH Regulation (EC) no. 1907/2006 & amendment no. 1272/2013, Annex XVII, Item 50 & The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 (S.I. 2019 No. 758) as amended for polycyclic aromatic hydrocarbons (PAH).

ppm = parts per million = mg/kg

Tested Components:

- (1) Coatings on plastic sheet (body).
- (2) Pink plastic sheet excluding coatings (body).
- (3) Transparent plastic (valve).

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End of report

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