

TEST REPORT

APPLICANT : Xindao B.V.

ADDRESS : P.O. Box 3082, 2280 GB, Rijswijk, The Netherlands

SAMPLE DESCRIPTION : Pattern tumbler

ITEM NO. : P432.20

COUNTRY OF ORIGIN : China

COUNTRY OF DESTINATION : Europe

SAMPLE RECEIVED DATE : 11-Oct-2016

SAMPLE RESUBMISSION DATE : 31-Oct-2016

TURN AROUND TIME : 17-Oct-2016 to 02-Nov-2016

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

TEST REQUESTED	RESULT
Total Lead Content	Pass
PAHs limit according to REACH Annex XVII, Entry 50	Pass
PAHs limit according to German GS Specification document: AfPS GS 2014:01 PAK (PAK=PAHs)	Pass
Bisphenol A (BPA) Content	Pass
Overall Migration for Plastic	Pass
Specific Migration of Heavy Metal	Pass
Overall Migration for Silicone	Pass
Overall Migration for TPR	Pass

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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



Joyce Liu
Lab Manager

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SAMPLE PHOTO



EFSH16100272-CG-01

TO BE CONTINUED

COMPONENT LIST

Component No.	Component	Related Sample(s)
1	Black coating on body (quote from EFSH16100291-CG-01)	A
2	Black PP cover (quote from EFSH16100291-CG-01)	A
3	Grey PP cover (quote from EFSH16100291-CG-01)	B
4	Black plastic (inside of the cup)	A
5	White silicone ring	A, B
6	Black foam pad with sticky (base) (quote from EFSH16100291-CG-01)	A, B
7	Black TPR (Switch of cover)	A

TO BE CONTINUED

TEST RESULT

Total Lead Content

Test Request: Total lead content as specified in entry 63 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 2015/628.

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996
Acid digestion method was used and total lead content was determined by ICP-OES.

Tested Item(s)	Unit	Limit	MDL	Result			
				1	2	3	6
Total Lead	%	0.05	0.001	ND	ND	0.00115	0.00373

Remark:

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: Polycyclic Aromatic Hydrocarbons (PAHs) content as specified in Regulation (EU) 2015/326 amending entry 50 of Annex XVII of REACH Regulation (EC) No 1907/2006.

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

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result
					2
For rubber or plastic of toys or child use articles, will direct contact with skin and mouth.					
Benzo(a)anthracene	56-55-3	mg/kg	0.5	0.2	ND
Chrysene	218-01-9	mg/kg	0.5	0.2	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.2	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	0.5	0.2	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.2	ND
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.2	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.5	0.2	ND
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.2	ND

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

TO BE CONTINUED

TEST RESULT

Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: 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
			2
Benzo(a)pyrene	50-32-8	mg/kg	ND
Benzo(e)pyrene	192-97-2	mg/kg	ND
Benzo(a)anthracene	56-55-3	mg/kg	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	ND
Chrysene	218-01-9	mg/kg	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	ND
Benzo(ghi)perylene	191-24-2	mg/kg	ND
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND
Sum of Acenaphthene, Acenaphthylene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene	-	mg/kg	ND
Naphthalene	91-20-3	mg/kg	ND
Sum 18 PAHs	-	mg/kg	ND
Summary to above mentioned requirement:	For Category 1		Pass

Remark:

mg/kg = milligram per kilogram

ND = not detected, less than 0.2 mg/kg

As per client's request, only the appointed materials have been tested.

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

Bisphenol A (BPA) Content

Test Requested : In accordance with French Law No. 2012/1442, DGCCRF information notice 2004/64 and (EC) No 1935/2004 on materials in contact with foodstuffs.

Test Method : Extraction with organic solvent, analysis by GC-MS and LC-MS

Test item(s)	Limit	Unit	MDL	Result
				2
Bisphenol A (BPA) content	Not Detectable	mg/kg	0.1	ND

Remark:

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

As per client's request, only the appointed materials have been tested.

Overall Migration

Test Requested : To determine the Overall Migration for compliance with Commission Regulation (EU) No 10/2011 and its amendments relating to plastic materials and articles intended to come into contact with foodstuffs.

Test Method : By reference to EU 10/2011 for selection of test condition;
With reference to EN1186-1:2002 for selection of test methods;
or EN1186-3:2002 aqueous food simulants by total immersion method;
or EN1186-9:2002 aqueous food simulants by article filling method;
or EN1186-2:2002 olive oil by total immersion method;
or EN1186-8:2002 olive oil by article filling method;
or EN 1186-14:2002 substitute test

Simulant used	Time	Temperature	Max. Permissible Limit (mg/dm ²)	Result (mg/dm ²)
				4
3% Acetic Acid (W/V) Aqueous Solution	4hrs	100°C	10	<3.0
50% Ethanol (V/V) Aqueous Solution	4hrs	100°C	10	3.8

Note:

- (1) mg/dm² = milligram per square decimeter
- (2) Analytical tolerance of aqueous simulants is 1 mg/dm²
- (3) Analytical tolerance of fatty food simulants is 3 mg/dm²
- (4) Test condition & simulant were specified by client.

TO BE CONTINUED

TEST RESULT

Specific Migration of Heavy Metal

Test Requested : To determine the Specific Migration of Heavy Metal for compliance with Commission Regulation (EU) No 10/2011 and its amendment Regulation (EU) 2016/1416 on plastic materials and articles intended to come into contact with food.

Test Method : With reference to Regulation (EU) 10/2011 and its amendment Regulation (EU) 2016/1416 for selection of test condition and EN 13130-1:2004 for test preparation method; analysis was performed by ICP-OES.

Simulant Used: 3% Acetic Acid (W/V) Aqueous Solution

Test Condition: 100°C 4hours

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result
				4
Aluminium	1	mg/kg	0.1	ND
Barium	1	mg/kg	0.25	ND
Cobalt	0.05	mg/kg	0.05	ND
Copper	5	mg/kg	0.25	ND
Iron	48	mg/kg	0.25	ND
Lithium	0.6	mg/kg	0.5	ND
Manganese	0.6	mg/kg	0.05	ND
Zinc	5	mg/kg	0.5	ND

Note:

- (1) mg/kg = milligram per kilogram
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected(<MDL)
- (4) Test condition & simulant were specified by client.

Overall Migration

Test Requested : In accordance with Council of Europe Resolution AP (2004) 5.

Test Method : With reference to EN 1186-1:2002 for selection of conditions and test methods;
or EN 1186-3:2002 aqueous food simulants by total immersion method;
or EN 1186-9:2002 aqueous food simulants by article filling method;
or EN 1186-2:2002 olive oil by total immersion method;
or EN 1186-8:2002 olive oil by article filling method;
or EN 1186-14:2002 substitute test.

Simulant used	Time	Temperature	Max. Permissible Limit (mg/dm ²)	Result (mg/dm ²)
				5
3% Acetic Acid (W/V) Aqueous Solution	4hrs	100°C	10	<3.0
50% Ethanol (V/V) Aqueous Solution	4hrs	100°C	10	4.4

Note:

- (1) mg/dm² = milligram per square decimeter
- (2) Analytical tolerance of aqueous simulants is 1 mg/dm²
- (3) Analytical tolerance of fatty food simulants is 3 mg/dm²
- (4) Test condition & simulant were specified by client.

TO BE CONTINUED

TEST RESULT

Overall Migration

Test Requested : In accordance with Council of Europe Resolution AP (2004) 4 and 93/11/EEC.

Test Method : With reference to EN 1186-1:2002 for selection of conditions and test methods;
or EN 1186-3:2002 aqueous food simulants by total immersion method;
or EN 1186-9:2002 aqueous food simulants by article filling method;
or EN 1186-2:2002 olive oil by total immersion method;
or EN 1186-8:2002 olive oil by article filling method;
or EN 1186-14:2002 substitute test.

Simulant used	Time	Temperature	Max. Permissible Limit (mg/dm ²)	Result (mg/dm ²)
				7
3% Acetic Acid (W/V) Aqueous Solution	4hrs	100°C	10	<3.0
50% Ethanol (V/V) Aqueous Solution	4hrs	100°C	10	6.0

Note:

- (1) mg/dm² = milligram per square decimeter
- (2) Analytical tolerance of aqueous simulants is 1 mg/dm²
- (3) Analytical tolerance of fatty food simulants is 3 mg/dm²
- (4) Test condition & simulant were specified by client.

END OF THE REPORT