

TEST REPORT

APPLICANT

:

ADDRESS

:

SAMPLE DESCRIPTION

: HAIR STRAIGHT

STYLE / ITEM NO.

: JD-806

REFERENCE NO.: JD-109, JD-107, JD-806, JD-808, JD-905A, JD-901,
JD-801, JD-101, JD-102, JD-103, JD-105, JD-802,
JD-803, JD-906, JD-908**AGE REQUESTED ON APPLICATION FORM**

: NOT PRESENT

SAMPLE RECEIVED DATE

: MAY 07, 2018; MAY 15, 2018

TEST PERIOD

: MAY 08, 2018 TO MAY 16, 2018

RESULT SUMMARY

:

TEST(S) REQUESTED BY APPLICANT:	RESULT
- RoHS Directive 2011/65/EU.	PASS

*****FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)*****

SIGNED FOR AND ON BEHALF OF
EUROFINS TESTING TECHNOLOGY (SHENZHEN) CO. LTD.



Harry Chen
Lab & Technical Support Manager



Coco Luo
Lab & Reporting Manager



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This test report does not entitle to carry any safety mark on this or similar products.

RoHS

Test Method : (1) Screening by XRF Spectroscopy:
IEC 62321-3-1: 2013, Lead, Mercury, Cadmium, total Chromium and total Bromine by X-ray fluorescence spectrometry

(2) Wet Chemical test:
Cadmium, Lead: IEC 62321-5: 2013, determined by ICP-OES.

Mercury: IEC 62321-4: 2013/AMD1: 2017, determined by ICP-OES.

Chromium (VI): IEC 62321-7-1: 2015 and IEC 62321-7-2: 2017, determined by UV/VIS.

PBBs & PBDEs: IEC 62321-6: 2015, determined by GC-MS.

Test Result :

Material No.	Material Description	XRF Results (mg/kg) (1)		Wet Chemical Confirmation Result (mg/kg) (2)
1	Silvery metal pin of plug	Cd	BL	--
		Pb	IN	1.4x10 ⁴ (*1)
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
2	White plastic pin of plug	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	IN	N.D.
		PBDEs	IN	N.D.
3	Black soft plastic of plug and line card	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
4	Black soft plastic of cable jacket	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
5	Light brown soft plastic of wire jacket	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
6	Light blue soft plastic of wire jacket	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--

TO BE CONTINUED

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Material No.	Material Description	XRF Results (mg/kg) (1)		Wet Chemical Confirmation Result (mg/kg) (2)
7	Copper metal core of wire	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
8	Transparent plastic of PCB with green printing and copper metal plating	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	IN	N.D.
		PBDEs	IN	N.D.
9	Black soft plastic of wire jacket with grey printing	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
10	Silvery metal core of wire	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
11	Khaki ceramic resistance on PCB with multi-color printing	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
12	Silvery metal pin of resistance	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
13	Transparent red plastic of LED	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	IN	N.D.
		PBDEs	IN	N.D.
14	Silvery metal pin of LED	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--

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Material No.	Material Description	XRF Results (mg/kg) (1)		Wet Chemical Confirmation Result (mg/kg) (2)
15	White plastic on LED	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
16	Silvery metal of soldering tin	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
17	Black plastic cap of switch	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	IN	N.D.
		PBDEs	IN	N.D.
18	Black plastic of switch	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	IN	N.D.
		PBDEs	IN	N.D.
19	Silvery metal cover of switch	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
20	Black metal spring in switch	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	IN	Negative
		PBBs	NA	--
		PBDEs	NA	--
21	Silvery metal ball in switch	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	IN	Negative
		PBBs	NA	--
		PBDEs	NA	--
22	Silvery metal chip in switch	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--

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Material No.	Material Description	XRF Results (mg/kg) (1)		Wet Chemical Confirmation Result (mg/kg) (2)
23	Black plastic base of switch	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	IN	N.D.
		PBDEs	IN	N.D.
24	Silvery metal pin of switch	Cd	BL	--
		Pb	IN	$1.7 \times 10^4 (*1)$
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
25	Black plastic of hair straight	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	IN	N.D.
		PBDEs	IN	N.D.
26	Silvery grey metal strip of heating plate	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
27	Black coating on silvery grey metal strip	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
28	Silvery metal wire in strip	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
29	Silvery grey micarex	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
30	Transparent yellow plastic sticker with transparent glue	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--

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Material No.	Material Description	XRF Results (mg/kg) (1)		Wet Chemical Confirmation Result (mg/kg) (2)
31	Transparent yellow plastic film	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
32	Silvery metal chip in heating plate	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	NA	--
		PBDEs	NA	--
33	Transparent soft plastic tube on wire	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
34	Khaki ceramic chip with silvery printing in heating plate	Cd	BL	--
		Pb	IN	$2.5 \times 10^5 (*2)$
		Hg	BL	--
		Cr(VI)	IN	N.D.
		PBBs	NA	--
		PBDEs	NA	--
35	Black soft plastic tube on wire with grey printing	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	BL	--
		PBBs	BL	--
		PBDEs	BL	--
36	Black metal of spring	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	IN	Negative
		PBBs	NA	--
		PBDEs	NA	--
37	Silvery metal of screw	Cd	BL	--
		Pb	BL	--
		Hg	BL	--
		Cr(VI)	IN	Negative
		PBBs	NA	--
		PBDEs	NA	--

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Remark:

(1) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).

(b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321.

XRF Screening Limits in mg/kg for Regulated Elements in Various Matrices:

Element	Polymer Materials	Metallic Materials	Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	-	$BL \leq (250-3\sigma) < X$

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

Note: BL= Below Limit

OL= Over Limit

IN = Inconclusive

LOD = Limit of Detection

N.D. = Not Detected (<MDL)

NA = Not Applicable

- = Not Regulated

-- = Not Conducted

mg/kg = milligram per kilogram = ppm = 0.0001%

(2) (a) Unit and Method Detected Limit (MDL) in wet chemical test.

Testing Item	Detection Limit
Cadmium, Lead & Mercury	10 mg/kg
Chromium (VI)	10 mg/kg
Polybrominated Biphenyls (PBBs) & Polybrominated Diphenyl Ethers (PBDEs)	10 [^] mg/kg

[^] The MDL for single compound of PBBs and PBDEs.

(b) According to IEC 62321, result on Cr(VI) for metal sample is shown as Positive/Negative.

Negative = Absence of Cr(VI) coating.

Positive = Presence of Cr(VI) coating.

(3) RoHS Requirement:

Restricted Substances	Limits [^]
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr VI)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

[^]The above limits were quoted from 2011/65/EU for homogeneous material.

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(4) (*1) According to the Annex of RoHS Directive 2011/65/EU, "Copper alloy containing up to 4% (4.0×10^4 mg/kg) lead by weight" is exempted from the requirements of Article 4(1). This exemption applies to testing sample No. 1&24.

(*2) According to the Annex of RoHS Directive 2011/65/EU, "Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors e.g. piezoelectronic devices, or in a glass or ceramic matrix compound" is exempted from the requirements of Article 4(1). This exemption applies to testing sample No. 34.

Other Information / Remark:

N/A

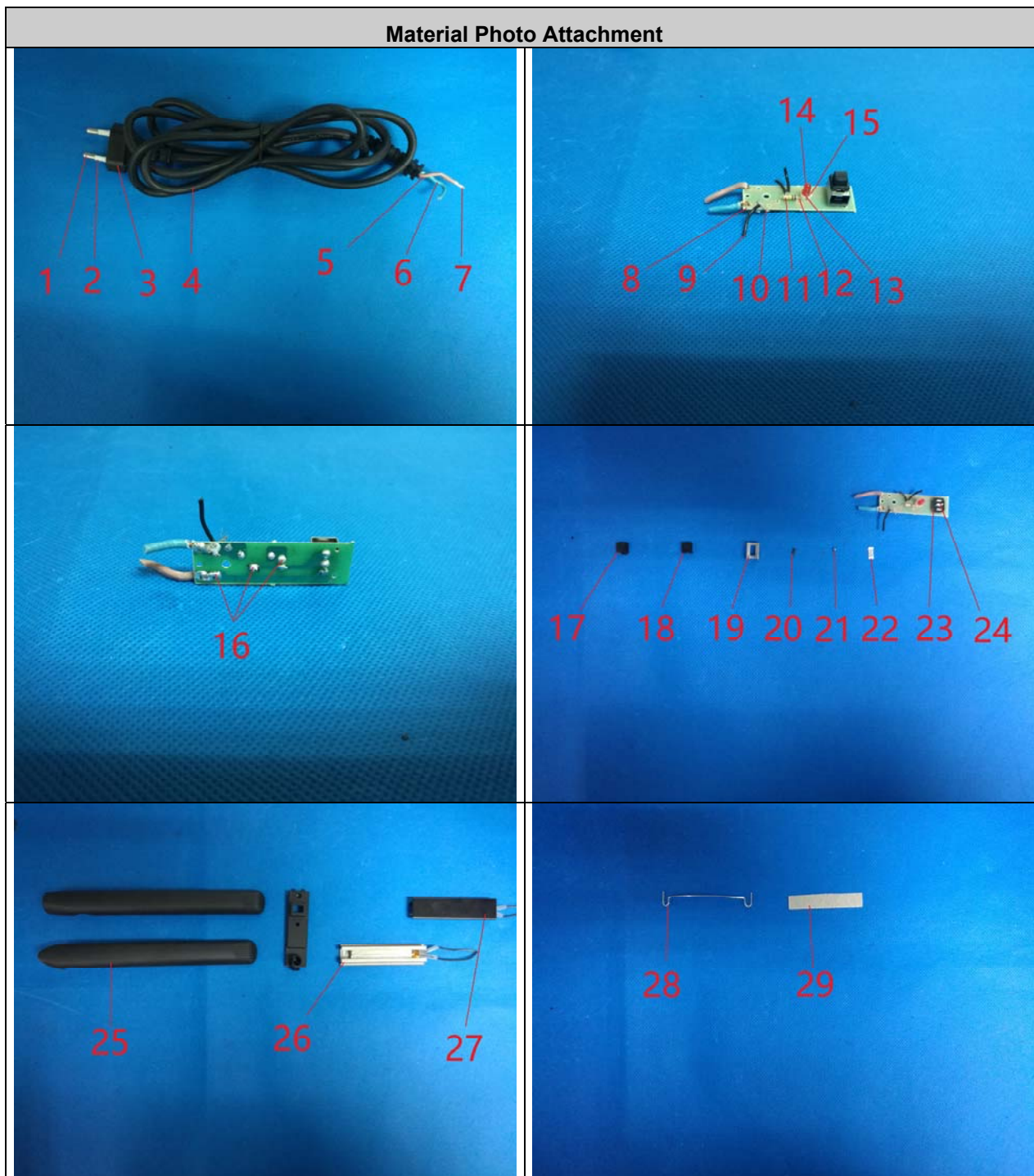


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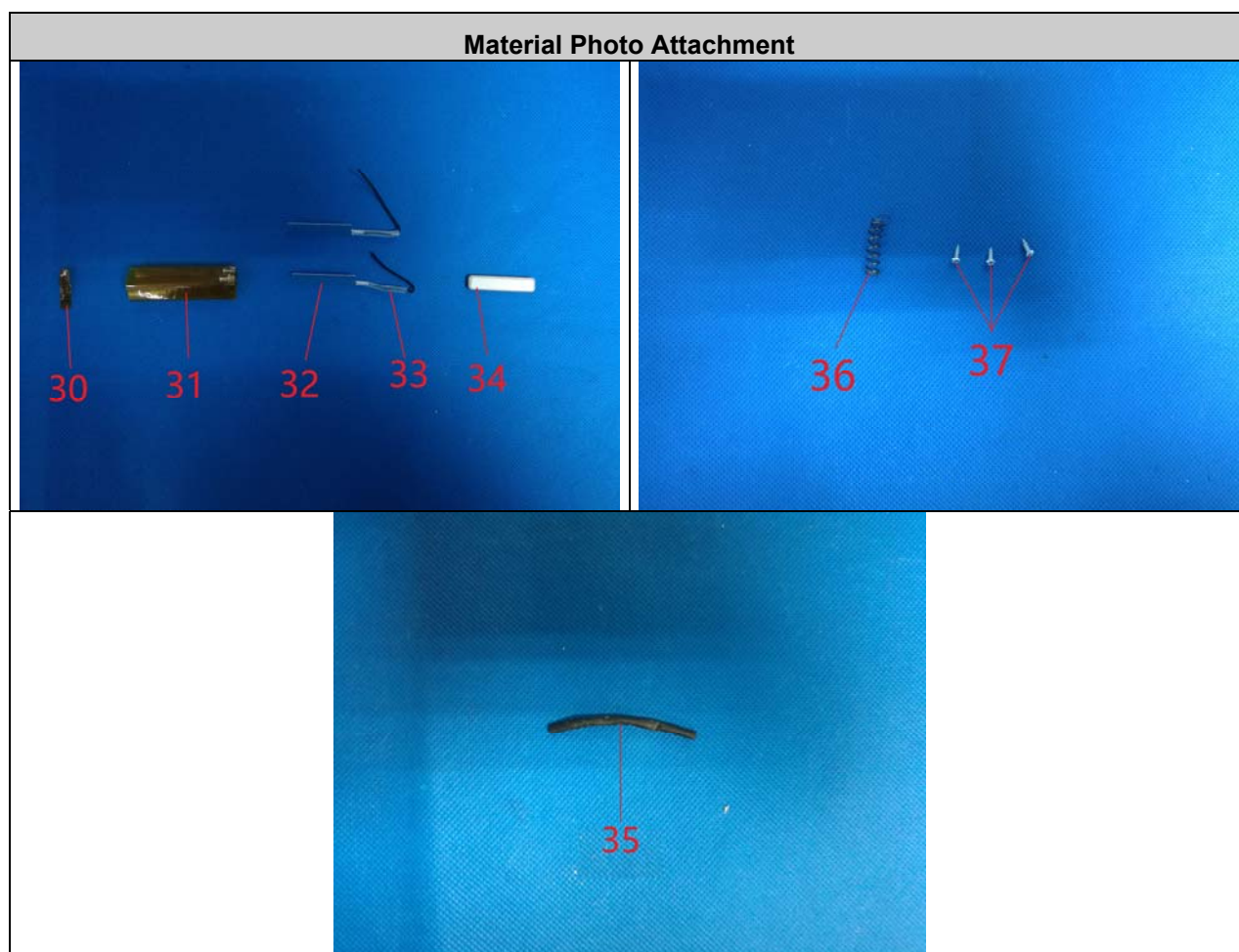
Material Photo Attachment



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END OF THE REPORT