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

Flashbay Electronics
Building2, Jixun Industrial Park, Xinjiao, Dong'ao Village,
Shatian Town, Huiyang District, Huizhou City,
Guangdong Province, P.R.China

**DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch**
No.3, Qiyun Road, Huangpu District,
Guangzhou, Guangdong, China
Tel.: +86 20 6661 2000
Fax: +86 20 6661 2001

Contact
Devin Ai
Tel.: +86 20 6684 3294
E-Mail: devin.ai@dekra.com


# TEST REPORT

| | | |
|---|---|---|
| **Test Report No.** | **:** | **4380674.55** Version 1 |
| **Project No.** | **:** | **4380674.00** |
| **Test Report Date** | **:** | **2021-09-27** |

| | | |
|---|---|---|
| Job No. | : | 21-01801 |
| Applicant | : | Flashbay Electronics<br>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 Clear |
| Test Requested | : | 1. Regulation (EC) No 1935/2004, Regulation (EU) 10/2011, EU 2020/1245 and its amendments<br>- Overall migration<br>- Specific migration of heavy metals<br>- Specific migration of primary aromatic amine<br>2. Overall migration according to Council Europe Resolution AP (2004) 5 on Silicones Used for Food Contact Applications |
| Test Method | : | Please refer to next pages |
| Sample Received | : | 2021-09-13 |
| Testing Period | : | 2021-09-13 to 2021-09-22 |

Test Results

- following pages -

**Resume:**

| No. | Parameter | Product Name: Water Bottles<br>Model No.: Nova Clear |
|---|---|---|
| | |  |
| 1. | Overall migration<br>(EU 10/2011) | PASS |
| 2. | Specific migration of heavy metals<br>(EU 10/2011 and EU 2020/1245) | PASS |
| 3. | Specific migration of Primary Aromatic Amine<br>(EU 10/2011 and EU 2020/1245) | PASS |
| 4. | Overall migration<br>(Resolution AP (2004) 5) | PASS |

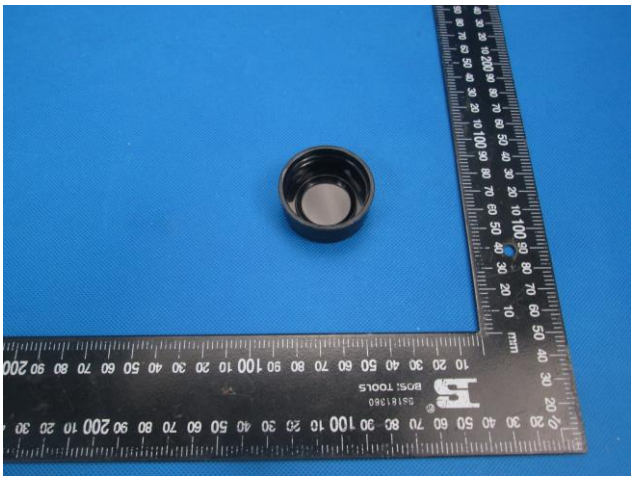
Guangzhou, September 27, 2021
Signed for and on behalf of
**DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch**
Chemical & Mechanical

Devin Ai
Approved Signatory

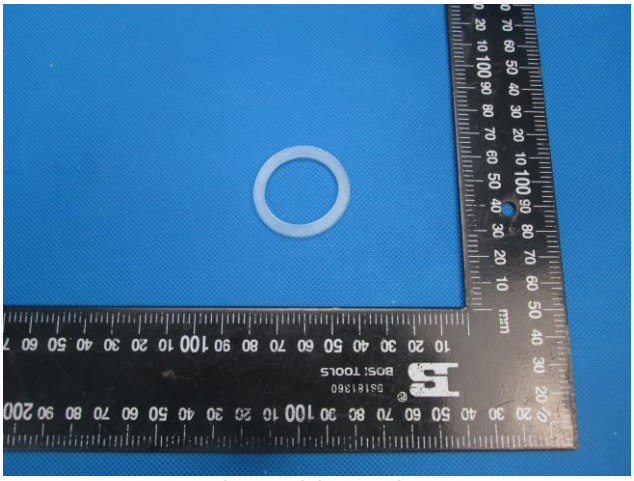
**Sample Descriptions:**

| No. | Description(s) | Material(s) (claimed by applicant) |
|---|---|---|
| (1) | Lid | PP (Black) |
| (2) | Washer | Silicone (Transparent) |
| (3) | Bottle | Tritan (Transparent) |

**Sample photos**



*Picture (1), Lid*



*Picture (2), Washer*

*Picture (3), Bottle*

*(Blank)*

# TEST 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: 2002.

| Parameter | Test Condition | Result ($mg/dm^2$) | | | | | | Limit ($mg/dm^2$) |
|---|---|---|---|---|---|---|---|---|
| | | (1) | | | (3) | | | |
| | | 1st | 2nd | 3rd | 1st | 2nd | 3rd | |
| Overall migration | 50%(v/v) Ethanol, 70ºC, 2 h | <3 | <3 | <3 | <3 | <3 | <3 | 10 |
| | 3%(w/v) Acetic acid, 70ºC, 2h | 5.4 | <3 | <3 | <3 | <3 | <3 | 10 |

Remark:
1. $mg/dm^2$ = 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) | | | (3) | | | | |
| | | 1st | 2nd | 3rd | 1st | 2nd | 3rd | | |
| Barium (Ba) | 3%(w/v) Acetic acid, 70ºC, 2h | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.1 | 1 |
| Cobalt (Co) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.05 | 0.05 |
| Copper (Cu) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.5 | 5 |
| Iron (Fe) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 1.0 | 48 |
| Lithium (Li) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.1 | 0.6 |
| Manganese (Mn) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.1 | 0.6 |
| Zinc (Zn) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.5 | 5 |
| Aluminum (Al) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.1 | 1 |
| Nickel (Ni) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.02 | 0.02 |
| Antimony (Sb) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | 0.04 |
| Arsenic (As) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | N.D. |
| Cadmium (Cd) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.002 | N.D. |
| Chromium (Cr) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | N.D. |
| Lead (Pb) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | N.D. |

| Parameter | Test Condition | Result (mg/kg) | | | | | | MDL (mg/kg) | Limit (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|
| | | (1) | | | (3) | | | | |
| | | 1st | 2nd | 3rd | 1st | 2nd | 3rd | | |
| Mercury (Hg) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | N.D. |
| Lanthanum (La) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | 0.05 |
| Europium (Eu) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | |
| Gadolinium (Gd) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | |
| Terbium (Tb) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | |
| Tungsten (W) | | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | 0.01 | 0.05 |

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) | | | | |
| | | 1st | 2nd | 3rd | | |
| 4-Aminobiphenyl | 3%(w/v) Acetic acid, 70ºC, 2h | 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. |
| 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. |

| Parameter | Test Condition | Result (mg/kg) (1) | | | MDL (mg/kg) | Limit (mg/kg) |
|---|---|---|---|---|---|---|
| | | 1st | 2nd | 3rd | | |
| 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 |

| Parameter | Test Condition | Result (mg/kg) (3) | | | MDL (mg/kg) | Limit (mg/kg) |
|---|---|---|---|---|---|---|
| | | 1st | 2nd | 3rd | | |
| 4-Aminobiphenyl | 3%(w/v) Acetic acid, 70ºC, 2h | 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. |
| 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

## 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: 2002.

| Parameter | Test Condition | Result ($mg/dm^2$) (2) | | | Limit ($mg/dm^2$) |
|---|---|---|---|---|---|
| | | 1st | 2nd | 3rd | |
| Overall migration | 50%(v/v) Ethanol, 70ºC, 2 h | <3 | <3 | <3 | 10 |
| | 3%(w/v) Acetic acid, 70ºC, 2h | 5.1 | <3 | <3 | 10 |

Remark:
1. $mg/dm^2$ = milligram per square decimeter

---End of Report---