

Test Report

Number: GZHH00498552

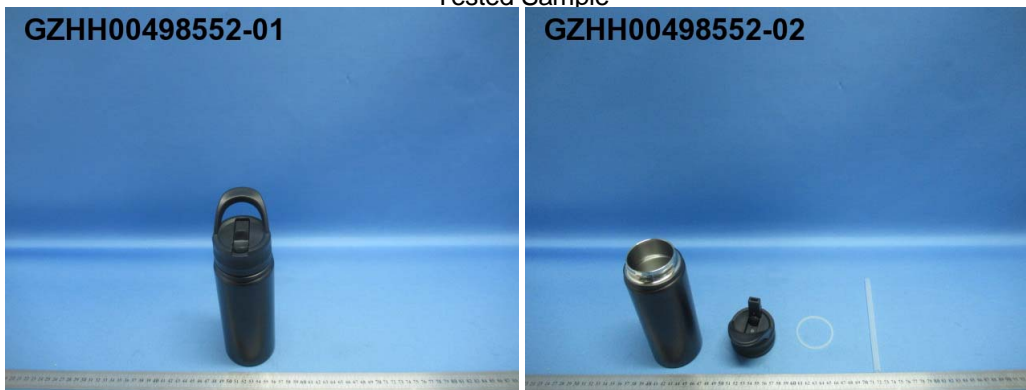
Applicant: FLASHBAY ELECTRONICS
BUILDING2, JIXUN INDUSTRIAL PARK, XINJIAO,
DONG'AO VILLAGE, SHATIAN TOWN, HUIYANG
DISTRICT, HUIZHOU CITY, GUANGDONG PROVINCE,
P.R. CHINA

Date: Aug 01, 2023

Sample Description:

Four (4) pieces of submitted sample said to be :
Item Name : **Water Bottle**
Item No. : **Range/RGE**
Country of Origin : **China**
Date Sample Received : **Jun 21, 2023**
Testing Period : **Jun 21, 2023 ~ Jul 31, 2023**

Tested Sample



Tests conducted:

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

To be continued



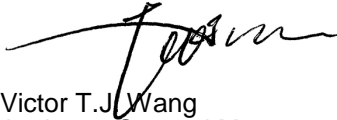
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Conclusion:

| <u>Tested sample</u> | <u>Standard</u> | <u>Result</u> |
|---|--|---------------|
| Tested component(s) of submitted sample | 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 |
| | 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 |
| | 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 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 |
| OM2 | 10 days at 40 °C |

| Tested component | Food simulant | Time(hour) | Temperature(°C) |
|------------------|----------------------|------------|-----------------|
| (1), (2) | 3% (w/v) Acetic acid | 240 | 40 |
| | 50% (v/v) Ethanol | 240 | 40 |

II. Test Results :

Tested component(1), (2):

| Food Simulant | Result(mg/dm ²) | | | Reporting Limit (mg/dm ²) | Limit (mg/dm ²) |
|----------------------|-----------------------------|---------------------------|---------------------------|--|--------------------------------|
| | 1 st migration | 2 nd migration | 3 rd migration | | |
| 3% (w/v) Acetic acid | ND | ND | ND | 3 | 10 |
| 50% (v/v) Ethanol | ND | ND | ND | 3 | 10 |

ND = Not detected(less than reporting limit)

Ratio of food contact surface area to volume of component (1) used to establish the compliance of material or article = 1.63 dm² : 550 mL.

Ratio of food contact surface area to volume of component (2) used to establish the compliance of material or article = 0.75 dm² : 550 mL.

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



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Tests Conducted

2 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 : 40 °C

Time : 24 hours

II. Test result :

Tested component(1), (2):

| 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

3 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), (2) | 3% (w/v) Acetic acid | 24 | 40 |

II. Test Result:

Tested component(1), (2):

| 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 | Benidine | 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 |



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ND = Not detected(less than reporting limit)

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.

4 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: 40 °C Time: 24 hours

II. Test Result:
Food simulant: Citric acid (5 g/L)

| Tested component(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) | 0.010 | 0.007 | 0.017 | 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 | - | - |



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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.

Ratio of food contact surface area to volume of component (4) used to establish the compliance of material or article = 2.53 dm² : 367 mL.

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

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

| Tested component | Food simulant | Time(hour) | Temperature(°C) |
|------------------|----------------------|------------|-----------------|
| (3) | 3% (w/v) Acetic acid | 240 | 40 |
| | 50% (v/v) Ethanol | 240 | 40 |

II. Test results

| Food Simulant | Result(mg/dm ²) | Reporting Limit (mg/dm ²) | Limit (mg/dm ²) |
|----------------------|-----------------------------|---------------------------------------|-----------------------------|
| | (3) | | |
| 3% (w/v) Acetic acid | ND | 1 | 10 |
| 50% (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.

Remark:

As requested by applicant, test was conducted only on component(s) listed in this report.

Component list:

- (1) Black PP plastic (lid, nozzle).
- (2) Semi-transparent white PE plastic (straw).
- (3) Semi-transparent white silicone (seal ring).
- (4) Silver color stainless steel (bottle).



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Tests Conducted

Reference photo



Remark: The products in the reference photo are not tested in this report. It's declared by the applicant that they are the same series of products with the particular tested sample, 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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