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
Block 5, 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.	**:**	**4902795.50** Version 1
Project No.	**:**	**4902795.00**
Test Report Date	**:**	**2023-05-18**

Job No.	:	23-00811
Applicant	:	Flashbay Electronics Building2, Jixun Industrial Park, Xinjiao, Dong'ao Village, Shatian Town, Huiyang District, Huizhou City, Guangdong Province, P.R. China
Product Name	:	USB Cable
Model No.	:	Multi Wood (MUW) / Motion Wood (MTW)
Reference Information	:	Annex 1 (List was provided by applicant)
Test Requested	:	RoHS Directive 2011/65/EU & Amendment Directive (EU) 2015/863 - Lead, Mercury, Cadmium, Hexavalent chromium, - Polybrominated biphenyls (PBB), - Polybrominated diphenyl ethers (PBDE), - Bis(2-ethylhexyl) phthalate (DEHP), - Butyl benzyl phthalate (BBP), - Dibutyl phthalate (DBP), - Diisobutyl phthalate (DIBP)
Test Method	:	Please refer to next pages
Sample Received	:	2023-04-26
Testing Period	:	2023-04-26 to 2023-05-06

Test Results

- following pages -

Resume:

Parameter	Sample photos:
	
RoHS Directive 2011/65/EU & Amendment Directive (EU) 2015/863	PASS

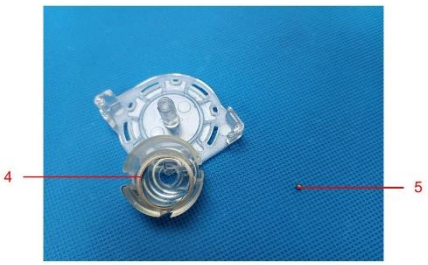
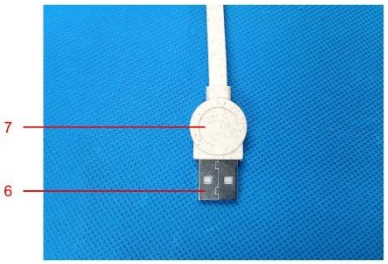
Guangzhou, May 18, 2023
Signed for and on behalf of
DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch
Chemical & Mechanical

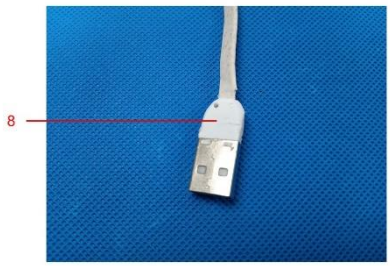
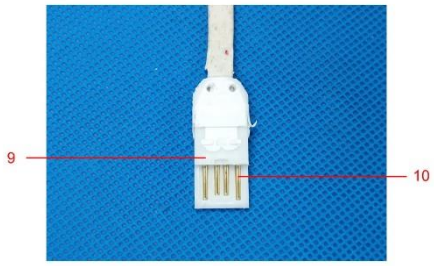
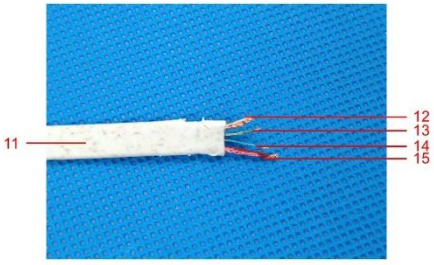
Devin Ai
Laboratory Manager

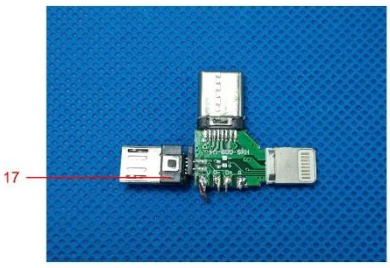
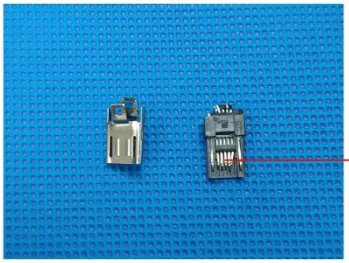
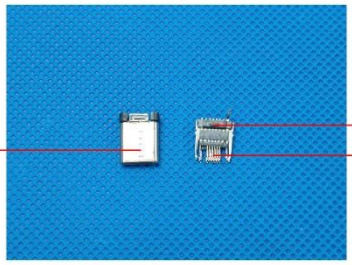
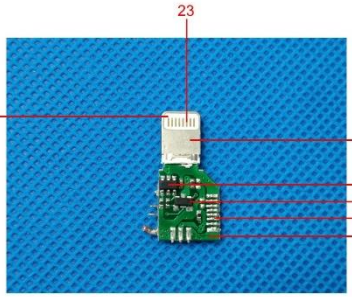
TEST RESULTS

RoHS Directive 2011/65/EU & Amendment Directive (EU) 2015/863

Test Components:

Test No.	Name of material	Photograph
1	Brown adhesive wood	
2	Transparent plastic	
3	Silvery metal	
4	Silvery metal	
5	Silvery metal	
6	Silvery metal	
7	Beige plastic	

Test No.	Name of material	Photograph
8	White plastic	
9	White plastic	
10	Golden metal	
11	Beige plastic	
12	Copper-colored metal	
13	Green metal	
14	Blue metal	
15	Red metal	
16	Silvery metal	

Test No.	Name of material	Photograph
17	Black plastic	
18	Silvery metal	
19	Silvery metal	
20	Black plastic	
21	Silvery metal	
22	White plastic	
23	Golden metal	
24	Silvery metal	
25	Black body	
26	Black body	
27	Silvery metal	
28	Green "PCB"	

A. Screening Test

Test No.	Result (mg/kg)				
	Pb	Cd	Hg	Cr	Br
1	BL	BL	BL	BL	BL
2	BL	BL	BL	BL	BL
3	BL	BL	BL	BL	N.A.
4	BL	BL	BL	**IC**	N.A.
5	BL	BL	BL	**IC**	N.A.
6	BL	BL	BL	BL	N.A.
7	BL	BL	BL	BL	BL
8	BL	BL	BL	BL	BL
9	BL	BL	BL	BL	BL
10	BL	BL	BL	BL	N.A.
11	BL	BL	BL	BL	BL
12	BL	BL	BL	BL	N.A.
13	BL	BL	BL	BL	N.A.
14	BL	BL	BL	BL	N.A.
15	BL	BL	BL	BL	N.A.
16	BL	BL	BL	**IC**	N.A.
17	BL	BL	BL	BL	**IC**
18	BL	BL	BL	**IC**	N.A.
19	BL	BL	BL	**IC**	N.A.
20	BL	BL	BL	BL	BL
21	BL	BL	BL	**IC**	N.A.
22	BL	BL	BL	BL	**IC**
23	BL	BL	BL	BL	N.A.
24	BL	BL	BL	BL	N.A.
25	BL	BL	BL	BL	BL
26	BL	BL	BL	BL	BL
27	BL	BL	BL	BL	N.A.
28	BL	BL	BL	BL	**IC**

Remark:

1. mg/kg = Milligram per kilogram
2. BL = Below Limit
3. **OL = Over Limit, represents test item needs further confirmation.**
4. **IC = Inconclusive, represents test item needs further confirmation.**
5. N.A. = Not Applicable
6. There are the results on total Br while test items on restricted substances are PBBs and PBDEs. There are the results on total Cr while test item on restricted substance is Cr(VI).

Disclaimers:

This XRF screening result 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 results 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.).

B. Chemical Test

Test Item	Result					
	(4)	(5)	(16)	(18)	(19)	(21)
Hexavalent Chromium Cr(VI)	Negative	Negative	Negative	Negative	Negative	Negative

Test Item	Result (mg/kg)		
	(17)	(22)	(28)
PBBs	N.D.	N.D.	N.D.
PBDEs	N.D.	N.D.	N.D.

Remark:

1. N.D. = Not Detected, less than MDL
2. mg/kg = Milligram per kilogram
3. According to IEC 62321-7-1:2015 Ed.1.0, result on Cr(VI) for metal sample is shown as Positive/Negative.
   Negative = Absence of Cr(VI) in coating layer, Positive = Presence of Cr(VI) in coating layer.

Note:

Results were obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) were recommended to be performed, if the concentration exceeded the warning value according to IEC 62321-3-1:2013 Ed. 1.0 (unit: mg/kg).

C. Phthalates Test

For plasticised material(s) in test components

Test Item	Result (mg/kg)					MDL	Limit
	(8)	(17)	(20)	(22)	(28)	(mg/kg)	(mg/kg)
Bis(2-ethylhexyl) phthalate (DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.	50	1000
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.	50	1000
Dibutyl phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.	50	1000
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.	50	1000

Test Item	Result (mg/kg)		MDL	Limit #
	(1)/(7)/(11)	(2)/(9)	(mg/kg)	(mg/kg)
Bis(2-ethylhexyl) phthalate (DEHP)	N.D.	N.D.	50	1000
Butyl benzyl phthalate (BBP)	N.D.	N.D.	50	1000
Dibutyl phthalate (DBP)	N.D.	N.D.	50	1000
Diisobutyl phthalate (DIBP)	N.D.	N.D.	50	1000

Remark:

1. N.D. = Not Detected (below MDL)
2. MDL = Method Detection Limit
3. mg/kg = Milligram per kilogram
4. # = The limit for the test result is 1/n of the value in column (where “n” is the number of

mixed samples).

Test Method

A. Screening test by XRF spectroscopy: With reference to IEC 62321-3-1: 2013 Ed. 1.0 Screening - Lead, mercury, cadmium, total chromium and total bromine using X-ray fluorescence spectrometry.

Screening limits in mg/kg for regulated elements in various material.

Element	Polymer Material	Metallic Material	Composite Material
Cadmium (Cd)	BL≤70＜IC＜130≤OL	BL≤70＜IC＜130≤OL	LOD＜IC＜150≤OL
Lead (Pb)	BL≤700＜IC＜1300≤OL	BL≤700＜IC＜1300≤OL	BL≤500＜IC＜1500≤OL
Mercury (Hg)	BL≤700＜IC＜1300≤OL	BL≤700＜IC＜1300≤OL	BL≤500＜IC＜1500≤OL
Bromine (Br)	BL≤300＜IC	N.A.	BL≤250＜IC
Chromium (Cr)	BL≤700＜IC	BL≤700＜IC	BL≤500＜IC

BL = Below Limit, OL = Over Limit, IC=Inconclusive, N.A. = Not Applicable, LOD=Limit of Detection

B. Chemical Test

Test Item	Test Method	Test Instrument	MDL	EU RoHS Limit (mg/kg)
Lead (Pb)	IEC 62321-5: 2013 Ed. 1.0 Sec.7	ICP-OES	5mg/kg	1000
Cadmium (Cd)	IEC 62321-5: 2013 Ed. 1.0 Sec.7	ICP-OES	5mg/kg	100
Mercury (Hg)	IEC 62321-4: 2013 AMD 1:2017 Ed. 1.0 Sec.7	ICP-OES	5mg/kg	1000
Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015 Ed.1.0 Sec.7	UV-Vis	0.1μg/cm^2	1000
	IEC 62321-7-2:2017 Ed.1.0 Sec.7	UV-Vis	2mg/kg	
Polybrominated Biphenyls (PBBs)	IEC 62321-6: 2015 Ed. 1.0 Sec.8	GC-MS	10mg/kg	1000
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6: 2015 Ed. 1.0 Sec.8	GC-MS	10mg/kg	1000
Bis(2-ethylhexyl) phthalate (DEHP)	IEC 62321-8: 2017 Ed. 1.0 Sec.8	GC-MS	50mg/kg	1000
Butyl benzyl phthalate (BBP)	IEC 62321-8: 2017 Ed. 1.0 Sec.8	GC-MS	50mg/kg	1000
Dibutyl phthalate (DBP)	IEC 62321-8: 2017 Ed. 1.0 Sec.8	GC-MS	50mg/kg	1000
Diisobutyl phthalate (DIBP)	IEC 62321-8: 2017 Ed. 1.0 Sec.8	GC-MS	50mg/kg	1000

****

Remark:
The information of Annex was submitted by the client. DEKRA Testing and Certification (Shanghai) Ltd., Guangzhou branch takes no responsibility for any mistake caused by inaccuracy and/or invalid information.
Annex 1

****

---End of Report---