

Test Report

No. SHAHG1718879101

Date: 31 Aug 2017

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SGS Job No. : SHHL17080492100T - SH
 Date of Sample Received : 25 Aug 2017
 Testing Period : 25 Aug 2017 - 31 Aug 2017
 Test Requested : Selected test(s) as requested by client.
 Test Method : Please refer to next page(s).
 Test Results : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
EN71-3:2013+A1:2014 under European Directive 2009/48/EC-Migration of certain elements(Category II:for liquid or sticky toy material)(As specified by client)	PASS
AS/NZS ISO 8124.3:2012- Migration of Certain Elements(As specified by client)	PASS
Phthalates	See Results
Entry 51 & 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC)-Phthalates content	PASS
American Society for Testing and Materials -ASTM F 963-11 - total Lead(As specified by client)	PASS
American Society for Testing and Materials -ASTM F 963-11 – soluble heavy metal(As specified by client)	PASS

Signed for and on behalf of
 SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Serena Wang
 Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA17-188791.001	Brown liquid

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

EN71-3:2013+A1:2014 under European Directive 2009/48/EC-Migration of certain elements(Category II:for liquid or sticky toy material)(As specified by client)

Test Method : With reference to EN71-3:2013+A1:2014, analysis was performed by ICP-MS
Soluble Chromium (VI) was analyzed by IC-UV or LC-ICP-MS

Test Item(s)	Limit	Unit	MDL	001
Soluble Chromium (VI) (Cr VI)	0.005	mg/kg	0.005	ND
Soluble Lead (Pb)	3.4	mg/kg	0.5	ND
Soluble Antimony (Sb)	11.3	mg/kg	1	ND
Soluble Arsenic (As)	0.9	mg/kg	0.5	ND
Soluble Barium (Ba)	375	mg/kg	50	ND
Soluble Cadmium (Cd)	0.3	mg/kg	0.1	ND
Soluble Chromium (III) (Cr III)	9.4	mg/kg	5	ND
Soluble Mercury (Hg)	1.9	mg/kg	0.5	ND
Soluble Selenium (Se)	9.4	mg/kg	5	ND
Soluble Boron (B)	300	mg/kg	50	ND
Soluble Cobalt (Co)	2.6	mg/kg	0.5	ND
Soluble Manganese (Mn)	300	mg/kg	50	ND
Soluble Strontium (Sr)	1125	mg/kg	50	ND
Soluble Zinc (Zn)	938	mg/kg	50	ND
Soluble Copper (Cu)	156	mg/kg	50	ND
Soluble Aluminum (Al)	1406	mg/kg	50	ND
Soluble Nickel (Ni)	18.8	mg/kg	10	ND
Soluble Tin (Sn)	3750	mg/kg	0.08	ND
Soluble Organic Tin*	0.2	mg/kg	-	ND

Notes :

- (1) *Confirmation test of soluble organic tin is not required in case of soluble tin, after conversion, does



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not exceed the soluble organic tin requirement as specified in EN71-3:2013+A1:2014

AS/NZS ISO 8124.3:2012- Migration of Certain Elements(As specified by client)

Test Method : As specified in the AS/NZS ISO 8124.3:2012. analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Soluble Lead (Pb)	90	mg/kg	5	ND
Soluble Antimony (Sb)	60	mg/kg	5	ND
Soluble Arsenic (As)	25	mg/kg	2.5	ND
Soluble Barium (Ba)	1000	mg/kg	10	ND
Soluble Cadmium (Cd)	75	mg/kg	5	ND
Soluble Chromium (Cr)	60	mg/kg	5	ND
Soluble Mercury (Hg)	60	mg/kg	5	ND
Soluble Selenium (Se)	500	mg/kg	10	ND

Notes :

(1) Results shown are of the adjusted analytical results.

Phthalates

Test Method : With reference to CPSC-CH-C1001-09.3, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Dimethyl Phthalate (DMP)	131-11-3	%	0.005	ND
Diethyl Phthalate (DEP)	84-66-2	%	0.005	ND

Entry 51 & 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC)-Phthalates content

Test Method : With reference to CPSC-CH-C 1001-09.3, analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
For all toys and childcare articles					
Dibutyl Phthalate (DBP)	84-74-2	-	%	0.003	ND



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Test Item(s)	CAS NO.	Limit	Unit	MDL	001
Benzylbutyl Phthalate (BBP)	85-68-7	-	%	0.003	ND
Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	-	%	0.003	ND
Total (DBP+BBP+DEHP)		0.1	%	-	ND

For toys and childcare articles that can be mouthed

Diisononyl Phthalate (DINP)	28553-12-0	-	%	0.01	ND
	/68515-48-0				
Di-n-octyl Phthalate (DNOP)	117-84-0	-	%	0.003	ND
Diisodecyl Phthalate (DIDP)	26761-40-0	-	%	0.01	ND
	/68515-49-1				
Total (DINP+DNOP+DIDP)		0.1	%	-	ND

Conclusion

PASS

Notes :

European Parliament adopted new phthalate Entry 51 & 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC);

(1-1) DBP, BBP and DEHP are totally banned for use in any toys on childcare articles where their concentration exceeds 0.1% by mass.

(1-2) DINP, DNOP, DIDP are totally banned for use in toys and childcare articles that can be mouthed where their concentration exceeds 0.1% by mass.

American Society for Testing and Materials -ASTM F 963-11 - total Lead in paint and similar surface-coating materials(As specified by client)

Test Method : With reference to CPSC Test Method: CPSC-CH-E1003-09.1, analysis was performed by AAS.

Test Item(s)	Limit	Unit	MDL	001
Total Lead (Pb)	90	mg/kg	20	ND

American Society for Testing and Materials -ASTM F 963-11 – soluble heavy metal in Substrate Materials/paint and similar surface-coating materials(As specified by client)

Test Method : Soluble Heavy Metal contents (Clause 4.3.5) - Sample was extracted by dilute hydrochloric acid in accordance with ASTM F 963-11(Claue 8.3), analysis was performed by ICP-OES.



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Test Item(s)	Limit	Unit	MDL	001
Soluble Lead (Pb)	90	mg/kg	5	ND
Soluble Antimony (Sb)	60	mg/kg	5	ND
Soluble Arsenic (As)	25	mg/kg	2.5	ND
Soluble Barium (Ba)	1000	mg/kg	10	ND
Soluble Cadmium (Cd)	75	mg/kg	5	ND
Soluble Chromium (Cr)	60	mg/kg	5	ND
Soluble Mercury (Hg)	60	mg/kg	5	ND
Soluble Selenium (Se)	500	mg/kg	10	ND

Notes :

(1) Results shown are of the adjusted analytical results

Remark: Result shown is of the total weight of wet sample

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



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