

TEST REPORT

APPLICANT : Ningbo Johnshen Stationery Co., Ltd
ADDRESS : No.119 Ding xiang Road, Jiangdong Zone, Ningbo, Zhejiang
SAMPLE DESCRIPTION : GLITTER GLUE
ITEM NO. : DY04093
COUNTRY OF ORIGIN : China
SAMPLE RECEIVED DATE : 22-Mar-2016
TURN AROUND TIME : 22-Mar-2016 to 06-Apr-2016
REVISED DATE : 22-Apr-2016 to 10-May-2016

The following test item(s) was/were performed on submitted sample(s) and/or component(s) confirmed by applicant.

TEST REQUESTED	TEST METHOD/REGULATION	RESULT
Total Cadmium Content	REACH Annex XVII, Entry 23	Pass
Polycyclic Aromatic Hydrocarbons (PAHs)	German GS Specification document: AfPS GS 2014:01 PAK (PAK=PAHs)	Pass
Migration of Certain Elements	EN71 Part 3:2013+A1:2014	Pass
Colourants Content	EN71 Part 9:2005+A1:2007	Pass
Primary Aromatic Amines Content	EN71 Part 9:2005+A1:2007	Pass
Preservatives Content	EN71 Part 9:2005+A1:2007	Pass
pH Value	EN71 Part 9:2005+A1:2007, ISO 787-9:1995	Pass

Note: This report cancels and supersedes report number EFSH16031503-CG-01 issued on Apr 06th, 2016.
 Modification description: as per client's request, add EN71 Part 9 test for component No. 7~9 in the revised report.

Eurofins (Shanghai) contact information

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***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

Signed for and on behalf of
Eurofins Product Testing Service (Shanghai) Co., Ltd



Terric Ji
Lab Manager

Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins Product Testing Service (Shanghai) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. If you happen to have any comments, please do it by sending email to sh.info@eurofins.com and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins Product Testing Service (Shanghai) Co., Ltd.

SAMPLE PHOTO



EFSH16031503-CG-01

TO BE CONTINUED

COMPONENT LIST

Component No.	Component
1	Transparent soft plastic bottles
2	Purple plastic lid
3	Blue plastic lid
4	Red plastic lid
5	Green plastic lid
6	Purple glitter glue
7	Blue glitter glue
8	Red glitter glue
9	Green glitter glue

TO BE CONTINUED

TEST RESULT

Total Cadmium Content

Test Request: Total cadmium content as specified in Commission Regulation (EU) 2016/217 amending entry 23 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: EN 1122:2001 Method B, acid digestion method was used and total cadmium content was determined by ICP-OES.

Tested Item(s)	Unit	Limit	MDL	Result				
				1	2+3	4+5	6+7	8+9
Total Cadmium	%	0.01	0.0005	ND	ND	ND	ND	ND

Remark:

MDL = method detection limit

ND = Not detected, less than MDL

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

TO BE CONTINUED

TEST RESULT

Polycyclic Aromatic Hydrocarbons (PAHs)

- Test specification : 18 Polycyclic Aromatic Hydrocarbons in polymers (PAHs) according to German GS Specification document: AfPS GS 2014:01 PAK (PAK=PAHs)
- Test method : Solvent extraction and quantification by gas chromatography-mass selective detection (GC-MS) with respect to AfPS GS 2014:01 PAK (PAK=PAHs) requirement
- Requirement : AfPS GS 2014:01 PAK (PAK=PAHs) requirement: Limits for PAHs in Toys under Directive 2009/48/EC and Other products under ProdSG, see table 1 on next page(s):

Parameter	CAS No.	Unit	Result		
			1	2+3	4+5
Benzo(a)pyrene	50-32-8	mg/kg	ND	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	ND	ND	ND
Benzo(a)anthracene	56-55-3	mg/kg	ND	ND	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	ND	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	ND	ND
Chrysene	218-01-9	mg/kg	ND	ND	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	ND	ND	ND
Benzo(ghi)perylene	191-24-2	mg/kg	ND	ND	ND
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	ND	ND
Sum of Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	-	mg/kg	ND	0.498	0.711
Naphthalene	91-20-3	mg/kg	ND	ND	ND
Sum 18 PAHs	-	mg/kg	ND	0.498	0.711
Summary to above mentioned requirement:	For Category 2 (Other products under ProdSG)		Pass	Pass	Pass

Note:

mg/kg = milligram per kilogram

ND = not detected, less than 0.2 mg/kg

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

TO BE CONTINUED

TEST RESULT

Polycyclic Aromatic Hydrocarbons (PAHs)

- Test specification : 18 Polycyclic Aromatic Hydrocarbons in polymers (PAHs) according to German GS Specification document: AfPS GS 2014:01 PAK (PAK=PAHs)
- Test method : Solvent extraction and quantification by gas chromatography-mass selective detection (GC-MS) with respect to AfPS GS 2014:01 PAK (PAK=PAHs) requirement
- Requirement : AfPS GS 2014:01 PAK (PAK=PAHs) requirement: Limits for PAHs in Toys under Directive 2009/48/EC and Other products under ProdSG, see table 1 on next page(s):

Parameter	CAS No.	Unit	Result			
			6	7	8	9
Benzo(a)pyrene	50-32-8	mg/kg	ND	ND	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	ND	ND	ND	ND
Benzo(a)anthracene	56-55-3	mg/kg	ND	ND	ND	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	ND	ND	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	ND	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	ND	ND	ND
Chrysene	218-01-9	mg/kg	ND	ND	ND	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	ND	ND	ND	ND
Benzo(ghi)perylene	191-24-2	mg/kg	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	ND	ND	ND
Sum of Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	-	mg/kg	ND	ND	ND	ND
Naphthalene	91-20-3	mg/kg	ND	ND	ND	ND
Sum 18 PAHs	-	mg/kg	ND	ND	ND	ND
Summary to above mentioned requirement:	For Category 2 (Other products under ProdSG)		Pass	Pass	Pass	Pass

Note:

mg/kg = milligram per kilogram

ND = not detected, less than 0.2 mg/kg

TO BE CONTINUED

TEST RESULT

Table 1

AfPS GS 2014:01 PAK (PAK=PAHs) requirement: Limits for PAHs in Toys under Directive 2009/48/EC and Other products under ProdSG.

Parameter	Unit	Category 1 Materials indented to be put in the mouth, or materials of toys for children with foreseeable skin contact for longer than 30 seconds (long-term skin contact)	Category 2 Materials not covered by category 1, with foreseeable skin contact for longer than 30 seconds (long-term skin contact) or short-term repetitive contact with the human skin		Category 3 Materials not covered by category 1 or 2 with foreseeable skin contact up to 30 seconds (short term skin contact)	
		-	Toys under Directive 2009/48/EC	Other products under ProdSG	Toys under Directive 2009/48/EC	Other products under ProdSG
Benzo(a)pyrene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo(e)pyrene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo(a)anthracene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo(b)fluoranthene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo(j)fluoranthene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo(k)fluoranthene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Chrysene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Dibenzo(a,h)anthracene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo(ghi)perylene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Indeno(1,2,3-cd)pyrene	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	mg/kg	<1 Sum*	<5 Sum*	<10 Sum*	<20 Sum*	<50 Sum*
Naphthalene	mg/kg	<1	<2		<10	
Sum* 18 PAHs	mg/kg	<1	<5	<10	<20	<50

* = Only those PAH components are taken into account, which have been specified in the material over the 0.2 mg/kg.

TO BE CONTINUED

TEST RESULT

Migration of Certain Elements

Test Request: Migration of certain elements as specified in European Standard on Safety of Toys EN71 Part 3:2013+A1:2014

Test Method: Extractable Organic Tin –With reference to EN 71 Part 3:2013+A1:2014, analysis was performed by GC-MS.
 General elements – With reference to EN 71 Part 3:2013+A1:2014, analysis was performed by ICP-MS.
 For Category III, Extractable Chromium(III) and Chromium(VI) – With reference to EN 71 Part 3:2013+A1:2014, analysis was performed by HPLC-ICP-MS.
 For Category I & II Extractable Chromium(III) and Chromium(VI) – With reference to EN 71 Part 3:2013+A1:2014, determination of the content of total Chromium analysis was performed by ICP-MS; Extractable Chromium(III) – With reference to EN 71 Part 3:2013+A1:2014, analysis was performed by HPLC-ICP-MS.

Test Item(s):	Unit	Result								
		1	2	3	4	5	6	7	8	9
Category Type		III	III	III	III	III	II	II	II	II
Extractable Lead (Pb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Antimony (Sb)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Arsenic (As)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Barium (Ba)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cadmium (Cd)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Mercury (Hg)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Selenium (Se)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Boron (B)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Cobalt (Co)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Manganese (Mn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Strontium (Sr)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Zinc (Zn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Copper (Cu)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Aluminum (Al)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Nickel (Ni)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Tin (Sn)	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Organic Tin ^{#1}	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium ^{#2}	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND
Extractable Chromium (III) (Cr III)	mg/kg	-	-	-	-	-	-	-	-	-
Extractable Chromium (VI) (Cr VI)	mg/kg	-	-	-	-	-	-	-	-	-

Remarks:

mg/kg = milligram per kilogram
 MDL = Method Detection Limit
 ND = Not Detected, less than MDL

Note:

^{#1} - The migration of organic tin is expressed as tributyltin.

^{#2} - If the migration of total Chromium is below the maximum limit for Chromium (VI), it can be inferred that the material complies with the requirements for both Chromium(III) and Chromium(VI).

TO BE CONTINUED

TEST RESULT

Limits –MDL per category type:

Test Item(s):	Unit	Limit	MDL	Limit	MDL	Limit	MDL
Category Type		I		II		III	
Extractable Lead (Pb)	mg/kg	13.5	1	3.4	0.2	160	10
Extractable Antimony (Sb)	mg/kg	45	5	11.3	1	560	10
Extractable Arsenic (As)	mg/kg	3.8	0.2	0.9	0.1	47	5
Extractable Barium (Ba)	mg/kg	1500	50	375	10	18750	50
Extractable Cadmium (Cd)	mg/kg	1.3	0.1	0.3	0.05	17	1
Extractable Mercury (Hg)	mg/kg	7.5	0.5	1.9	0.2	94	10
Extractable Selenium (Se)	mg/kg	37.5	2	9.4	1	460	10
Extractable Boron (B)	mg/kg	1200	50	300	10	15000	50
Extractable Cobalt (Co)	mg/kg	10.5	1	2.6	0.2	130	10
Extractable Manganese (Mn)	mg/kg	1200	50	300	10	15000	50
Extractable Strontium (Sr)	mg/kg	4500	50	1125	50	56000	50
Extractable Zinc (Zn)	mg/kg	3750	50	938	50	46000	50
Extractable Copper (Cu)	mg/kg	622.5	10	156	10	7700	50
Extractable Aluminum (Al)	mg/kg	5625	50	1406	50	70000	50
Extractable Nickel (Ni)	mg/kg	75	5	18.8	2	930	10
Extractable Tin (Sn)	mg/kg	15000	50	3750	50	180000	50
Extractable Organic Tin ^{#1}	mg/kg	0.9	0.2	0.2	0.2	12	0.2
Extractable Chromium ^{#2}	mg/kg	-	0.02	-	0.005	-	0.02
Extractable Chromium (III) (Cr III)	mg/kg	37.5	2	9.4	1	460	10
Extractable Chromium (VI) (Cr VI)	mg/kg	0.02	0.02	0.005	0.005	0.2	0.1

Category I: dry, brittle, powder-like or pliable toy material

Category II: liquid or sticky toy material

Category III: scrapped-off toy material

“-“ : Not Regulated

TO BE CONTINUED

TEST RESULT

Colourants Content

Test Request: Colourants content as specified in EN71 Part 9:2005+A1:2007.

Test Method: Sample preparation with reference to EN 71-10:2005 followed by analysis with reference to EN71-11:2005.

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result			
					6	7	8	9
Disperse Blue 1	2475-45-8	mg/kg	6	6	ND	ND	ND	ND
Disperse Blue 3	2475-46-9	mg/kg	6	6	ND	ND	ND	ND
Disperse Blue 106	12223-01-7	mg/kg	6	6	ND	ND	ND	ND
Disperse Blue 124	61951-51-7	mg/kg	6	6	ND	ND	ND	ND
Disperse Yellow 3	2832-40-8	mg/kg	6	6	ND	ND	ND	ND
Disperse Orange 3	730-40-5	mg/kg	6	6	ND	ND	ND	ND
Disperse Orange 37/76	12223-33-5 13301-61-6	mg/kg	6	6	ND	ND	ND	ND
Disperse Red 1	2872-52-8	mg/kg	6	6	ND	ND	ND	ND
Solvent Yellow 1	60-09-3	mg/kg	6	6	ND	ND	ND	ND
Solvent Yellow 2	60-11-7	mg/kg	6	6	ND	ND	ND	ND
Solvent Yellow 3	97-56-3	mg/kg	6	6	ND	ND	ND	ND
Basic Red 9	569-61-9	mg/kg	6	6	ND	ND	ND	ND
Basic Violet 1	8004-87-3	mg/kg	6	6	ND	ND	ND	ND
Basic Violet 3	548-62-9	mg/kg	6	6	ND	ND	ND	ND
Acid Red 26	3761-53-3	mg/kg	6	6	ND	ND	ND	ND
Acid Violet 49	1694-09-3	mg/kg	6	6	ND	ND	ND	ND

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Primary Aromatic Amines Content

Test Request: Primary Aromatic Amines content as specified in EN71 Part 9:2005 + A1:2007.

Test Method: Sample preparation with reference to EN 71-10:2005 followed by analysis with reference to EN71-11:2005.

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result			
					6	7	8	9
Benzidine	92-87-5	mg/kg	5	5	ND	ND	ND	ND
2-Naphthylamine	91-59-8	mg/kg	5	5	ND	ND	ND	ND
4-Chloroaniline	106-47-8	mg/kg	5	5	ND	ND	ND	ND
3,3'-Dichlorobenzidine	91-94-1	mg/kg	5	5	ND	ND	ND	ND
3,3'-Dimethoxybenzidine	119-90-4	mg/kg	5	5	ND	ND	ND	ND
3,3'-Dimethylbenzidine	119-93-7	mg/kg	5	5	ND	ND	ND	ND
o-Toluidine	95-53-4	mg/kg	5	5	ND	ND	ND	ND
2-Methoxyaniline (o-Anisidine)	90-04-0	mg/kg	5	5	ND	ND	ND	ND
Aniline	62-53-3	mg/kg	5	5	ND	ND	ND	ND

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

Preservatives Content

Test Request: Preservatives content as specified in EN71 Part 9:2005 + A1:2007.

Test Method: Sample preparation with reference to EN 71-10:2005 followed by analysis with reference to EN71-11:2005.

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result			
					6	7	8	9
Phenol	108-95-2	mg/kg	0.1	0.1	ND	ND	ND	ND
1,2-Benzylisothiazolin-3-one	2634-33-5	mg/kg	0.1	0.1	ND	ND	ND	ND
2-Methyl-4-isothiazolin-3-one	2682-20-4	mg/kg	10	0.1	ND	ND	ND	ND
5-Chloro-2-methyl-4-isothiazolin-3-one	26172-55-4	mg/kg	10	0.1	ND	ND	ND	ND
5-Chloro-2-methyl-4-isothiazolin-3-one + 2-methyl-4-isothiazolin-3-one	--	mg/kg	15	0.1	ND	ND	ND	ND
Formaldehyde (free)	50-00-0	mg/kg	500	0.1	25.9	135.2	141.9	120.6

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

pH Value

EN71 Part 9:2005 + A1:2007, ISO 787-9:1995

	6	7	8	9	
pH Value	6.5	6.3	6.1	6.9	Requirement: 3.0-10.0

*** END OF THE REPORT ***