

Test Report

Number: GZHH00466317

Applicant: FLASHBAY ELECTRONICS
BUILDING2 ,JIXUN INDUSTRIAL PARK, XINJIAO,
DONG'AO VILLAGE ,SHATIAN TOWN, HUIYANG
DISTRICT, HUIZHOU CITY, GUANGDONG PROVINCE,
P.R.CHINA

Date: Sep 08, 2022

Sample Description:

Four (4) pieces of submitted sample said to be :
Item Name : **Water Bottle**
Item No. : **Fuel/FUL**
Additional Material and Wet : Yes
Paint Provided
Country of Origin : China
Date Sample Received : Aug 31, 2022
Testing Period : Aug 31, 2022 ~ Sep 07, 2022

Tested sample



Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

To be continued



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Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Tested component(s) of submitted sample(s)	EU Technical Guide Council of Europe Resolution CM/Res(2013)9 on metals and alloys Used in Food Contact Materials and Articles on specific migration of heavy metal	Pass
	European Commission Regulation No. 10/2011 and Amendment No. 2016/1416 and No 2017/752 and No. 2020/1245 and Regulation 1935/2004 on overall migration	Pass
	European Commission Regulation No. 10/2011 Annex II and Amendment No. 2016/1416 and No. 2017/752 and No. 2020/1245 and Regulation 1935/2004 on specific migration of heavy metal content	Pass
	European Commission Regulation No. 10/2011 Annex I and II and Amendments No. 2020/1245 and Regulation 1935/2004 on specific migration of Primary Aromatic Amines	Pass
	Council Europe Resolution AP (2004) 5 on Silicones Used for Food Contact Applications on Overall Migration	Pass

Authorized by:
For Intertek Testing Services Shenzhen Ltd.
Guangzhou Branch, Hardlines



Victor T.J. Wang
Assistant General Manager



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Tests Conducted

1 Release Testing on Metals and Alloys Used in Food Contact Materials and Articles

With reference to EU Technical Guide "Council of Europe Resolution CM/Res(2013)9 on metals and alloys Used in Food Contact Materials and Articles". Migration test was carried out and heavy metal content was determined by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) and Inductively Coupled Plasma Mass Spectrometer (ICP-MS).

I. Test Condition:
Temperature: 70 °C Time: 2 hours

II. Test Result:
Food simulant: Water

Tested component (3), (4) :

Elements	Result 1 st test (mg/kg)	Result 2 nd test (mg/kg)	Result 1 st test+Result 2 nd test (mg/kg)	Result 3 rd test (mg/kg)	Reporting Limit (mg/kg)	7*Limit (mg/kg)	Limit (mg/kg)
Silver (Ag)	ND	ND	ND	ND	0.05	0.56	0.08
Aluminium (Al)	ND	ND	ND	ND	1	35	5
Chromium (Cr)	ND	ND	ND	ND	0.02	1.75	0.250
Cobalt (Co)	ND	ND	ND	ND	0.01	0.14	0.02
Copper (Cu)	ND	ND	ND	ND	0.5	28	4
Iron (Fe)	ND	ND	ND	ND	1	280	40
Manganese (Mn)	ND	ND	ND	ND	0.1	12.6	1.8
Molybdenum(Mo)	ND	ND	ND	ND	0.02	0.84	0.12
Nickel (Ni)	ND	ND	ND	ND	0.1	0.98	0.14
Tin (Sn)	ND	ND	ND	ND	10	700	100
Vanadium (V)	ND	ND	ND	ND	0.005	0.07	0.01
Zinc (Zn)	ND	ND	ND	ND	1	35	5
Antimony (Sb)	ND	ND	ND	ND	0.01	0.28	0.04
Arsenic (As)	ND	ND	ND	ND	0.001	0.014	0.002
Barium (Ba)	ND	ND	ND	ND	0.1	8.4	1.2
Beryllium (Be)	ND	ND	ND	ND	0.01	0.07	0.01
Cadmium (Cd)	ND	ND	ND	ND	0.001	0.035	0.005
Lead (Pb)	ND	ND	ND	ND	0.005	0.070	0.010
Lithium (Li)	ND	ND	ND	ND	0.010	0.336	0.048
Mercury (Hg)	ND	ND	ND	ND	0.003	0.021	0.003
Thallium (Tl)	ND	ND	ND	ND	0.0001	0.0007	0.0001
Magnesium(Mg)	ND	ND	ND	ND	1	-	-
Titanium(Ti)	ND	ND	ND	ND	1	-	-

ND = Not detected(less than reporting limit)

Remark : The submitted sample is a repeated use article. The migration test was carried out three times on the same article. The sum of the results of the first and second tests should not exceed seven times the limit (Result 1st test + Result 2nd test < 7 * limit) and the Result 3rd test shouldn't exceed the limit.



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Ratio of food contact surface area to volume of component (3) used to establish the compliance of material or article = 2.90 dm^2 : 493 mL.

Ratio of food contact surface area to volume of component (4) used to establish the compliance of material or article = 0.40 dm^2 : 67 mL.

Tested component(s) : See component list in the last section of this report.

2 Overall Migration Test

With reference to Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition:

Aqueous food simulant:

Test no.	Time and temperature
OM3	2 hours at 70 °C

Tested component	Food simulant	Time(hour)	Temperature(°C)
(1)	20% (v/v) Ethanol	2	70

II. Test Results :

Tested component(1):

Food Simulant	Result(mg/dm ²)			Reporting Limit (mg/dm ²)	Limit (mg/dm ²)
	1 st migration	2 nd migration	3 rd migration		
20% (v/v) Ethanol	ND	ND	ND	3	10

ND = Not detected(less than reporting limit)

Remark : As per client's request, the above condition and food simulant was used for the test.

Ratio of food contact surface area to volume of component (1) used to establish the compliance of material or article = 1.72 dm^2 : 739 mL.

Tested component(s) : See component list in last section of this report.



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3 Specific Migration of Heavy Metal Content

With reference to Commission Regulation (EU) No. 10/2011 and its amendments

I. Test condition:

Food simulant : 3% (w/v) Acetic acid
Temperature : 70 °C

Time : 2 hours

II. Test result :

Tested component(1) :

Element	Result (mg/kg)			Reporting limit (mg/kg)	Limit (mg/kg)
	1 st migration	2 nd migration	3 rd migration		
Aluminum(Al)	ND	ND	ND	0.1	1
Antimony(Sb)	ND	ND	ND	0.01	0.04
Arsenic(As)	ND	ND	ND	0.01	ND
Barium(Ba)	ND	ND	ND	0.1	1
Cadmium(Cd)	ND	ND	ND	0.002	ND
Chromium(Cr)	ND	ND	ND	0.01	ND
Cobalt(Co)	ND	ND	ND	0.03	0.05
Copper(Cu)	ND	ND	ND	1	5
Iron(Fe)	ND	ND	ND	5	48
Lead(Pb)	ND	ND	ND	0.01	ND
Lithium(Li)	ND	ND	ND	0.1	0.6
Manganese(Mn)	ND	ND	ND	0.1	0.6
Mercury(Hg)	ND	ND	ND	0.01	ND
Nickel(Ni)	ND	ND	ND	0.01	0.02
Zinc(Zn)	ND	ND	ND	1	5
Europium(Eu)	ND	ND	ND	0.01	0.05
Gadolinium(Gd)	ND	ND	ND	0.01	0.05
Lanthanum(La)	ND	ND	ND	0.01	0.05
Terbium(Tb)	ND	ND	ND	0.01	0.05
Sum of (Eu, Gd, La, Tb)	ND	ND	ND	0.04	0.05

ND = Not detected(less than reporting limit)

Tested component(s) : See component list in last section of this report.



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4 Specific Migration of Primary Aromatic Amines

with reference to Commission Regulation (EU) No. 10/2011 and its amendments and JRC Technical Guidelines EUR 24815 EN 2011.

I. Test condition:

Tested component	Food simulant	Time(hour)	Temperature (°C)
(1)	3% (w/v) Acetic acid	2	70

II. Test Result:

Tested component (1):

Test Item	CAS No.	Result (mg/kg)			Reporting Limit (mg/kg)	Limit (mg/kg)	
		1 st migration	2 nd migration	3 rd migration			
1	4-Aminodiphenyl	92-67-1	ND	ND	ND	0.002	ND
2	Benzidine	92-87-5	ND	ND	ND	0.002	ND
3	4-Chloro-o-Toluidine	95-69-2	ND	ND	ND	0.002	ND
4	2-Naphthylamine	91-59-8	ND	ND	ND	0.002	ND
5	o-Aminoazotoluene	97-56-3	ND	ND	ND	0.002	ND
6	2-Amino-4-Nitrotoluene	99-55-8	ND	ND	ND	0.002	ND
7	p-Chloroaniline	106-47-8	ND	ND	ND	0.002	ND
8	2,4-Diaminoanisole	615-05-4	ND	ND	ND	0.002	ND
9	4,4'-Diaminodiphenylmethane	101-77-9	ND	ND	ND	0.002	ND
10	3,3'-Dichlorobenzidine	91-94-1	ND	ND	ND	0.002	ND
11	3,3'-Dimethoxybenzidine	119-90-4	ND	ND	ND	0.002	ND
12	3,3'-Dimethylbenzidine	119-93-7	ND	ND	ND	0.002	ND
13	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	ND	ND	ND	0.002	ND
14	p-Cresidine	120-71-8	ND	ND	ND	0.002	ND
15	4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	ND	ND	ND	0.002	ND
16	4,4'-Oxydianiline	101-80-4	ND	ND	ND	0.002	ND
17	4,4'-Thiodianiline	139-65-1	ND	ND	ND	0.002	ND
18	o-Toluidine	95-53-4	ND	ND	ND	0.002	ND
19	2,4-Toluylenediamine	95-80-7	ND	ND	ND	0.002	ND
20	2,4,5-Trimethylaniline	137-17-7	ND	ND	ND	0.002	ND
21	o-Anisidine	90-04-0	ND	ND	ND	0.002	ND
22	4-Aminoazobenzene	60-09-3	ND	ND	ND	0.002	ND
23	m-Phenylendiamine	108-45-2	ND	ND	ND	0.002	ND
24	Benzoguanamin	91-76-9	ND	ND	ND	0.05	5
25	4,4'-Methylenebis(3-chloro-2,6-diethylaniline)	106246-33-7	ND	ND	ND	0.01	0.05
26	Total of other primary aromatic amine	-	ND	ND	ND	0.01	0.01



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Other primary aromatic amines are p-Phenyldiamine, Aniline, 2,4-Xylidine, 2,6-Xylidine, 3-Methoxyaniline, 2,6- Toluene-diamine, 1,5-Diaminonaphthalene, 4-Ethoxyaniline, 3-Amino-4-methoxybenzanilide, 3-Amino-4-methylbenzamide, 2-Amino-5-methylbenzoic acid

Tested component(s) : See component list in last section of the report.

5 Overall Migration Test for Silicones

As per Council Europe Resolution AP (2004) 5 on silicones used for food contact applications, selection of test condition & food simulants by Commission Regulation (EU) No. 10/2011 and its amendments.

I. Test condition:

<u>Aqueous food simulant:</u>	
<u>Test no.</u>	<u>Time and temperature</u>
OM3	2 hours at 70 °C

<u>Tested component</u>	<u>Food simulant</u>	<u>Time(hour)</u>	<u>Temperature(°C)</u>
(2)	20% (v/v) Ethanol	2	70

II. Test results

<u>Food Simulant</u>	<u>Result(mg/dm²)</u>	<u>Reporting Limit (mg/dm²)</u>	<u>Limit (mg/dm²)</u>
	(2)		
20% (v/v) Ethanol	ND	1	10

ND = Not detected(less than reporting limit)

Tested component(s) : See component list in last section of this report.

Components list:

- (1) Black PP plastic (lid).
- (2) Semi-transparent white silicone (sealing ring of lid).
- (3) Silver color stainless steel (inner body).
- (4) Silver color stainless steel (ball).



Tests Conducted

Reference photo



Remark: The products in the reference photos are not tested in this report. It's declared by the applicant that the materials of those items are identical to the particular tested sample. They are just included in the report for reference.

End of report

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

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