

# TEST REPORT

**Client company** : Shenzhen bolesic electronic ltd  
**Client address** : 601,155 Tsaopu Zhenwei Village, Honggang Road, Qingshui Street, Luohu District, Shenzhen  
**Manufacturer** : Shenzhen bolesic electronic ltd  
**Address** : 601,155 Tsaopu Zhenwei Village, Honggang Road, Qingshui Street, Luohu District, Shenzhen

Report on the submitted samples said to be:

**Sample Name** : HEAT STRAIGHTENING COMB  
**Trade Mark** : N/A  
**Style/ Item No.** : WT-058  
**Sample Receiving Date** : March 23, 2020  
**Testing Period** : March 23, 2020 ~ April 01, 2020  
**Results** : Please refer to next page(s).

\*\*\*\*\*  
**Summary of Test Results:**

**TEST REQUEST**

**CONCLUSION**

A RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

**PASS**

\*\*\*\*\*  
Signed for and on behalf of AOC

Written By:

*Sunny Su*

\_\_\_\_\_  
Sunny Su  
File administrators

Approved by:



**Results:**

**A. EU RoHS Directive 2011/65/EU and its amendment directives on XRF**

Test method: With reference to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

| Seq. No. | Tested Part(s)                     | Results |    |    |    |    |
|----------|------------------------------------|---------|----|----|----|----|
|          |                                    | Pb      | Cd | Hg | Cr | Br |
| 1        | Black plastic shell                | BL      | BL | BL | BL | BL |
| 2        | Silvery metal screw                | x       | BL | BL | BL | BL |
| 3        | Silvery metal(Power switch)        | BL      | BL | BL | BL | BL |
| 4        | Black plastic(Power switch)        | BL      | BL | BL | BL | x  |
| 5        | Silvery metal needle(Power switch) | BL      | BL | BL | BL | BL |
| 6        | Blue plastic(Battery)              | BL      | BL | BL | BL | BL |
| 7        | Silvery metal(Battery)             | BL      | BL | BL | BL | BL |
| 8        | Black material(Battery)            | BL      | BL | BL | BL | BL |
| 9        | White plastic(Battery)             | BL      | BL | BL | BL | BL |
| 10       | Red paper(Battery)                 | BL      | BL | BL | BL | BL |
| 11       | Solder (Battery)                   | BL      | BL | BL | BL | BL |
| 12       | Silvery metal (USB)                | BL      | BL | BL | BL | BL |
| 13       | Black plastic(USB)                 | BL      | BL | BL | BL | BL |
| 14       | Black plastic line(USB)            | BL      | BL | BL | BL | BL |
| 15       | Red plastic line(USB)              | BL      | BL | BL | BL | BL |
| 16       | Black plastic line gasket(USB)     | BL      | BL | BL | BL | BL |
| 17       | Silvery metal line(USB)            | BL      | BL | BL | BL | BL |
| 18       | Blue capacitance                   | BL      | BL | BL | BL | BL |
| 19       | IC(BD1)                            | BL      | BL | BL | BL | BL |
| 20       | Chips of resistance                | BL      | BL | BL | BL | BL |
| 21       | Chips of capacitance               | BL      | BL | BL | BL | BL |
| 22       | PCB                                | BL      | BL | BL | BL | x  |
| 23       | Solder on PCB                      | x       | BL | BL | BL | BL |
| 24       | Black plastic line                 | BL      | BL | BL | BL | BL |
| 25       | Black plastic line gasket          | BL      | BL | BL | BL | BL |
| 26       | Silvery metal line                 | BL      | BL | BL | BL | BL |

\*\*\*\*\*

Note:

- = Not Conducted
- \* = Screening by XRF and detected by chemical method. The test results of chemical method please refer to next pages.

i Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013.

| Element | Unit  | Non-metal                  | Metal                      | Composite Material         |
|---------|-------|----------------------------|----------------------------|----------------------------|
| Cd      | mg/kg | BL≤70-3σ<X<br><130+3σ≤OL   | BL≤70-3σ<X<br><130+3σ≤OL   | BL≤50-3σ<X<br><150+3σ≤OL   |
| Pb      | mg/kg | BL≤700-3σ<X<br><1300+3σ≤OL | BL≤700-3σ<X<br><1300+3σ≤OL | BL≤500-3σ<X<br><1500+3σ≤OL |
| Hg      | mg/kg | BL≤700-3σ<X<br><1300+3σ≤OL | BL≤700-3σ<X<br><1300+3σ≤OL | BL≤500-3σ<X<br><1500+3σ≤OL |
| Cr      | mg/kg | BL≤700-3σ<X                | BL≤700-3σ<X                | BL≤500-3σ<X                |
| Br      | mg/kg | BL≤300-3σ<X                | --                         | BL≤250-3σ<X                |

\*\*\*\*\*

Note:

- BL = Below Limit
- OL = Over Limit
- X = Inconclusive

- ii The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
- iii The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2011/65/EU:

| RoHS Restricted Substances            | Maximum Concentration Value (mg/kg)<br>(by weight in homogenous materials) |
|---------------------------------------|----------------------------------------------------------------------------|
| Cadmium (Cd)                          | 100                                                                        |
| Lead (Pb)                             | 1000                                                                       |
| Mercury (Hg)                          | 1000                                                                       |
| Hexavalent Chromium (Cr(VI))          | 1000                                                                       |
| Polybrominated biphenyls (PBBs)       | 1000                                                                       |
| Polybrominated diphenylethers (PBDEs) | 1000                                                                       |

Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

\*\*\*\*\*

**B. The Test Results of Chemical Method:**

Test method:

**Lead & Cadmium Content:**

With reference to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-AES)

**Mercury Content:**

With reference to IEC 62321-4:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-AES)

**Hexavalent Chromium Content:**

With reference to IEC 62321-7-1:2013, by alkaline digestion and analysis was performed by UV-visible spectrophotometer (UV-Vis)

**PBBs & PBDEs Content:**

With reference to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS)

**1) The test results of Lead (Pb)**

| Item              | Unit     | MDL      | Results     |             | Limit    |
|-------------------|----------|----------|-------------|-------------|----------|
|                   |          |          | (2)         | (24)        |          |
| Lead Content (Pb) | mg/kg    | 2        | 38          | 21          | 1000     |
| <b>Conclusion</b> | <i>/</i> | <i>/</i> | <b>Pass</b> | <b>Pass</b> | <i>/</i> |

\*\*\*\*\*

**2) The test results of PBBs & PBDEs**

| Item                                                   | Unit  | MDL | Results |      | Limit |
|--------------------------------------------------------|-------|-----|---------|------|-------|
|                                                        |       |     | 4       | 23   |       |
| <b>Polybrominated Biphenyls (PBBs)</b>                 |       |     |         |      |       |
| Monobromobiphenyl                                      | mg/kg | 5   | N.D.    | N.D. |       |
| Dibromobiphenyl                                        | mg/kg | 5   | N.D.    | N.D. |       |
| Tribromobiphenyl                                       | mg/kg | 5   | N.D.    | N.D. |       |
| Tetrabromobiphenyl                                     | mg/kg | 5   | N.D.    | N.D. |       |
| Pentabromobiphenyl                                     | mg/kg | 5   | N.D.    | N.D. |       |
| Hexabromobiphenyl                                      | mg/kg | 5   | N.D.    | N.D. |       |
| Heptabromobiphenyl                                     | mg/kg | 5   | N.D.    | N.D. |       |
| Octabromobiphenyl                                      | mg/kg | 5   | N.D.    | N.D. |       |
| Nonabromodiphenyl                                      | mg/kg | 5   | N.D.    | N.D. |       |
| Decabromodiphenyl                                      | mg/kg | 5   | N.D.    | N.D. |       |
| Total content                                          | mg/kg | /   | N.D.    | N.D. | 1000  |
| <b>Polybrominated Diphenylethers (PBDEs)(Mon-Deca)</b> |       |     |         |      |       |
| Monobromodiphenyl ether                                | mg/kg | 5   | N.D.    | N.D. |       |
| Dibromodiphenyl ether                                  | mg/kg | 5   | N.D.    | N.D. |       |
| Tribromodiphenyl ether                                 | mg/kg | 5   | N.D.    | N.D. |       |
| Tetrabromodiphenyl ether                               | mg/kg | 5   | N.D.    | N.D. |       |
| Pentabromodiphenyl ether                               | mg/kg | 5   | N.D.    | N.D. |       |
| Hexabromodiphenyl ether                                | mg/kg | 5   | N.D.    | N.D. |       |
| Heptabromodiphenyl ether                               | mg/kg | 5   | N.D.    | N.D. |       |
| Octabromodiphenyl ether                                | mg/kg | 5   | N.D.    | N.D. |       |
| Nonabromodiphenyl ether                                | mg/kg | 5   | N.D.    | N.D. |       |
| Decabromodiphenyl ether                                | mg/kg | 5   | N.D.    | N.D. |       |
| Total content                                          | mg/kg | /   | N.D.    | N.D. | 1000  |

\*\*\*\*\*

| Item                                 | Unit  | MDL | Results |      |      |      |      | Limit |
|--------------------------------------|-------|-----|---------|------|------|------|------|-------|
|                                      |       |     | (1)     | (4)  | (6)  | (8)  | (9)  |       |
| DibuyI Phthalate(DBP)                | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Benzylbutyl Phthalate(BBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Bis(2-ethylhexyl)<br>Phthalate(DEHP) | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Diispbutyl phthalate(DIBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |

| Item                                 | Unit  | MDL | Results |      |      |      |      | Limit |
|--------------------------------------|-------|-----|---------|------|------|------|------|-------|
|                                      |       |     | (10)    | (16) | (14) | (15) | (16) |       |
| DibuyI Phthalate(DBP)                | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Benzylbutyl Phthalate(BBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Bis(2-ethylhexyl)<br>Phthalate(DEHP) | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Diispbutyl phthalate(DIBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |

| Item                                 | Unit  | MDL | Results |      |      |      |      | Limit |
|--------------------------------------|-------|-----|---------|------|------|------|------|-------|
|                                      |       |     | (19)    | (20) | (21) | (22) | (23) |       |
| DibuyI Phthalate(DBP)                | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Benzylbutyl Phthalate(BBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Bis(2-ethylhexyl)<br>Phthalate(DEHP) | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |
| Diispbutyl phthalate(DIBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | N.D. | N.D. | 1000  |

| Item                                 | Unit  | MDL | Results |      |      | Limit |
|--------------------------------------|-------|-----|---------|------|------|-------|
|                                      |       |     | (25)    | (26) | (27) |       |
| DibuyI Phthalate(DBP)                | mg/kg | 50  | N.D.    | N.D. | N.D. | 1000  |
| Benzylbutyl Phthalate(BBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | 1000  |
| Bis(2-ethylhexyl)<br>Phthalate(DEHP) | mg/kg | 50  | N.D.    | N.D. | N.D. | 1000  |
| Diispbutyl phthalate(DIBP)           | mg/kg | 50  | N.D.    | N.D. | N.D. | 1000  |

Note:

- N.D. = Not Detected or less than MDL
- mg/kg = ppm
- MDL = Method Detection Limit
- Photo appendix is included.

\*\*\*\*\*

# Appendix

## Photograph of Sample



Fig.1



Fig.2



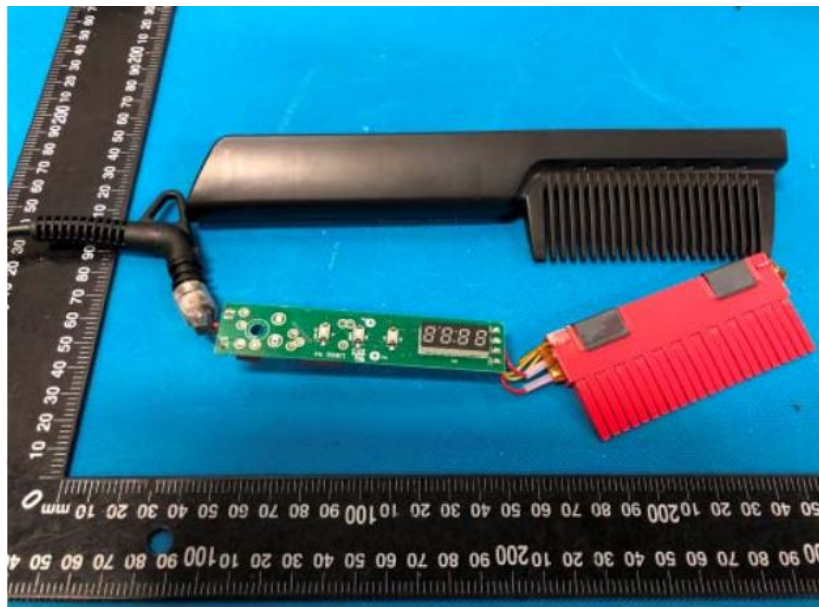


Fig.3

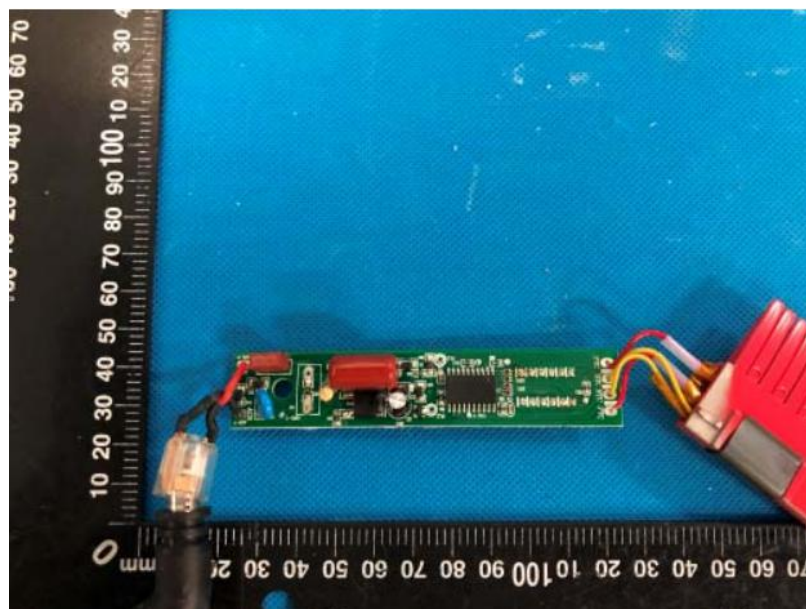


Fig.4

AOC authenticate the photo on original report only

\*\*\*\*\* End of Report \*\*\*\*\*