

Test Report

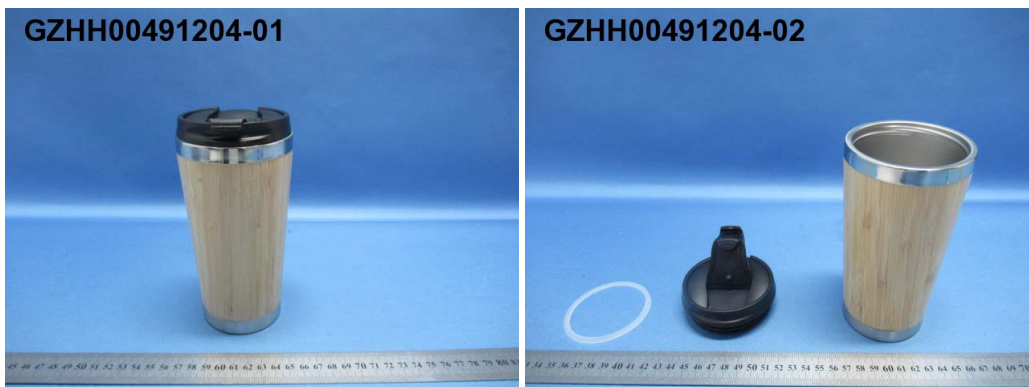
Number: GZHH00491204

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

Date: Jun 08, 2023

Sample Description:

Three (3) pieces of submitted sample said to be :
Item Name : **Travel Cup**
Item No. : **EcoSip/EP**
Country of Origin : China
Date Sample Received : Apr 28, 2023
Testing Period : Apr 28, 2023 ~ Jun 08, 2023



Tests conducted:

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

To be continued



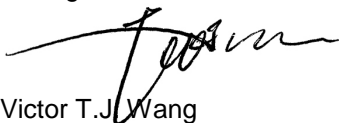
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Conclusion:

<u>Tested sample</u> Tested component(s) of submitted sample(s)	<u>Standard/Testing Item</u>	<u>Result</u>
	Council Europe Resolution AP (2004) 5 on Silicones Used for Food Contact Applications on Overall Migration	Pass
	European Commission Regulation No. 10/2011 Annex I and its amendment No. 2018/213 and No. 2020/1245 and Regulation 1935/2004 on specific migration of Bisphenol A	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
	European Commission Regulation No. 10/2011 Annex I and its amendment EU 2020/1245 and Regulation 1935/2004 on specific migration of Phthalate content	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
	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 Annex I and Regulation(EC) 1935/2004 on 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 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.

Test condition :

Aqueous food simulant:	
Test no.	Time and temperature
OM2	10 days at 40 °C
Fatty food simulant:	
Test no.	Time and temperature
OM2	10 days at 40 °C

Tested component	Food simulant	Time(hour)	Temperature(°C)
(3)	10% (v/v) Ethanol	240	40
	3% (w/v) Acetic acid	240	40
	95%(v/v) Ethanol	240	40
	Iso –octane	48	20

Test Item	Result					Units	D.L.	Limit
	3	-	-	-	-			
10% (v/v) Ethanol	ND	-	-	-	-	mg/dm ²	1	10
3% (w/v) Acetic acid	ND	-	-	-	-	mg/dm ²	1	10
95% (v/v) Ethanol	ND	-	-	-	-	mg/dm ²	1	10
Iso–octane	ND	-	-	-	-	mg/dm ²	1	10

Remarks:

D.L. = Detection Limit

ND = Not detected

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



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Tests Conducted

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

With reference to Commission Regulation (EU) No. 10/2011 and its amendments (including amendment No. 2018/213 and amendment No. 2020/1245) and DD CEN/TS 13130-13:2005.

Test condition:

Tested component	Food simulant	Time(hour)	Temperature(°C)
(4)	3% (w/v) Acetic acid	2 and then 24	70 and then 40

(4) Black unvulcanized TPR plastic (plug).

Food simulant	Result				
	1 st migration mg/kg	2 nd migration mg/kg	3 rd migration mg/kg	Reporting Limit mg/kg	Limit mg/kg
3% (w/v) Acetic acid	ND	ND	ND	0.01	0.05

ND = Not detected

Compliance: 3rd migration result < limit (if limit is ND, 1st migration result < limit)

3rd migration result ≤ 2nd migration result ≤ 1st migration result

3 Specific Migration of Heavy Metals Content (EU Commission Regulation (EU) No 10/2011)

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

Test condition:

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

Temperature : 70°C and then 40°C

Time : 2 hours and then 24 hours

(1) Black PP plastic (lid).

Element	Result				
	1 st migration mg/kg	2 nd migration mg/kg	3 rd migration mg/kg	Reporting Limit mg/kg	Limit mg/kg
Aluminium (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



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Element	Result				
	1 st migration mg/kg	2 nd migration mg/kg	3 rd migration mg/kg	Reporting Limit mg/kg	Limit mg/kg
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

(4) Black unvulcanized TPR plastic (plug).

Element	Result				
	1 st migration mg/kg	2 nd migration mg/kg	3 rd migration mg/kg	Reporting Limit mg/kg	Limit mg/kg
Aluminium (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

Compliance: 3rd migration result < limit (if limit is ND, 1st migration result < limit)
 3rd migration result ≤ 2nd migration result ≤ 1st migration result



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Tests Conducted

4 Specific Migration of Primary Aromatic Amines (EU Commission Regulation (EU) No 10/2011)

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

Test condition:

Tested component	Food simulant	Time(hour)	Temperature(°C)
(1)to(4)	3% (w/v) Acetic acid	2 and then 24	70 and then 40

(1) Black PP plastic (lid).

Test Item	Result				
	1 st migration mg/kg	2 nd migration mg/kg	3 rd migration mg/kg	Reporting Limit mg/kg	Limit mg/kg
4-Aminodiphenyl	ND	ND	ND	0.002	ND
Benzidine	ND	ND	ND	0.002	ND
4-Chloro-o-toluidine	ND	ND	ND	0.002	ND
2-Naphthylamine	ND	ND	ND	0.002	ND
o-Aminoazotoluene	ND	ND	ND	0.002	ND
2-Amino-4-Nitrotoluene	ND	ND	ND	0.002	ND
p-Chloroaniline	ND	ND	ND	0.002	ND
2,4-Diaminoanisole	ND	ND	ND	0.002	ND
4,4'-Diaminodiphenylmethane	ND	ND	ND	0.002	ND
3,3'-Dichlorobenzidine	ND	ND	ND	0.002	ND
3,3'-Dimethoxybenzidine	ND	ND	ND	0.002	ND
3,3'-Dimethylbenzidine	ND	ND	ND	0.002	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	ND	ND	ND	0.002	ND
p-Cresidine	ND	ND	ND	0.002	ND
4,4'-Methylene-bis-(2-chloroaniline)	ND	ND	ND	0.002	ND
4,4'-Oxydianiline	ND	ND	ND	0.002	ND
4,4'-Thiodianiline	ND	ND	ND	0.002	ND
o-Toluidine	ND	ND	ND	0.002	ND
2,4-Toluylenediamine	ND	ND	ND	0.002	ND
2,4,5-Trimethylaniline	ND	ND	ND	0.002	ND
o-Anisidine	ND	ND	ND	0.002	ND
4-Aminoazobenzene	ND	ND	ND	0.002	ND
m-Phenylenediamine	ND	ND	ND	0.002	ND
Benzoguanamin	ND	ND	ND	0.05	5
4,4'-Methylene-bis-3(chloro-2,6-diethylaniline)	ND	ND	ND	0.01	0.05
Total of other primary aromatic amine	ND	ND	ND	0.01	0.01



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(4) Black unvulcanized TPR plastic (plug).

Test Item	Result				
	1 st migration mg/kg	2 nd migration mg/kg	3 rd migration mg/kg	Reporting Limit mg/kg	Limit mg/kg
4-Aminodiphenyl	ND	ND	ND	0.002	ND
Benzidine	ND	ND	ND	0.002	ND
4-Chloro-o-toluidine	ND	ND	ND	0.002	ND
2-Naphthylamine	ND	ND	ND	0.002	ND
o-Aminoazotoluene	ND	ND	ND	0.002	ND
2-Amino-4-Nitrotoluene	ND	ND	ND	0.002	ND
p-Chloroaniline	ND	ND	ND	0.002	ND
2,4-Diaminoaniso	ND	ND	ND	0.002	ND
4,4'-Diaminodiphenylmethane	ND	ND	ND	0.002	ND
3,3'-Dichlorobenzidine	ND	ND	ND	0.002	ND
3,3'-Dimethoxybenzidine	ND	ND	ND	0.002	ND
3,3'-Dimethylbenzidine	ND	ND	ND	0.002	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	ND	ND	ND	0.002	ND
p-Cresidine	ND	ND	ND	0.002	ND
4,4'-Methylene-bis-(2-chloroaniline)	ND	ND	ND	0.002	ND
4,4'-Oxydianiline	ND	ND	ND	0.002	ND
4,4'-Thiodianiline	ND	ND	ND	0.002	ND
o-Toluidine	ND	ND	ND	0.002	ND
2,4-Toluylenediamine	ND	ND	ND	0.002	ND
2,4,5-Trimethylaniline	ND	ND	ND	0.002	ND
o-Anisidine	ND	ND	ND	0.002	ND
4-Aminoazobenzene	ND	ND	ND	0.002	ND
m-Phenylenediamine	ND	ND	ND	0.002	ND
Benzoguanamin	ND	ND	ND	0.05	5
4,4-Methylene-bis-3(chloro-2,6-diethylaniline)	ND	ND	ND	0.01	0.05
Total of other primary aromatic amine	ND	ND	ND	0.01	0.01

ND = Not detected

Other primary aromatic amines are p-Phenylenediamine, 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

Compliance: 3rd migration result < limit (if limit is ND, 1st migration result < limit)
3rd migration result ≤ 2nd migration result ≤ 1st migration result



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Tests Conducted

5 Specific Migration of Phthalate Content Test

As per Commission Regulation (EU) No.10/2011 and its amendments.

Test condition:

Tested component	Food simulant	Time(hour)	Temperature(°C)
(4)	95%(v/v) Ethanol	2 and then 24	70 and then 40

(4) Black unvulcanized TPR plastic (plug).

Test Item	Result of 95%(v/v) Ethanol				
	1 st migration mg/kg	2 nd migration mg/kg	3 rd migration mg/kg	Reporting Limit mg/kg	Limit mg/kg
Benzyl butyl phthalate (BBP)	ND	ND	ND	1.0	30
Di-(2-ethylhexyl) phthalate (DEHP)	ND	ND	ND	1.0	1.5
Dibutyl phthalate (DBP)	ND	ND	ND	0.2	0.3
Di-isononyl phthalate (DINP)+Di-isodecyl phthalate (DIDP)	ND	ND	ND	1.0	9.0
Diallyl phthalate (DAP)	ND	ND	ND	0.01	ND

ND = Not Detected

Ratio of food contact surface area to volume of component (4) used to establish the compliance of material or article = 0.006 dm² : 450 mL.

Compliance: 3rd migration result < limit (if limit is ND, 1st migration result <limit)
3rd migration result ≤ 2nd migration result ≤ 1st migration result



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Tests Conducted

6 Overall Migration Test (EU Commission Regulation (EU) No 10/2011)

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

Test condition:

Aqueous food simulant:	
Test no.	Time and temperature
OM2	10 days at 40 °C
Fatty food simulant:	
Test no.	Time and temperature
OM2	10 days at 40 °C

Tested component	Food simulant	Time(hour)	Temperature(°C)
(1)(4)	10% (v/v) Ethanol	240	40
	3% (w/v) Acetic acid	240	40
	95%(v/v) Ethanol	240	40
	Iso –octane	48	20

(1) Black PP plastic (lid).

Food Simulant	Result				
	1 st migration mg/dm ²	2 nd migration mg/dm ²	3 rd migration mg/dm ²	Reporting Limit mg/dm ²	Limit mg/dm ²
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

(4) Black unvulcanized TPR plastic (plug).

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



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Tests Conducted

ND = Not detected

Ratio of food contact surface area to volume of component (1) used to establish the compliance of material or article = $1.10 \text{ dm}^2 : 450 \text{ mL}$.

Ratio of food contact surface area to volume of component (4) used to establish the compliance of material or article = $0.006 \text{ dm}^2 : 450 \text{ mL}$.

Compliance: 3rd migration result < limit (if limit is ND, 1st migration result < limit)
3rd migration result \leq 2nd migration result \leq 1st migration result

7 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) .

Test Condition:

Food simulant	Time(hours)	Temperature(°C)
Citric acid (5 g/L)	2 and then 24	70 and then 40

(2) Silver color stainless steel (body).

Test Item	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	0.05	35	5
Chromium (Cr)	0.02	ND	0.02	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	0.02	12.6	1.8
Molybdenum (Mo)	ND	ND	ND	ND	0.02	0.84	0.12
Nickel (Ni)	ND	ND	ND	ND	0.01	0.98	0.14



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Test Item	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
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	0.005	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	0.002	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

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.

Ratio of food contact surface area to volume of component (2) used to establish the compliance of material or article = 2.06 dm²: 300 mL.

8 Phthalate Content

With reference to ISO 8124-6:2018, and phthalate content was determined by Gas Chromatographic-Mass Spectrometric (GC-MS).

Test Item	CAS No.	Result					Units	D.L.	Limit
		4	-	-	-	-			
Di-butyl 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-iso-nonyl phthalate (DINP)	28553-12-0	ND	-	-	-	-	%	0.005	0.1
Di-iso-decyl phthalate (DIDP)	26761-40-0	ND	-	-	-	-	%	0.005	0.1



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Remarks:

D.L. = Detection Limit

ND = Not detected

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

Component List

No.	Test Component Description(s)
(1)	Black PP plastic (lid).
(2)	Silver color stainless steel (body).
(3)	Semi-transparent white silicone (seal ring).
(4)	Black unvulcanized TPR plastic (plug).

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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