

Test Report

Applicant: ZHEJIANG HENRY ELECTRONIC CO.,LTD.

Address: 11 BLDG, B SECTION, SHOES IND.ZONE, ECO. DEVELOPMENT AREA PINGYANG ZHEJIANG, P.R.CHINA.

Report on the submitted sample(s) said to be:

Sample Name : BANKNOTE SORTER

Sample Model : HL-8 PLUS, 8 PLUS

Trade Mark : N/A

Manufacturer : ZHEJIANG HENRY ELECTRONIC CO.,LTD.

Sample Received Date : 2017.06.19

Testing Period : 2017.06.19—2017.06.28

Test Requested According to customer's requirements, Split the sample and determine the Pb, Cd, Hg, Cr(VI), PBBs & PBDEs content of the parts.

Test Method:

1. Sample prepared with reference to IEC 62321-2:2013 Determination of certain substances in electrotechnical products - Part 2: Disassembly, disjunction and mechanical sample preparation
2. Sample Screening testing with reference to IEC 62321-3-1:2013 Determination of certain substances in electrotechnical products - Part 3-1: Screening - Lead, mercury, cadmium, total chromium and total bromine using X-ray fluorescence spectrometry.

Test Result(s) Please refer to the following page(s).

Test conclusion Based on the analysis on the submitted samples, the test results comply with the RoHS Directive 2011/65/EU (RoHS 2.0) and its subsequent amendments

Test by : Vicky Wen

Inspected by : Ma Chen

Approved by : Billy Tu
Technical Manager

Date : 2017.06.28



Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|-------------------|-----------------------|------------------|
| 1 | Plastic particles | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 2 | power socket | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 3 | fuse | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 4 | power switch | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 5 | Plastic cover | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | 154 |
| 6 | stacker motor | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|-----------------------|-----------------------|------------------|
| 7 | lead wire | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 8 | synchronous motor | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 9 | connector | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 10 | printed circuit board | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 11 | CIS sensor | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 12 | MG sensor | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|-----------------|-----------------------|------------------|
| 13 | touch screen | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 14 | A3 iron plate | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 15 | silicone button | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 16 | resistance | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 17 | capacitance | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 18 | integration | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|------------|-----------------------|------------------|
| 19 | NPN | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 20 | TA CAP | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 21 | Inductance | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 22 | P MOSFET | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 23 | Shield | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | 154 |
| 24 | Fittings | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|-------------------|-----------------------|------------------|
| 25 | Link to the screw | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 26 | The gasket | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 27 | Cable | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 28 | Fan | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 29 | Screw | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | 154 |
| 30 | U gasket | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|------------------------|-----------------------|------------------|
| 31 | Nut | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 32 | According to partition | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 33 | The sign | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 34 | Wire core | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 35 | Red wire covering | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | 154 |
| 36 | Black wire covering | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|----------------------|-----------------------|------------------|
| 37 | Yellow wire covering | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 38 | Terminal metal | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 39 | Bsb plastic | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 40 | USB metal | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 41 | SD card metal | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | 154 |
| 42 | LCD | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|-----------------|-----------------------|------------------|
| 43 | Blue plastic | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 44 | SCREW | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 45 | Cylindrical pin | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 46 | Screw | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 47 | Wite sticker | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | 154 |
| 48 | Nut | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |

Test Report

| No. | Part Name | Restricted Substances | Results of EDXRF |
|-----|-----------------------|-----------------------|------------------|
| 49 | Soft tire | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 50 | Stainless steel plate | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
| 51 | Plastic floor MATS | Pb | BL |
| | | Cd | BL |
| | | Hg | BL |
| | | Cr | BL |
| | | Br | BL |
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Test Report

Remark:

- (1)(a) It is the result on total Br while test item on restricted substance is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr6+.
- (b) Result are obtained EDXRF for primary screening, and further chemical testing by ICP(for Cd, Pb, Hg), UV-VIS(for Cr6+) and GC/MS(for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321(unit:mg/kg)

| Element | Polymer | Metal | Composite Materials |
|---------|---|---|---|
| Cd | $BL \leq (70-3\sigma) < X < (130+30\sigma) \leq OL$ | $BL \leq (70-3\sigma) < X < (130+30\sigma) \leq OL$ | $LOD < X < (150+30\sigma) \leq OL$ |
| Pb | $BL \leq (700-3\sigma) < X < (1300+30\sigma) \leq OL$ | $BL \leq (700-3\sigma) < X < (1300+30\sigma) \leq OL$ | $BL \leq (500-3\sigma) < X < (1300+30\sigma) \leq OL$ |
| Hg | $BL \leq (700-3\sigma) < X < (1300+30\sigma) \leq OL$ | $BL \leq (700-3\sigma) < X < (1300+30\sigma) \leq OL$ | $BL \leq (500-3\sigma) < X < (1300+30\sigma) \leq OL$ |
| Br | $BL \leq (300-3\sigma) < X$ | -- | $BL \leq (250-3\sigma) < X$ |
| Cr | $BL \leq (700-3\sigma) < X$ | $BL \leq (700-3\sigma) < X$ | $BL \leq (500-3\sigma) < X$ |

(c) BL=Below Limit, OL=Over Limit, IN=Inconclusive,
LOD=Limit of Detection, --=Not Regulated.

(d) The XRF screening test for RoHS elements-The reading may be different to the actual content in the sample be of non-uniformity composition.

(2) (a)mg/kg=ppm=0.0001%,ND=Not Detected(<MDL), ---=Not Conducted.

(b) Unit and Method Detection Limit(MDL) in wet chemical test

| Test Items | Pb | Cd | Hg |
|------------|-------|-------|-------|
| Units | mg/kg | mg/kg | mg/kg |
| MDL | 2 | 2 | 2 |

The MDL for single compound of PBBs & PBDEs is 5 mg/kg and MDL of Cr6+ for polymer & composite sample is 2 mg/kg.

*Due to the few amount of sample, MDL of Cr6+ in Polymer and Composite Materials is 10mg/kg.

(c) According to IEC62321, result on Cr6+ for metal sample is shown as Positive/Negative.

(d) As declared by the client, the materials fall into exemption items according to RoHS Directive 2011/65/EU recasting 2002/95/EC

Test Report

Photo(s) of the sample(s)



*** End of Report ***

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