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TEST REPORT

Test Report No. : **4396992.58** Version 2 (Supersedes Version 1)
Project No. : **4396992.00**
Test Report Date : **2022-12-20**

Job No. : 22-03751
Applicant : Flashbay Electronics
Building2, Jixun Industrial Park, Xinjiao, Dong'ao Village, Shatian Town,
Huiyang District, Huizhou City, Guangdong Province, P.R. China
Product Name : Water Bottles
Model No. : Nova/NV
Test Requested : 1. Regulation (EC) No 1935/2004, Regulation (EU) 10/2011, EU 2020/1245
and its amendments
- Overall migration
- Specific migration of heavy metals
- Specific migration of primary aromatic amine
2. Overall migration according to Council Europe Resolution AP (2004) 5 on
Silicones Used for Food Contact Applications
3. Extractable heavy metals (23 elements) according to EU Technical Guide
Council of Europe Resolution CM/Res (2013)9 on metals and alloys Used
in Food Contact Materials and Articles
Test Method : Please refer to next pages
Sample Received : 2022-11-18 and 2022-11-23
Testing Period : 2022-11-18 to 2022-12-01

Test Results
- following pages -

Resume:

No.	Parameter	Conclusion
		
1.	Overall migration (EU 10/2011 and EU 2020/1245)	PASS
2.	Specific migration of heavy metals	PASS
3.	Specific migration of Primary Aromatic Amine	PASS
4.	Overall migration (Resolution AP(2004) 5)	PASS
5.	Extractable heavy metals (23 elements)	PASS

Guangzhou, December 20, 2022

Signed for and on behalf of

DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch

Chemical & Mechanical

Devin Ai



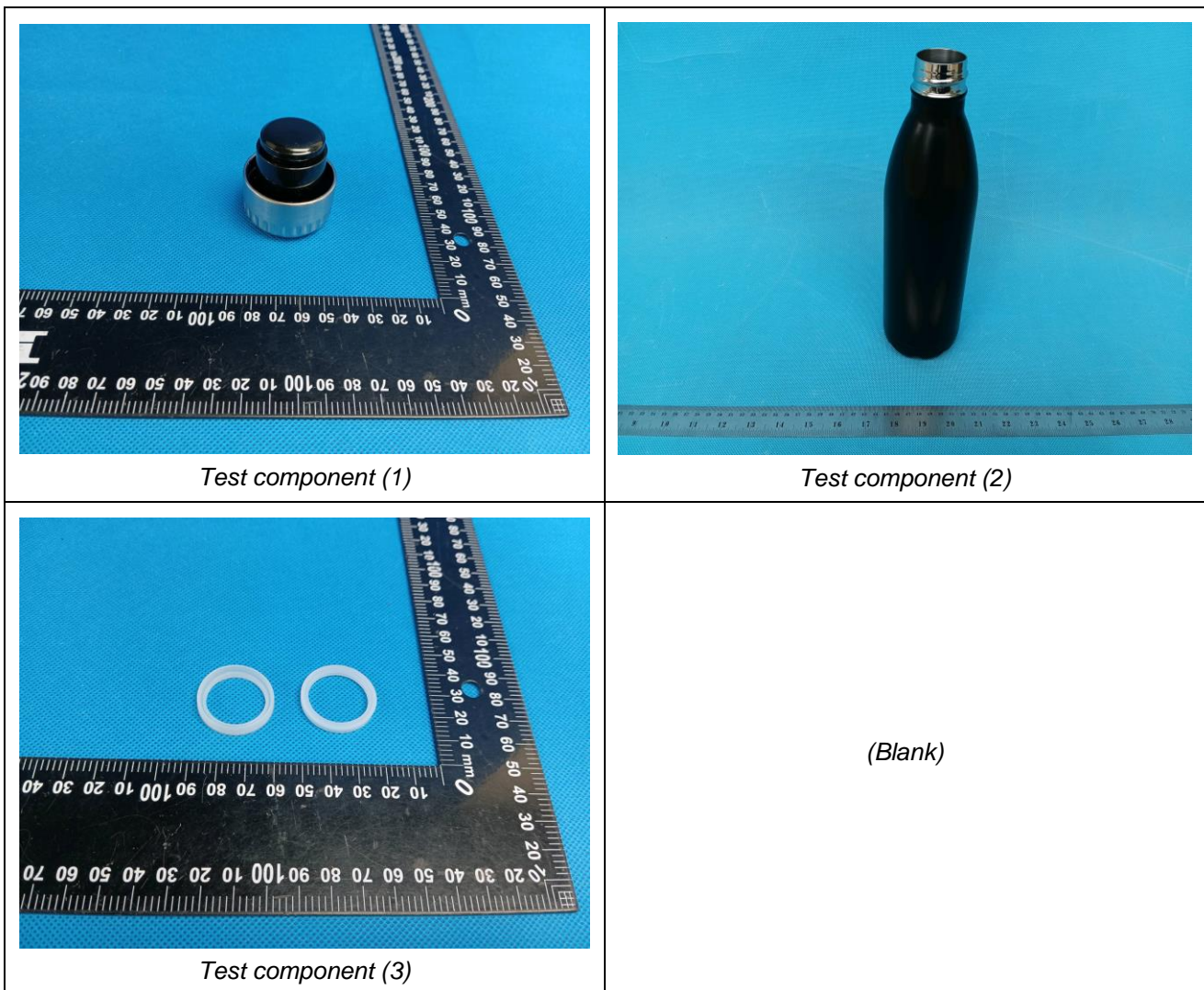
Devin Ai
Laboratory Manager

Attention: Please note that every statement made in this report is only valid for the samples tested and reported herein. This report shall not be reproduced except in full, without the written approval of the testing laboratory.

Sample Descriptions:

No.	Sample Descriptions	Materials (claimed by applicant)
(1)	Lid	PP (Black)
(2)	Body	Stainless steel
(3)	Sealing ring	Silicone (White)

Sample photos:



EST RESULTS

1. Regulation (EC) No 1935/2004, Regulation (EU) 10/2011, EU 2020/1245 and its amendments

Overall migration

With reference to (EU) No.10/2011 and its amendments, analysis by method EN 1186-3: 2022

Parameter	Test Condition	Result (mg/dm ²)			Limit (mg/dm ²)
		(1)			
		1 st	2 nd	3 rd	
Overall migration	10%(v/v) Ethanol, 100°C, 4 h	<3	<3	<3	10
	3%(w/v) Acetic acid, 100°C, 4 h	<3	<3	<3	10
	95%(v/v) Ethanol, 60°C, 6 h	<3	<3	<3	10
	10%(v/v) Ethanol, 60°C, 4 h	4.0	<3	<3	10

Remark:

1. mg/dm² = milligram per square decimeter

Specific migration of heavy metals

With reference to (EU) No. 2020/1245 for selection of conditions and test method for specific migration. Analysis was performed by inductively coupled plasma optical emission spectrometer (ICP-OES) and inductively coupled plasma mass spectrometer (ICP-MS).

Parameter	Test Condition	Result (mg/kg)			MDL (mg/kg)	Limit (mg/kg)
		(1)				
		1 st	2 nd	3 rd		
Barium (Ba)	3%(w/v) Acetic acid, 100°C, 24 h	N.D.	N.D.	N.D.	0.1	1
Cobalt (Co)		N.D.	N.D.	N.D.	0.03	0.05
Copper (Cu)		N.D.	N.D.	N.D.	0.5	5
Iron (Fe)		N.D.	N.D.	N.D.	5.0	48
Lithium (Li)		N.D.	N.D.	N.D.	0.1	0.6
Manganese (Mn)		N.D.	N.D.	N.D.	0.1	0.6
Zinc (Zn)		N.D.	N.D.	N.D.	1	5
Aluminum (Al)		N.D.	N.D.	N.D.	0.5	1
Nickel (Ni)		N.D.	N.D.	N.D.	0.02	0.02
Antimony (Sb)		N.D.	N.D.	N.D.	0.01	0.04

Parameter	Test Condition	Result (mg/kg)			MDL (mg/kg)	Limit (mg/kg)
		(1)				
		1 st	2 nd	3 rd		
Arsenic (As)		N.D.	N.D.	N.D.	0.01	N.D.
Cadmium (Cd)		N.D.	N.D.	N.D.	0.002	N.D.
Chromium (Cr)		N.D.	N.D.	N.D.	0.01	N.D.
Lead (Pb)		N.D.	N.D.	N.D.	0.01	N.D.
Mercury (Hg)		N.D.	N.D.	N.D.	0.01	N.D.
Lanthanum (La)		N.D.	N.D.	N.D.	0.01	0.05
Europium (Eu)		N.D.	N.D.	N.D.	0.01	
Gadolinium (Gd)		N.D.	N.D.	N.D.	0.01	
Terbium (Tb)		N.D.	N.D.	N.D.	0.01	
Tungsten (W)		N.D.	N.D.	N.D.	0.01	

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)
3. MDL = Method Detection Limit

Specific migration of Primary Aromatic Amine (PAA)

With reference to (EU) No. 2020/1245, analysis was performed by Liquid chromatography tandem mass spectrometry.

Parameter	Test Condition	Result (mg/kg)			MDL (mg/kg)	Limit (mg/kg)
		(1)				
		1 st	2 nd	3 rd		
4-Aminobiphenyl	3%(w/v) Acetic acid, 100°C, 24 h	N.D.	N.D.	N.D.	0.002	N.D.
Benzidine		N.D.	N.D.	N.D.	0.002	N.D.
4-Chloro-o-Toluidine		N.D.	N.D.	N.D.	0.002	N.D.
2-Naphthylamine		N.D.	N.D.	N.D.	0.002	N.D.
o-Aminoazotoluene		N.D.	N.D.	N.D.	0.002	N.D.
5-Nitro-o-toluidine		N.D.	N.D.	N.D.	0.002	N.D.
4-Chloro-Aniline		N.D.	N.D.	N.D.	0.002	N.D.
4-Methoxy-m-phenylenediamine		N.D.	N.D.	N.D.	0.002	N.D.
4,4'-Methylenedianiline		N.D.	N.D.	N.D.	0.002	N.D.
3,3'-Dichlorobenzidine		N.D.	N.D.	N.D.	0.002	N.D.
3,3'-Dimethoxybenzidine		N.D.	N.D.	N.D.	0.002	N.D.
3,3'-Dimethylbenzidine		N.D.	N.D.	N.D.	0.002	N.D.
4,4'-Methylenedi-o-toluidine		N.D.	N.D.	N.D.	0.002	N.D.

Parameter	Test Condition	Result (mg/kg)			MDL (mg/kg)	Limit (mg/kg)
		(1)				
		1 st	2 nd	3 rd		
2-Methoxy-5-Methylaniline		N.D.	N.D.	N.D.	0.002	N.D.
4,4'-Methylene bis(2-chloroaniline)		N.D.	N.D.	N.D.	0.002	N.D.
4,4-Diaminodiphenylether		N.D.	N.D.	N.D.	0.002	N.D.
4,4'-Thioaniline		N.D.	N.D.	N.D.	0.002	N.D.
o-Toluidine		N.D.	N.D.	N.D.	0.002	N.D.
2,4-Toluenediamine		N.D.	N.D.	N.D.	0.002	N.D.
2,4,5-Trimethylaniline		N.D.	N.D.	N.D.	0.002	N.D.
o-Anisidine		N.D.	N.D.	N.D.	0.002	N.D.
4-Aminoazobenzol		N.D.	N.D.	N.D.	0.002	N.D.
Other PAAs		N.D.	N.D.	N.D.	0.002	0.01

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)
3. MDL = Method Detection Limit
4. Those analyses were performed in DEKRA's partner lab.

2. Overall migration according to Council Europe Resolution AP (2004) 5 on Silicones Used for Food Contact Applications

With reference to Resolution AP (2004) 5, analysis by method EN 1186-3: 2022.

Parameter	Test Condition	Result (mg/dm ²)			Limit (mg/dm ²)
		(3)			
		1 st	2 nd	3 rd	
Overall migration	10%(v/v) Ethanol, 100°C, 4 h	<3	<3	<3	10
	3%(w/v) Acetic acid, 100°C, 4 h	<3	<3	<3	10
	95%(v/v) Ethanol, 60°C, 6 h	<3	<3	<3	10
	10%(v/v) Ethanol, 60°C, 4 h	26.6	<3	<3	10

Remark:

1. mg/dm² = milligram per square decimeter
2. For repeated use articles and materials, compliance with the overall migration limit shall be verified on the basis of the level of the overall migration found in the third test.

3. Extractable heavy metals (23 elements) according to EU Technical Guide Council of Europe Resolution CM/Res(2013)9 on metals and alloys Used in Food Contact Materials and Articles

With reference to European Resolution CM/Res (2013)9 on metals and alloys used in food contact materials and articles. Analyzed by inductively coupled plasma optical emission spectrometer (ICP-OES) and inductively coupled plasma mass spectrometer (ICP-MS).

Parameter	Result(s) of 1 st + 2 nd Migration (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	(2)		
Aluminium (Al)	N.D.	0.2	35
Barium (Ba)	N.D.	0.2	8.4
Chromium (Cr)	0.354	0.1	1.75
Copper (Cu)	N.D.	0.2	28
Iron (Fe)	0.436	0.2	280
Manganese (Mn)	N.D.	0.2	12.6
Nickel (Ni)	N.D.	0.1	0.98
Molybdenum (Mo)	N.D.	0.1	0.84
Magnesium (Mg)	N.D.	0.2	--
Titanium (Ti)	N.D.	0.2	--
Tin (Sn)	N.D.	2	700
Zinc (Zn)	N.D.	0.2	35
Beryllium (Be)	N.D.	0.02	0.07
Antimony (Sb)	N.D.	0.02	0.28
Mercury (Hg)	N.D.	0.004	0.021
Lithium (Li)	N.D.	0.02	0.336
Cobalt (Co)	N.D.	0.02	0.14
Silver (Ag)	N.D.	0.02	0.56
Lead (Pb)	N.D.	0.02	0.07
Vanadium (V)	N.D.	0.02	0.07
Arsenic (As)	N.D.	0.004	0.014
Cadmium (Cd)	N.D.	0.004	0.035
Thallium (Tl)	N.D.	0.0002	0.0007

Parameter	Result(s) of 3 rd Migration (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	(2)		
Aluminium (Al)	N.D.	0.1	5
Barium (Ba)	N.D.	0.1	1.2
Chromium (Cr)	0.187	0.05	0.25
Copper (Cu)	N.D.	0.1	4
Iron (Fe)	1.645	0.1	40
Manganese (Mn)	N.D.	0.1	1.8

Parameter	Result(s) of 3 rd Migration (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	(2)		
Nickel (Ni)	N.D.	0.05	0.14
Molybdenum (Mo)	N.D.	0.05	0.12
Magnesium (Mg)	N.D.	0.1	--
Titanium (Ti)	N.D.	0.1	--
Tin (Sn)	N.D.	1	100
Zinc (Zn)	N.D.	0.1	5
Beryllium (Be)	N.D.	0.01	0.01
Antimony (Sb)	N.D.	0.01	0.04
Mercury (Hg)	N.D.	0.002	0.003
Lithium (Li)	N.D.	0.01	0.048
Cobalt (Co)	N.D.	0.01	0.02
Silver (Ag)	N.D.	0.01	0.08
Lead (Pb)	N.D.	0.01	0.01
Vanadium (V)	N.D.	0.01	0.01
Arsenic (As)	N.D.	0.002	0.002
Cadmium (Cd)	N.D.	0.002	0.005
Thallium (Tl)	N.D.	0.0001	0.0001

Remark:

1. mg/kg = milligram per kilogram
2. N.D. = Not Detected (below MDL)
3. MDL = Method Detection Limit
4. The test condition was 0.5% citric acid at 100°C for 24 h.

Remark:

The information of Annex was submitted by the client. DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch takes no responsibility for any mistake caused by inaccuracy and/or invalid information.

Annex 1



---End of Report---