

Test Report

Number: GZHH00531331

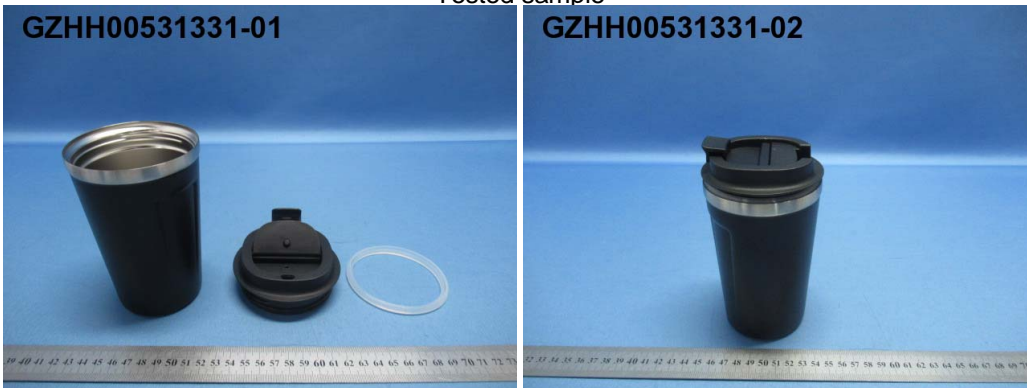
Applicant: FLASHBAY ELECTRONICS
BUILDING2, JIXUN INDUSTRIAL PARK, XINJIAO,
DONG'AO VILLAGE, SHATIAN TOWN, HUIYANG
DISTRICT, HUIZHOU CITY, GUANGDONG PROVINCE,
P.R.CHINA

Date: Apr 02, 2024

Sample Description:

Thirteen (13) pieces of submitted sample said to be :
Item Name : **Travel Cups**
Item No. : **Aroma (AM)**
Country of Origin : China
Date Sample Received : Mar 21, 2024
Testing Period : Mar 21, 2024 ~ Apr 02, 2024

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> Tested component(s) of submitted sample(s)	<u>Standard</u>	<u>Result</u>
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Section 5 and Annex 2 on specific migration of Primary Aromatic Amines	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) section 5 on overall migration	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) annex 9 on overall migration of silicone materials and articles	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Annex 9 on specific migration of heavy metal content of silicone materials and articles	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) annex 9 on specific migration of Primary Aromatic Amines of silicone materials and articles	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) annex 9 on volatile organic matter of silicone materials and articles	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) section 4 on Total Heavy Metal content	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) section 4 on Specific Migration of Aluminum Content	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Section 5 and Annex 2 on specific migration of heavy metal content	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Section 5 and Annex 2 on specific migration of Bisphenol A content	Pass
	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Section 5 and Annex 2 on Phthalate content	Pass

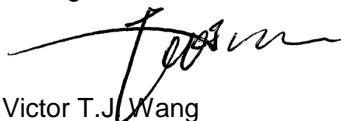
To be continued



Conclusion:

<u>Tested sample</u>	<u>Standard</u>	<u>Result</u>
Tested component(s) of submitted sample(s)	Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Section 5 and Annex 2 on specific migration of Phthalate content	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 Specific Migration of Primary Aromatic Amines
with reference to Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Annex 4.

I. Test condition:

Tested component	Food simulant	Time(hour)	Temperature (°C)
(1), (4)	3% (w/v) Acetic acid	24	40

II. Test Result:

Tested component (1), (4):

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	0.002	ND
2	Benzidine	92-87-5	ND	ND	0.002	ND
3	4-Chloro-o-Toluidine	95-69-2	ND	ND	0.002	ND
4	2-Naphthylamine	91-59-8	ND	ND	0.002	ND
5	o-Aminoazotoluene	97-56-3	ND	ND	0.002	ND
6	2-Amino-4-Nitrotoluene	99-55-8	ND	ND	0.002	ND
7	p-Chloroaniline	106-47-8	ND	ND	0.002	ND
8	2,4-Diaminoanisole	615-05-4	ND	ND	0.002	ND
9	4,4'-Diaminodiphenylmethane	101-77-9	ND	ND	0.002	ND
10	3,3'-Dichlorobenzidine	91-94-1	ND	ND	0.002	ND
11	3,3'-Dimethoxybenzidine	119-90-4	ND	ND	0.002	ND
12	3,3'-Dimethylbenzidine	119-93-7	ND	ND	0.002	ND
13	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	ND	ND	0.002	ND
14	p-Cresidine	120-71-8	ND	ND	0.002	ND
15	4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	ND	ND	0.002	ND
16	4,4'-Oxydianiline	101-80-4	ND	ND	0.002	ND
17	4,4'-Thiodianiline	139-65-1	ND	ND	0.002	ND
18	o-Toluidine	95-53-4	ND	ND	0.002	ND
19	2,4-Toluylenediamine	95-80-7	ND	ND	0.002	ND
20	2,4,5-Trimethylaniline	137-17-7	ND	ND	0.002	ND
21	o-Anisidine	90-04-0	ND	ND	0.002	ND
22	4-Aminoazobenzene	60-09-3	ND	ND	0.002	ND
23	m-Phenylenediamine	108-45-2	ND	ND	0.002	ND
24	Benzoguanamin	91-76-9	ND	ND	0.05	5
25	4,4'-Methylenebis(3-chloro-2,6-diethylaniline)	106246-33-7	ND	ND	0.01	0.05
26	Total of other primary aromatic amine	-	ND	ND	0.01	0.01

ND = Not detected (less than reporting limit)



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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.

2 Overall Migration Test

With reference to Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) annex 4.

I. Test condition:

Tested component	Food simulant	Time(hour)	Temperature(°C)
(1), (4)	10% (v/v) Ethanol	2	100
	3% (w/v) Acetic acid	2	100
	95%(v/v) Ethanol	4	60
	Iso -octane	2	60

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		
10% (v/v) Ethanol	ND	ND	ND	3	10
3% (w/v) Acetic acid	ND	ND	ND	3	10
95%(v/v) Ethanol	ND	ND	ND	3	10
Iso -octane	ND	ND	ND	3	10

Tested component(4):

Food Simulant	Result(mg/dm ²)			Reporting Limit (mg/dm ²)	Limit (mg/dm ²)
	1 st migration	2 nd migration	3 rd migration		
10% (v/v) Ethanol	ND	ND	ND	3	10
3% (w/v) Acetic acid	ND	ND	ND	3	10
95%(v/v) Ethanol	ND	ND	ND	3	10
Iso -octane	6	ND	ND	3	10

ND = Not detected(less than reporting limit)

Ratio of food contact surface area to volume used to establish the compliance of material or article:

Component (1) = 1 dm² : 337 mL
 Component (4) = 1 dm² : 35000 mL

Verification of compliance with the limit was based on the result obtained from 3rd migration and results of 3rd migration < 2nd migration < 1st migration.

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



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3 Overall Migration Test on silicone materials and articles

As per Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) annex 4.

I. Test condition:

Aqueous food simulant:	
Test no.	Time and temperature
OM5	2 hours at 100 °C

Fatty food simulant:	
Test no.	Time and temperature
OM5	1 hour at 121 °C

Tested component	Food simulant	Time(hour)	Temperature(°C)
(2)	10% (v/v) Ethanol	2	100
	3% (w/v) Acetic acid	2	100
	95%(v/v) Ethanol	4	60
	Iso –octane	2	60

II. Test Results :

Food Simulant	Result(mg/dm ²)	Reporting Limit (mg/dm ²)	Limit (mg/dm ²)
	(2)		
10% (v/v) Ethanol	ND	1	10
3% (w/v) Acetic acid	ND	1	10
95%(v/v) Ethanol	2	1	10
Iso –octane	2	1	10

ND = Not detected(less than reporting limit)

Ratio of food contact surface area to volume used to establish the compliance of material or article = 1dm² : 972mL.

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



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Tests Conducted

4 Specific Migration of Heavy Metal on silicone materials and articles

As per Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) annex 4.

I. Test condition:

Temperature : 40 °C

Time : 24 hours

II. Test result :

Food simulant	Element	Result (mg/kg)	Reporting limit (mg/kg)	Limit (mg/kg)
		(2)		
3% (w/v) Acetic acid in aqueous solution	Barium	ND	0.1	1 (max.)
	Cobalt	ND	0.03	0.05 (max.)
	Copper	ND	1	5 (max.)
	Iron	ND	5	48 (max.)
	Lithium	ND	0.1	0.6 (max.)
	Manganese	ND	0.1	0.6 (max.)
	Zinc	ND	1	5 (max.)
	Aluminum	ND	0.1	1(max)

ND = Not detected(less than reporting limit)

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

5 Specific Migration of Primary Aromatic Amines on silicone materials and articles

As per Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) annex 4.

I. Test condition :

Tested component	Food simulant	Time(hour)	Temperature(°C)
(2)	3% (w/v) Acetic acid	24	40

II. Test result :

Food simulant	Result(mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
	(2)		
3% (w/v) Acetic acid	ND	0.01	ND

ND = Not detected(less than reporting limit)

Remark: Ratio of food contact surface area to volume used for the testing : 1 dm² : 972 ml

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



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Tests Conducted

6 Volatile Organic Matter

By gravimetric analysis.

I. Test condition:

Temperature: 200°C

Time: 4 hours

II. Result :

<u>Tested component of submitted sample</u>	<u>Result (%)</u>	<u>Reporting limit (%)</u>	<u>Limit (%)</u>
(2)	0.3	0.1	0.5

Tested Components : See component list in last section of this report.

7 Total Heavy Metal Content

By acid digestion and followed by Inductively Coupled Plasma Optical Emission Spectrometry analysis.

<u>Element</u>	<u>Result (%)</u>	<u>Reporting limit (%)</u>	<u>Limit (%)</u>
	(3)	(%)	
Lead (Pb)	ND	0.001	0.05
Cadmium (Cd)	ND	0.001	0.01
Arsenic (As)	0.004	0.001	0.03

ND = Not detected(less than reporting limit)

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

8 Specific Migration of Aluminum Content

Migration test was carried out and heavy metal content was determined by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) .

I. Test condition:

<u>Food simulant</u>	<u>Time(hour)</u>	<u>Temperature(°C)</u>
3% (w/v) Acetic acid	24	40

II. Test result :

<u>Test Item</u>	<u>Result (mg/L)</u>	<u>Reporting limit (mg/L)</u>	<u>Limit(mg/L)</u>
	(3)	(mg/L)	
Specific Migration of Aluminum Content	ND	1	10(max.)



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Tests Conducted

ND = Not detected(less than reporting limit)

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

9 Specific Migration of Heavy Metal Content

With reference to Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Annex 4.

I. Test condition:

Food simulant : 3% (w/v) Acetic acid

Temperature : 40 °C

Time : 24 hours

II. Test result :

Tested component(1), (4) :

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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Tests Conducted

10 Specific Migration of Bisphenol A Test for Plastic Food Contacting Materials/Articles

With reference to Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Annex 4.

I. Test condition:

Food simulant	Time(hour)	Temperature(°C)
3% (w/v) Acetic acid	24	40

II. Test result:

Food Simulant	Result(mg/kg) (4)	Reporting Limit (mg/kg)	Limit (mg/kg)
3% (w/v) Acetic acid	ND	0.01	0.05

ND = Not detected(less than reporting limit)

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

11 Phthalate Content

With reference to Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Annex 4.

Phthalate	CAS No.	Result (%)	Reporting Limit (%)	Limit (%)
		Tested component (4)		
Dibutyl phthalate (DBP)	84-74-2	ND	0.005	0.05
Di-(2-ethyl hexyl) phthalate (DEHP)	117-81-7	ND	0.005	0.1
Benzyl butyl phthalate (BBP)	85-68-7	ND	0.005	0.1
Di-isononyl phthalate (DINP)	28553-12-0	ND	0.005	0.1
Di-isodecyl phthalate (DIDP)	26761-40-0	ND	0.005	0.1

ND = Not detected (less than reporting limit)

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



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Tests Conducted

12 Specific Migration of Phthalate Content Test

With reference to Swiss Ordinance on Materials and Articles in Contact with Food (SR 817.023.21) Annex 4.

I. Test condition:

Tested component	Food simulant	Time(hour)	Temperature(°C)
(4)	95%(v/v) Ethanol	24	40

II. Test result :

Food simulant : Fatty food simulant / 95% Ethanol:

Tested component (4)					
Phthalate	Result(mg/kg)			Reporting Limit (mg/kg)	Limit (mg/kg)
	1 st migration	2 nd migration	3 rd migration		
Butyl benzy phthalate (BBP)	ND	ND	ND	1	30
Bis (2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	1	1.5
Dibutyl phthalate (DBP)	ND	ND	ND	0.2	0.3
Di-(iso-nonyl) Phthalate (DINP) + Di-(iso-decyl) phthalate (DIDP)	ND	ND	ND	1	9
Diallyl phthalate (DAP)	ND	ND	ND	0.01	ND

ND = Not detected(less than reporting limit)

Compliance: 3rd migration result < limit

1st migration result ≤ 2nd migration result ≤ 3rd migration result after consideration of method variation

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

Components list:

- (1) Black PP plastic (lid).
- (2) Semi-transparent white silicone (seal ring).
- (3) Silver color 304 stainless steel (inner body).
- (4) Black unvulcanized TPR plastic (sealing stopper of lid).



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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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