中国认可
国际互认
检测
TESTING
CNAS L6478

TEST REPORT

Report No.	:	WTF25F03076583C
Job No.	:	FSW2503291445CJ
Applicant	:	Mid Ocean Brands B.V.
Address	:	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	:	118897
Sample Name	:	Apple Find my bicycle bell
Sample Model	:	MO2601
Test Requested	:	Refer to next page (s)
Test Method	:	Refer to next page (s)
Test Conclusion	:	Refer to next page (s)
Date of Receipt sample	:	2025-03-29
Testing period	:	2025-03-29 to 2025-04-09
Date of Issue	:	2025-04-10
Test Result	:	Refer to next page (s)

Prepared By:
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Signed for and on behalf of
Waltek Testing Group (Foshan) Co., Ltd.

Swing.Liang

WTF25F03076583C

Summary:

Test Requested	Test Conclusion
In accordance with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863, to determine the 10 restricted substances content in the submitted sample.	**Pass** (Please refer to next pages for details)

Sample Photo(s):

MO2601

MO2601

Test Results:

1. Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs

Test method:

1) With reference to IEC 62321-2:2021, disassembly, disjunction and mechanical sample preparation
2) With reference to IEC 62321-3-1:2013, screening –Lead, cadmium, mercury, total chromium and total bromine by X-ray fluorescence spectrometry
3) With reference to IEC 62321-4:2013+AMD1:2017 CSV, determination of Mercury by ICP-OES
4) With reference to IEC 62321-5:2013, determination of Lead and Cadmium by ICP-OES
5) With reference to IEC 62321-7-2: 2017 and IEC 62321-7-1: 2015, determination of Hexavalent Chromium by UV-Vis
6) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
14	Black plastic shell	BL	BL	BL	BL	BL	NA
15	Silvery metal sheet	BL	BL	BL	BL	--	NA
16	Black-white PCB	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND
17	Chip capacitor	BL	BL	BL	BL	BL	NA
18	Chip IC	BL	BL	BL	BL	BL	NA
19	Silvery metal pin	BL	BL	BL	IN	--	Cr^{6+} : Negative
20	Chip EC	BL	BL	BL	BL	BL	NA
21	Chip resistor	BL	**OL**	BL	BL	BL	***Pb : 1560**
22	Chip crystal oscillator	BL	BL	BL	BL	BL	NA
23	Black plastic shell (button)	BL	BL	BL	BL	BL	NA
24	Silvery metal shell (button)	BL	BL	BL	IN	--	Cr^{6+} : Negative
25	Silvery metal sheet (button)	BL	BL	BL	IN	--	Cr^{6+} : Negative
26	Chip LED	BL	BL	BL	BL	BL	NA
27	Chip audio	BL	BL	BL	BL	BL	NA
28	Golden metal sheet	BL	BL	BL	BL	--	NA

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
29	White ceramic	BL	**OL**	BL	BL	--	***Pb : 3.84×10^5**
30	Transparent double faced adhesive tape	BL	BL	BL	BL	BL	NA

Remark:

(1) Results are obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr^{6+}) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1: 2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	LOD < IN < (150+3σ) ≤ OL
Pb	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Hg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Cr	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) <IN	BL ≤ (500-3σ) < IN
Br	BL ≤ (300-3σ) < IN	--	BL ≤ (250-3σ) < IN

BL= Below Limit OL= Over Limit LOD = Limit of Detection -- = Not Regulated

(2) "IN" expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.

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

(4) mg / kg =milligram per kilogram=ppm, μg/cm^2= Micrograms per square centimetre.

(5) ND = Not Detected or lower than limit of quantitation.

(6) NA = Not Applicable, as the XRF screening test result was below the limit or as the XRF screening directly determine that test result was over the limit, it was not need to conduct the wet chemical testing.

(7) LOQ = Limit of quantitation.

Test Items	Pb	Cd	Hg	Cr^{6+}		PBB	PBDE
Units	mg/kg	mg/kg	mg/kg	mg/kg	μg/cm^2	mg/kg	mg/kg
LOQ	2	2	2	8	0.1	5	5

The LOQ for single compound of PBBs and PBDEs is 5 mg/kg, LOQ of Cr^{6+} for polymer and composite sample is 8 mg/kg and LOQ of Cr^{6+} for metal sample is 0.1 μg/cm^2.

(8) 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^{6+})	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

(9) According to IEC 62321-7-1:2015, determined of Cr^{6+} on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.
Boiling water extraction:
Negative = Absence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is less than 0.10 μg/cm^2.
Positive = Presence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is greater than 0.13 μg/cm^2.
Information on storage conditions and production date of the tested sample is unavailable and thus Cr^{6+} results represent status of the sample at the time of testing.

(10) Abbreviation:
"Pb" denotes Lead, "Cd" denotes Cadmium, "Hg" denotes Mercury, "Cr" denotes Chromium, "Cr (VI)" denotes Hexavalent Chromium, "Br" denotes Bromine, "PBBs" denotes Total Polybrominated Biphenyls, "PBDEs" denotes Total Polybrominated Diphenyl Ethers.

(11) As per client's requirement, to test the specified components. The test results relate only to the components tested, and it doesn't mean that the whole product complies with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863.

(12) * = According to the declaration from client, the source of lead in test sample is from the glass or ceramic material of that electronic component which is exempted by Directive 2011/65/EU ANNEX III-7(c)-I.

2. Phthalates:

Test method:

With reference to IEC 62321-8:2017, determination of Phthalates content by GC-MS.

Serial No.	Part No.	Result (mg/kg)			
		DBP	BBP	DEHP	DIBP
T01	14+23△	ND	ND	ND	ND
T02	15	--	--	--	--
T03	16	ND	ND	ND	ND
T04	17+18+20+21+22△	ND	ND	ND	ND
T05	19	--	--	--	--
T06	24	--	--	--	--
T07	25	--	--	--	--
T08	26+27△	ND	ND	ND	ND
T09	28	--	--	--	--
T10	29	--	--	--	--
T11	30	ND	ND	ND	ND

Note:

(1) mg/kg = milligram per kilogram= ppm

(2) ND = Not Detected or lower than limit of quantitation.

(3) -- = Not Regulated.

(4) LOQ = Limit of quantitation.

Test Items	DBP	BBP	DEHP	DIBP
Units	mg/kg	mg/kg	mg/kg	mg/kg
LOQ	50	50	50	50

(5) Abbreviation:
"DBP" denotes Dibutyl phthalate, "BBP" denotes Benzyl butyl phthalate (BBP), "DEHP" denotes Bis(2-ethylhexyl)-phthalate, "DIBP" denotes Diisobutyl phthalate, "PHT" denotes Phthalates.

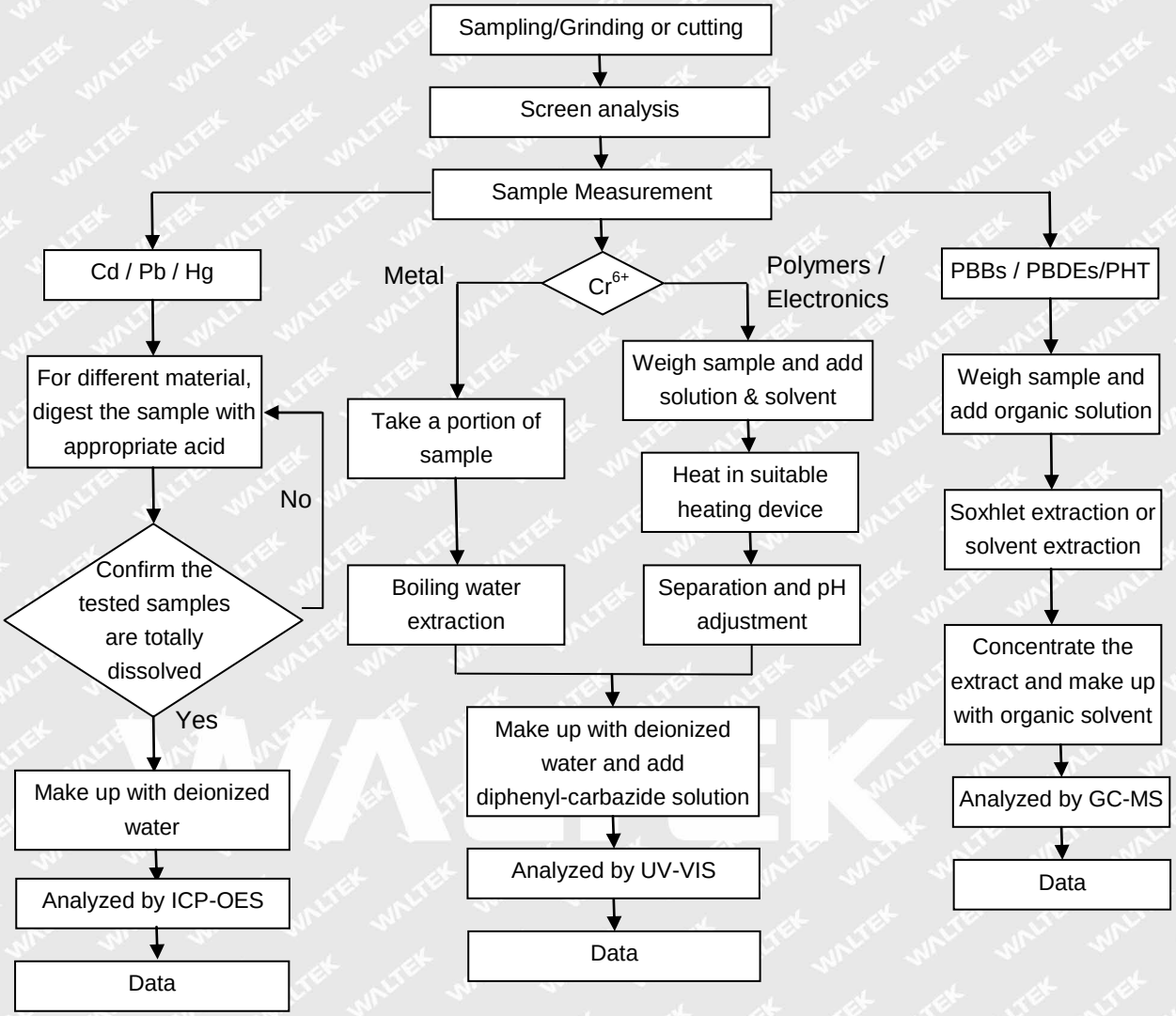
(6) RoHS requirement

Restricted Substances	Limits
Dibutyl phthalate (DBP)	0.1% (1000 mg/kg)
Benzyl butyl phthalate (BBP)	0.1% (1000 mg/kg)
Di(2-ethylhexyl) phthalate (DEHP)	0.1% (1000 mg/kg)
Di-iso-butyl phthalate (DIBP)	0.1% (1000 mg/kg)

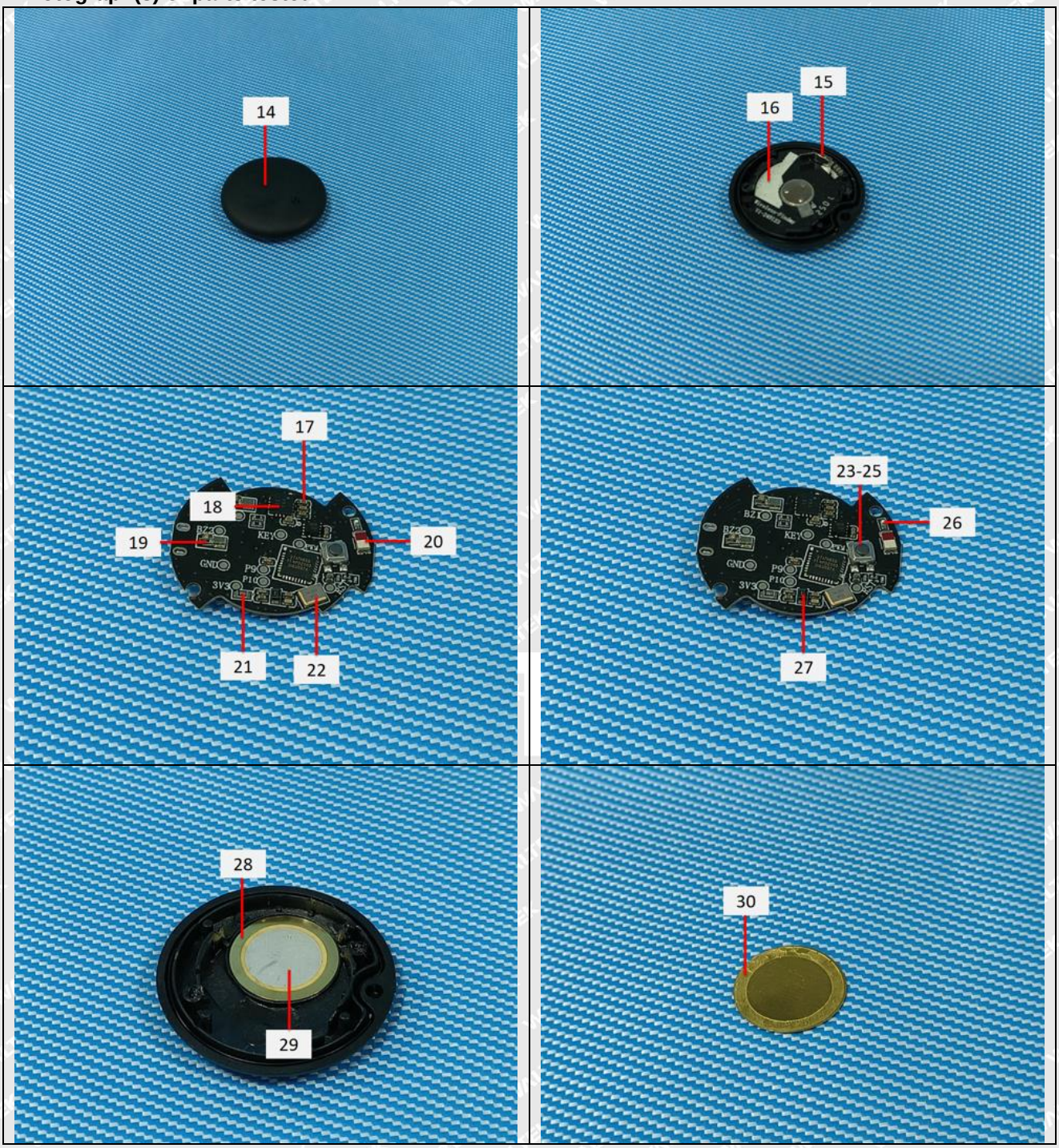
(7) "△"= As client's requirement, the testing was conducted based on mixed components.Results are calculated by the minimum weight of mixed components.

(8) As per client's requirement, to test the specified components. The test results relate only to the components tested, and it doesn't mean that the whole product complies with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863.

Measurement Flowchart:



Photograph(s) of parts tested:



Remarks:

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====== End of Report ======