

Applicant: Ampire Electronics GmbH&Co.KG

Contact information: Langwadener Strasse 60, D-41516 Grevenbroich, Germany

The following sample(s) was (were) submitted and identified by client as:

Sample Name : Audio Isolator

Model No. : 55100-KLINKE

Received Date : Mar. 23, 2022

Testing Period : From Mar. 23, 2022 to Apr. 25, 2022

Test Request : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Shen Zhen UONE Test Co., LTD.

Marcia

Prepared by Checked by Approved by

Marcia Deng Lin Zhu Levent Liang



Report No.: U0511022032361	5-1E Query Password: QW7281	Date: Apr. 25, 2022	Page 2 of 12
Summary of test results:			
TEST REQUEST			CONCLUSION
	d its subsequent amendments Directive	•	
	Cadmium(Cd), Mercury(Hg), Hexavalen (PBBs) and Polybrominated Diphenyl and chemical test		PASS
(2) To determine Phthalates (	DBP, BBP, DEHP, DIBP) content by che	emical test	PASS
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#### Test Material List

Material No.	Description (Location)	Photo(s) of tested materials
1 10h	White plastic with black coating (label)	1 2 3 4 5
2	Black plastic (shell)	
3	Black soft plastic (SR)	INDIVIDUAL DE LES COMPANION DE LES COMPA
4	White glue	
5	Yellow glue	
6	Yellow plastic tape (transformer)	20, 10, 10, 10
∠7 ∠	Black magnet block (transformer)	4. 4. 4.
0 8 0	White plastic bobbin (transformer)	10 HO 10 HOW 10 10
9	Red plastic tape (transformer)	6 <sub>7</sub> 10 11 <sub>7</sub> 17
10	Coppery metal coil (transformer)	
11	Black plastic with white printing (capacitor)	
12	Silvery metal shell (capacitor)	
13	Black soft plastic pin holder (capacitor)	
14	Brown paper (capacitor)	
15	Silvery metal foil (capacitor)	1012 11012 11012 1101
16	Dark silvery metal foil (capacitor)	4. 4. 4
17	Silvery metal pin (capacitor)	Our TOUR TOUR TO
18	Silvery metal (solder)	18 19
JOHE JOHE	JOHE JOHE JOHE JOHE JOHE	
19	Green PCB	

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Material No.	Description (Location)	Photo(s) of tested materials
20	Black soft plastic handle (audio jack)	at the the
21	Golden metal shell (audio jack)	10, 10, 10, 10, 10,
22	White plastic pin holder (audio jack)	20 21 <sub>7</sub> 23 24 25 26 27 28 29
23	Silvery metal pin (audio jack)	
24	White glue (audio jack)	
25	Red soft plastic wire jacket (audio line)	
26	White soft plastic wire jacket (audio line)	
27	Black soft plastic sleeve (audio line)	
28	Silvery metal wire (audio line)	20, 110, 110, 110
29	Black soft plastic cable jacket (audio line)	
30	Golden metal pin (audio plug)	101, 101, 101, 10,
31	Golden metal tube (audio plug)	4. 4. 4.
32	Black plastic pin holder (audio plug)	30 31 32 33 34 35 36 37 38 3
33	Black plastic handle (audio plug)	
34	Black glue (audio plug)	
35	Red soft plastic wire jacket (audio line)	
36	White soft plastic wire jacket (audio line)	
37	Black soft plastic wire jacket (audio line)	
38	Silvery metal foil (audio line)	de de de d
39	Black soft plastic cable jacket (audio line)	O. "4O, "10" , 10"

Remark: The test result(s) of Material No. 3 is(are) shown retest result, and the retest sample(s) was(were) provided by client on Apr. 19, 2022.



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#### Test Result(s):

(1) Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)

Test Method: IEC62321-3-1: 2013, IEC62321-4: 2013+A1:2017, IEC62321-5: 2013, IEC62321-6: 2015, IEC 62321-7-1:2015, IEC 62321-7-2: 2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

1019	101	EDXRF Result (1)			10/11/	Chemical Result (2)		OH1 10H1
No.	Pb	Cd	Hg	Cr	Br	(mg/kg)	Remark <sup>(3)</sup>	Conclusion
1	BL	BL	BL	BL	BL	WE - WE	WE -WE	PASS
2	BL	BL	BL	BL	BL	200	2 2	PASS
3	BL	BL	BL	BL	BL	<u> </u>	Apr. 19, 2022	PASS
4	BL	BL	BL	BL	BL	10, 10,	20, 20,	PASS
5	BL	BL	BL	BL	BL	16 - 16	& - &	PASS
6	BL	BL	BL	BL	BL	1012 -1012 "	1012 TOLE "	PASS
7	BL	BL	BL	BL	BL	6 - 6	4 - 4	PASS
8	BL	BL	BL	BL	BL	10HF -10HF	10HP -10HP	PASS
9	BL	BL	BL	BL	BL	0 0	0 0	PASS
10	BL	BL	BL	BL	NA	WE - WE	ME -ME	PASS
11	BL	BL	BL	BL	BL	120 -120 .	20 20 1	PASS
12	BL	BL	BL	BL	NA	JE - JE	JE - JE	PASS
13	BL	BL	BL	BL	BL	10, -10,	10, 70,	PASS
14	BL	BL	BL	BL	BL	20 - 30	4 4.	PASS
15	BL	BL	BL	BL	NA	10 H - 10 H .	10 ps. 10 ps.	PASS
16	BL	BL	BL	BL	NA	/ - /		PASS
17	BL	BL	BL	BL	NA	10HF -10HF	10 Hz 10 Hz	PASS
18	BL	BL	BL	BL	NA	0 0	0 0	PASS
19	BL	BL	BL	BL	Х	PBBs: N.D. PBDEs: N.D.	ONE -ONE	PASS
20	BL	BL	BL	BL	BL	2 D	2 <u>7</u> .	PASS
21	OL	Х	BL	BL	NA	Pb: 26500# Cd: 66	Copper alloy	PASS
22	BL	BL	BL	BL	BL	0 0 .	2. D.	PASS

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110	117	EDX	RF Resu	ılt <sup>(1)</sup>	110	Chemical Result (2)	D a a (3)	Oanalus's s
No.	Pb	Cd	Hg	Cr	Br	(mg/kg)	Remark <sup>(3)</sup>	Conclusion
23	BL	BL	BL	BL	NA	10, 10, 1	20, 20,	PASS
24	BL	BL	BL	BL	BL	4 4.	4 4.	PASS
25	BL	BL	BL	BL	BL	1019 -1019	OH 170H	PASS
26	BL	BL	BL	BL	BL			PASS
27	BL	BL	BL	BL	BL	· OHE - OHE	0HF -0HF	PASS
28	BL	BL	BL	BL	NA	0 0	2	PASS
29	BL	BL	BL	BL	BL	ME - ME	NE -NE	PASS
30	OL	BL	BL	BL	NA	Pb: 23200#	Copper alloy	PASS
31	BL	BL	BL	BL	NA	£ - £	A − A	PASS
32	BL	BL	BL	BL	BL	10, 10,	20, 40,	PASS
33	BL	BL	BL	BL	BL	4 - 4	.66	PASS
34	BL	BL	BL	BL	BL	1011-1011	OHI TOHIL	PASS
35	BL	BL	BL	BL	BL			PASS
36	BL	BL	BL	BL	BL	OHE -OHE	OHE -OHE	PASS
37	BL	BL	BL	BL	BL	200 1	200	PASS
38	BL	BL	BL	BL	NA		all -all	PASS
39	BL	BL	BL	BL	BL	10, 10, 1	20, 20,	PASS



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#### Remark:

- (1) ①Results are obtained by EDXRF for primary screening, and further wet chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).
  - ②OL = Over Limit, BL = Below Limit, X = Inconclusive, NA = Not Applicable.
  - ③The EDXRF screening test for RoHS elements The reading may be different to the actual content in the sample be of non-uniformity composition.

<u> </u>	, ,		
Element	Polymer	Metal	Composite Materials
Cd	BL ≤(70-3σ)< X <(130+3σ)≤ OL	BL ≤(70-3σ)< X <(130+3σ)≤ OL	LOD < X <(150+3σ)≤ OL
DL	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(500-3σ)< X
Pb	OL (	& OL & &	<(1500+3σ)≤ OL
1012	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(500-3σ)< X
Hg	OL	OL	<(1500+3σ)≤ OL
Br	BL ≤ (300-3σ)< X	NA	BL ≤ (250-3σ)< X
Cr	BL ≤ (700-3σ)< X	BL ≤ (700-3σ)< X	BL ≤ (500-3σ)< X

#### Units and limits in EU RoHS Directive 2011/65/EU:

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit	1000	100	1000	1000	1000	1000

- (2) ① mg/kg = ppm = 0.0001%, N.D. = Not Detected (Less than MDL).
  - ②Unit and MDL (Method detection limit) in wet chemical test.

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL	2	2	2	8	5	5

③According to IEC 62321-7-1:2015, result on Cr(VI) for metal sample is shown as Positive/Negative.

Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating.

Storage condition and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

- According to IEC 62321-3-1:2013, this column represents the results of wet chem test.
- (3) This column represents the exempted decoration of material or other related testing sample's information.

  According to the declaration from the client, Lead in specimen(s) is exempted by RoHS Directive (2011/65 / EU) annex III and its amendment base on:
  - # Copper alloy containing up to 4 % lead by weight.



#### (2) Phthalates (DBP, BBP, DEHP, DIBP) content

Test Method: IEC 62321-8: 2017, analyzed by gas chromatographic- mass spectrometer (GC-MS).

Substances	DBP	ВВР	DEHP	DIBP	0
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	all all
Limit (mg/kg)	1000	1000	1000	1000	Conclusion
MDL (mg/kg)	20	20	20	20	A 3
Material No.	110 HOLE	Result	(mg/kg)	John John	POLE POL
, 1	N.D.	N.D.	N.D.	N.D.	PASS
0 2 0 1	N.D.	N.D.	N.D.	N.D.	PASS
3	N.D.	N.D.	300	N.D.	PASS
AF 4 AF	N.D.	N.D.	N.D.	N.D.	PASS
5	N.D.	N.D.	N.D.	N.D.	PASS
6	N.D.	N.D.	N.D.	N.D.	PASS
10, 110,	N.D.	N.D.	N.D.	N.D.	PASS
8	N.D.	N.D.	N.D.	N.D.	PASS
0 9	N.D.	N.D.	N.D.	N.D.	PASS
11	N.D.	N.D.	N.D.	N.D.	PASS
13	N.D.	N.D.	N.D.	N.D.	PASS
14	N.D.	N.D.	N.D.	N.D.	PASS
19	N.D.	N.D.	N.D.	N.D.	PASS
20	N.D.	N.D.	N.D.	N.D.	PASS
22	N.D.	N.D.	N.D.	N.D.	PASS
24	N.D.	N.D.	N.D.	N.D.	PASS
25	N.D.	N.D.	N.D.	N.D.	PASS
26	N.D.	N.D.	N.D.	N.D.	PASS
27	N.D.	N.D.	N.D.	N.D.	PASS
29	N.D.	N.D.	N.D.	N.D.	PASS
32	N.D.	N.D.	N.D.	N.D.	PASS

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10, 10,	10,10,	10, 11,	, 70, ,	10, -10,	10, 10,
Substances	DBP	BBP	DEHP	DIBP	0
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	all all
Limit (mg/kg)	1000	1000	1000	1000	Conclusion
MDL (mg/kg)	20	20	20	20	4. 3
Material No.	110/4, 110/4,	Result	(mg/kg)	10/4, 10/4,	104, 104,
33	N.D.	N.D.	N.D.	N.D.	PASS
34	N.D.	N.D.	N.D.	N.D.	PASS
35	N.D.	N.D.	N.D.	N.D.	PASS
36	N.D.	N.D.	N.D.	N.D.	PASS
37	N.D.	N.D.	N.D.	N.D.	PASS
39	N.D.	N.D.	N.D.	N.D.	PASS

Note:

- 1. mg/kg = milligram per kilogram (ppm).
- 2. MDL= method detection limit.
- 3. N.D.=not detected(less than MDL).



#### **Test Process Flow** 1. Lead, Cadmium, Mercury Cut and Weigh the Add Digested Reagents or Completely dissolved and Cool Solutions Samples the Digested Solution Analyzed by ICP-OES Filter the Digested Solution Data process 2. Hexavalent Chromium (Non-metal) Cut and Weigh the Add Digested Reagents or Heat Samples at Proper Samples Solutions temperature Adjust pH value to 7.5±0.5 Cool and then Filter the Add the DI Water and Dipthenylcarbazide use Nitric acid solution Solution Adjust pH value to 2.0±0.5 Analyzed by UV-Vis use Sulfur acid solution Hexavalent Chromium (Metal) Heat Water to boil and keeping Cut sample (50+5) Add 50mL DI water to beaker 10mins cm<sup>2</sup> Add 1mL color Complement the water to 50mL Add 1mL orthophosphoric acid developing reagent

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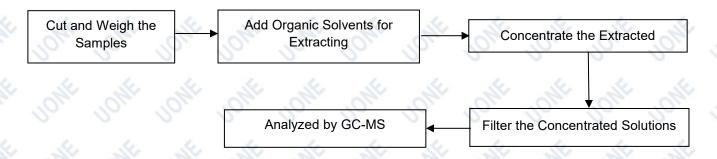
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Analyzed by UV-Vis



#### **Test Process Flow (Continued):**

3. PBBs & PBDEs, Phthalates



#### Photo(s) of Sample:



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



#### Statement

- 1. The information as listed on the first page of this test report was all provided by the client except the received date, testing period, test result(s) and test request. The client shall be responsible for the representativeness of sample and authenticity of materials, for which UONE shall bear no responsibilities.
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