Product Service

# Technical Report No. 68.163.10.00057.01
## Dated 2010-03-12

| | |
|---|---|
| Applicant: | Yingda Electric Co., Ltd |
| Address: | Hongjian Industrial District Guangming North Road, Nantou Zhongshan, Guangdong 528400 P.R.China |
| Attn.: | / |
| Product Description: | Coffee Maker |
| Model No.: | Refer to **REMARK** |
| Sample Received Date: | 2010-01-20 |
| Test Period: | From 2010-01-20 to 2010-03-12 |
| Location of Testing: | LCTECH (Zhongshan) Testing service Co., Ltd |
| Objectives of Examination: | 1. For material: Plastics / Rubber / Silicone / Organic coating<br>– Overall migration test for compliance with Directive 2002/72/EC & it's amendment 2007/19/EC for plastic materials and article intended to come into contact with foodstuffs.<br>2. For material: Rubber / Silicone<br>– Peroxide value<br>3. For material: Rubber / Silicone<br>– Volatile Organic Matters<br>4. For material: Silicone<br>– Specific Migration of Organotin<br>5. For material: Glass and ceramics surface<br>– Leachable Lead and Cadmium content<br>6. For material: Aluminium and aluminium alloys<br>– Composition analysis for compliance with EN 601 / EN 602<br>7. For material: Stainless steel<br>– Composition analysis for compliance with French Arrêté du 13 Janvier 1976 |
| Test Method: | Refer to following page(s) |
| Conclusion: | The tested sample were found to **comply** with the respective requirement(s) for the tested item(s) as stated in the French Decrét 2007-766, French information note DGCCRF 2004-64 and Regulation (EC) No.1935/2004 (Material in contact with food regulation). |



TÜV Product Service Ltd. Shenzhen Branch
TÜV SÜD Group
6th Floor, H Hall, Century Craftwork Culture Square,
No. 4001, Fuqiang Road,Futian District,
Shenzhen 518048, P.R. China
Tel.: (86) 755 88286998
Fax: (86) 755 88285299

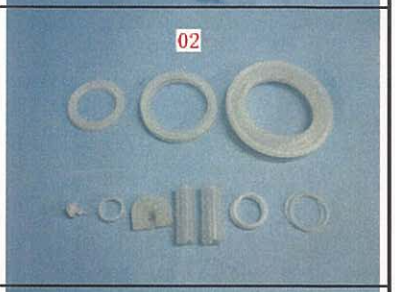
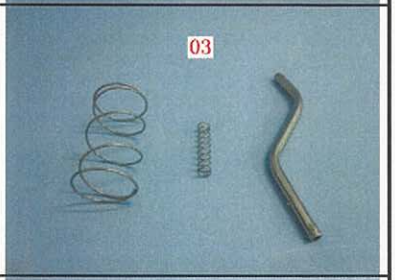
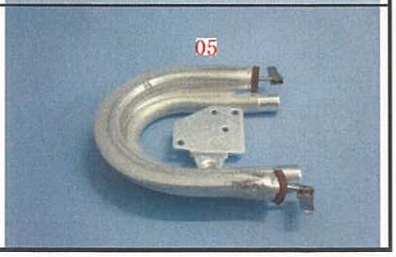
## 1. PHOTO OF SUBMITTED PRODUCT

YD-CM-628 CM-401

TÜV Product Service Ltd. Shenzhen Branch
TÜV SÜD Group
6th Floor, H Hall, Century Craftwork Culture Square,
No. 4001, Fuqiang Road,Futian District,
Shenzhen 518048, P.R. China

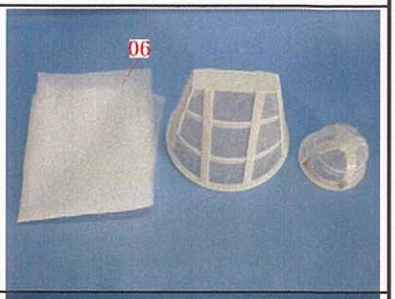
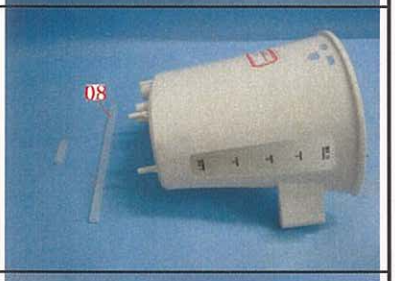
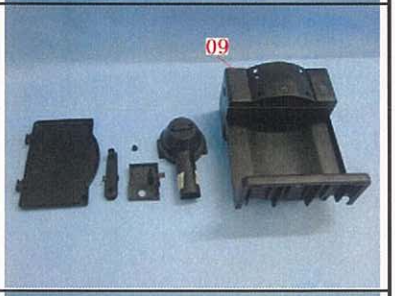
Tel.: (86) 755 88286998
Fax: (86) 755 88285299

## 2. TESTED SUBJECT DESCRIPTION

| SAMPLE NO. * | PART NAME | TESTED MATERIAL DESCRIPTION | PHOTO |
|---|---|---|---|
| 001 | Tank (6) | White plastic (PP) |  |
| 002 | Immobility ring | Transparent silica gel |  |
| 003 | spring | Silvery metal (SUS) |  |
| 004 | Vacuum cup cover (41) | Grey plastic (PP) |  |
| 005 | Heating element (14) | Silvery metal (Aluminum alloy) |  |

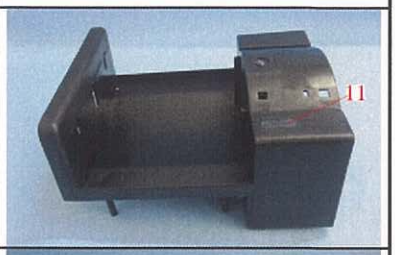
TÜV Product Service Ltd. Shenzhen Branch
TÜV SÜD Group
6th Floor, H Hall, Century Craftwork Culture Square,
No. 4001, Fuqiang Road,Futian District,
Shenzhen 518048, P.R. China

Tel.: (86) 755 88286998
Fax: (86) 755 88285299

| SAMPLE NO. * | PART NAME | TESTED MATERIAL DESCRIPTION | PHOTO |
|---|---|---|---|
| **006** | Inner funnel netting (27) | White plastic (PA) |   |
| **007** | Vacuum flask (56) | glass |   |
| **008** | PP tube (4) | Translucence plastic (PP) |   |
| **009** | Corpus (3) | Black plastic (PP) |   |
| **010** | Valve corpus (19) | Black plastic (PA) |   |

TÜV Product Service Ltd. Shenzhen Branch
TÜV SÜD Group
6th Floor, H Hall, Century Craftwork Culture Square,
No. 4001, Fuqiang Road,Futian District,
Shenzhen 518048, P.R. China

Tel.: (86) 755 88286998
Fax: (86) 755 88285299

| SAMPLE NO. * | PART NAME | TESTED MATERIAL DESCRIPTION | PHOTO |
|---|---|---|---|
| **011** | Water rule (24) | Transparent plastic (PC) |  |
| **012** | Ceramic cup | White ceramic |  |

"*" Sample 002 was claimed by the client as identically same as sample 003 of Report 68.163.10.00059.01 issued on 2010-03-12. The test data was quoted from the latter one.

Sample 003 was claimed by the client as identically same as sample 002 of Report 68.163.10.00059.01 issued on 2010-03-12. The test data was quoted from the latter one.

Sample 011 was claimed by the client as identically same as sample 004 of Report 68.163.10.00059.01 issued on 2010-03-12. The test data was quoted from the latter one.

TÜV Product Service Ltd. Shenzhen Branch
TÜV SÜD Group
6th Floor, H Hall, Century Craftwork Culture Square,
No. 4001, Fuqiang Road,Futian District,
Shenzhen 518048, P.R. China

Tel.: (86) 755 88286998
Fax: (86) 755 88285299

## 3. TEST RESULTS

### 3.1. OVERALL MIGRATION TEST

Test method :As specified in 82/711/EEC, 85/572/EEC, and 97/48/EC Directives; with reference to EN 1186:part 1 & part 3 :2002.

| SIMULANT USED | TEST CONDITIONS | RESULTS [mg/dm²] | | | MAXIMUM PERMISSIBLE LIMIT [mg/dm²] |
|---|---|---|---|---|---|
| | | SAMPLE 001 | SAMPLE 002 | SAMPLE 004 | |
| Distilled water | 100℃ for 0.5 hours | < 3.0 | < 3.0 | < 3.0 | 10 |

| SIMULANT USED | TEST CONDITIONS | RESULTS [mg/dm²] | | | MAXIMUM PERMISSIBLE LIMIT [mg/dm²] |
|---|---|---|---|---|---|
| | | SAMPLE 006 | SAMPLE 008 | SAMPLE 009 | |
| Distilled water | 100℃ for 0.5 hours | < 3.0 | < 3.0 | < 3.0 | 10 |

| SIMULANT USED | TEST CONDITIONS | RESULTS [mg/dm²] | | | MAXIMUM PERMISSIBLE LIMIT [mg/dm²] |
|---|---|---|---|---|---|
| | | SAMPLE 010 | SAMPLE 011 | --- | |
| Distilled water | 100℃ for 0.5 hours | < 3.0 | < 3.0 | --- | 10 |

Note :

- "℃" denotes degree Celsius
- "mg/dm$^2$" denotes milligram per square decimeter
- "<" denotes less than
- The specification was quoted from Directive 2002/72/EC

### 3.2. PEROXIDE VALUE TEST

Test method : With reference to 58th Communication on testing of plastics in Bundesgesundheitsbl 40 (1997) 412.

| TEST ITEM | RESULTS | MAXIMUM PERMISSIBLE LIMIT |
|---|---|---|
| | SAMPLE 002 | |
| PEROXIDE VALUE | Absent | Absent |

Note:

- The specification was quoted from Recommendation of the BfR "Kunststoffe im Lebensmittelverkehr Part XV and Part VI.

**********

### 3.3. VOLATILE ORGANIC MATTER TEST

Test Method: With reference to Bundesgesundheitsbl. 16 (1973) 332. The samples were tested at 105 ℃ for 0.5 hours

| TEST ITEM | RESULTS [%] | MAXIMUM PERMISSIBLE LIMIT [%] |
|---|---|---|
| | SAMPLE 002 | |
| VOLATILE ORGANIC MATTER | **0.05** | 0.5 |

Note:

— "%" denotes percentage by weight

### 3.4. SPECIFIC MIGRATION OF ORGANOTIN

Test method: The sample was filled with distilled water at 100℃ for 0.5 hours. The heavy metal content of extracting solution was then analyzed using Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES).

| TEST ITEMS | RESULTS [mg/kg] | GENERALLY ACCEPTED LIMIT [mg/kg] |
|---|---|---|
| | SAMPLE 002 | |
| Specific Migration of Organotin | < 0.1 | 0.1 |

Note :

— "℃" denotes degree Celsius

— "mg/kg" denotes milligram per kilogram

— "<" denotes less than.

### 3.5. LEACHABLE LEAD AND CADMIUM CONTENT TEST

Test method: With reference to DIN EN 1388: Part 1: 1995 and DIN EN 1388: Part 2: 1995.

| TEST ITEM | RESULT [mg/L] | | | MAXIMUM PERMISSIBLE LIMIT [mg/L] |
|---|---|---|---|---|
| | SAMPLE 007 | SAMPLE 012 | --- | |
| Leachable Lead | < 0.10 | < 0.10 | --- | 4.0 |
| Leachable Cadmium | < 0.01 | < 0.01 | --- | 0.3 |

Note :

— "mg/L" denotes milligram per Litre

— "<" denotes less than

— The specification was quoted from directive 84/500/EEC for article as hollowware (category 2).

### 3.6. COMPOSITION ANALYSIS FOR ALUMINUM

Test method : Acid digestion, followed by analysis using Atomic Absorption Spectrometry (AAS) and Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES).

| TEST ITEM | RESULT [%] | MAXIMUM PERMISSIBLE LIMIT [%] |
|---|---|---|
| | SAMPLE 005 | |
| Silicon content (Si) | 0.405 | 13.5 |
| Magnesium content (Mg) | 0.552 | 11 |
| Manganese content(Mn) | 0.0040 | 4 |
| Nickel content (Ni) | 0.0010 | 3 |
| Iron content (Fe) | 0.126 | 2 |
| Copper content (Cu) | 0.0030 | 0.6 |
| Antimony content (Sb) | < 0.0001 | 0.2 |
| Chromium content (Cr) | 0.0003 | 0.35 |
| Titanium content (Ti) | 0.0117 | 0.3 |
| Zirconium content (Zr) | 0.0005 | 0.3 |
| Zinc content (Zn) | 0.0174 | 0.2 |
| Strontium content (Sr) | < 0.0001 | 0.1 |
| Tin content (Sn) | < 0.0001 | 0.05 |
| Arsenic content (As) | < 0.0001 | 0.05 |
| Tantalum content (Ta) | < 0.0001 | 0.05 |
| Beryllium content (Be) | < 0.0001 | 0.05 |
| Thallium content (Tl) | < 0.0001 | 0.05 |
| Lead content (Pb) | < 0.0001 | 0.05 |
| Aluminum content (Al) | 98.8 | - |

Note :

- "%" denotes percentage by weight
- "<" denotes less than
- The specification was quoted from EN 601 / EN 602.

### 3.7. STAINLESS STEEL COMPOSITION TEST

Test method: Acid digestion, followed by analysis with Inductively Coupled Plasma Spectrometry (ICP).

| TEST ITEM | RESULTS [%] | MAXIMUM PERMISSIBLE LIMIT [%] |
|---|---|---|
| | SAMPLE 003 | |
| Chromium content (Cr) | 14.53 | >13 |
| Tantalum content (Ta) | < 0.0001 | < 1 |
| Niobium content (Nb) | < 0.0001 | < 1 |
| Zirconium (Zr) | < 0.0001 | < 1 |
| Molubdenum content (Mo) | < 0.0001 | < 4 |
| Titanium content (Ti) | < 0.0001 | < 4 |
| Aluminium content (Al) | 0.0029 | < 4 |
| Copper content (Cu) | 1.277 | < 4 |

Note :

- "%" denotes percentage by weight.
- "<" denotes less than.
- ">" denotes greater than.
- The specification was quoted from French Arrêté du 13 Janvier 1976.

**Remark:**

The follow Model No. was supplied by applicant:
CM-401, CM-402, CM-403, CM-404, CM-406, CM-408, YD-CM-411, CM-601, CM-602, CM-607, CM-52, YD-CM-625, YD-CM-608, YD-CM-608S, YD-CM-609, YD-CM-609S, YD-CM-610, YD-CM-619, YD-CM-629, YD-CM-629-9, YD-CM-628, YD-CM-623, YD-CM-633(CM2221), YD-CM-641, YD-TCM-01, YD-TCM-02, YD-TCM-03, YD-TCM-08, YD-TCM-23, YD-CM-6018, YD-CM-6038, YD-CM-612

**********

TÜV Product Service Ltd. Shenzhen Branch
TÜV SÜD Group

Prepared by:

Brady Yu
Project Engineer
**Chemical Department**

JIANGSU TÜV PRODUCT SERVICE LTD. TÜV SÜD SHEN ZHEN

Reviewed by:

Joey Fan
Chemcial Manager
**Chemical Department**