

Test report

T-25093573-11-R1



Verify Report

Overall result

Pass

Please refer to the following pages for test result summary and notes.

Client information

Client: Mid Ocean Brands B.V.
Address: 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong



Sample information

Description: MINI TOOL SET WITH LED LIGHT	Labeled age grade: -
SKU/style #: IT3874	Tested age grade: -
Country of origin: -	Vendor code: 118518
Country of distribution: Europe	
Material/composition: ABS,aluminum	
Quantity submitted: 6 pcs	

General information

Sample receipt date: 05-Mar-2025	Report date: 31-Mar-2025
Testing period: 12-Mar-2025 to 27-Mar-2025	

QIMA (Hangzhou) Testing Co., Ltd.

Jeremy Xu

Jeremy Xu
Chemical Laboratory Manager



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Result summary

At the request of the client, the following test were conducted:

Test(s) conducted	Conclusion
Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Phthalates Content ^φ	Pass
Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Heavy metals and Flame retardants content (Pb, Cd, Hg, Cr (VI), PBBs and PBDEs) ^φ	Pass

Note:

Test(s) marked with "φ" indicate tests performed in external laboratories.



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Detailed results

Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Phthalates Content [†]

Test Method: EN 62321-8:2017
Analytical Method: Gas Chromatography/Mass Spectrometry

Specimen No.		1	2+3+8	4+7	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
DBP	84-74-2	ND	ND	ND	---	1000
BBP	85-68-7	ND	ND	ND	---	1000
DEHP	117-81-7	ND	ND	ND	---	1000
DIBP	84-69-5	ND	ND	ND	---	1000
Conclusion		Pass	Pass	Pass	---	

Note:
DBP = Dibutyl phthalate; BBP = Benzyl butyl phthalate; DEHP = Di-(2-ethylhexyl) phthalate; DIBP = Di-iso-Butyl phthalate
mg/kg = Milligrams per kilogram
ND = Not detected (Reporting Limit =50mg/kg)





Detailed results

Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Heavy metals and Flame retardants content (Pb, Cd, Hg, Cr (VI), PBBs and PBDEs)[‡]

Test Method: EN 62321-3-1:2013 for Cadmium, Lead, Mercury, Chromium and Bromine by XRF
EN 62321-4:2013/AMD1:2017 for Mercury by ICP-OES
EN 62321-5:2013 for Lead, Cadmium and Chromium by ICP-OES
EN 62321-6:2015 for PBBs and PBDEs by GC-MS
EN 62321-7-1:2015, EN 62321-7-2:2017 for Hexavalent Chromium by UV- Vis

Analytical Method: X-ray Fluorescence Spectrometry
Inductively Coupled Plasma-Optical Emission Spectrometry
Gas Chromatography Mass Spectrometry
UV-Visible Spectrophotometry

Specimen No.	Test Item (mg/kg)						Conclusion
	Pb	Cd	Hg	Cr (VI)	PBBs	PBDEs	
1	BL	BL	BL	BL	BL	BL	Pass
2	BL	BL	BL	BL	BL	BL	Pass
3	BL	BL	BL	BL	BL	BL	Pass
4	BL	BL	BL	BL	ND	ND	Pass
5	BL	BL	BL	Ne	NA	NA	Pass
6	BL	BL	BL	BL	NA	NA	Pass
7	BL	BL	BL	BL	BL	BL	Pass
8	BL	BL	BL	BL	BL	BL	Pass
9	BL	BL	BL	BL	NA	NA	Pass

Parameter	Unit	Requirement	Report Limit (MDL)
Lead (Pb)	mg/kg	1000	10
Cadmium (Cd)	mg/kg	100	10
Mercury (Hg)	mg/kg	1000	10
Chromium VI (Cr VI) (metal)	ug/cm ²	1000	Positive(>0.13ug/cm ²)/Nega- tive(<0.10ug/cm ²) /Inconclusive(0.10ug-0.13ug/cm ²)
Chromium VI (Cr VI) (non-metal)	mg/kg	1000	10
PBB	mg/kg	1000	20
PBDE	mg/kg	1000	20

ED-XRF Detection Limits In mg/kg For Regulated Elements Matrices

Parameter	Unit	Polymers	Metals	Composite material
Lead (Pb)	mg/kg	100	200	200
Cadmium (Cd)	mg/kg	50	70	70
Mercury (Hg)	mg/kg	100	200	200
Chromium (Cr)	mg/kg	100	200	200
Bromine (Br)	mg/kg	200	---	200





Detailed results

As specified by client, with XRF analysis toxic harmful substance content, All kinds of matrixes screening of the element is limited see chart (Unit: mg/kg)

Elements	Polymer material	Metal material/ Inorganic nonmetallic material	Electronic component
Lead (Pb)	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cadmium (Cd)	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Mercury (Hg)	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Chromium (Cr)	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Bromine (Br)	$BL \leq (300-3\sigma) < X$	-	$BL \leq (250-3\sigma) < X$

Note:

- Unit: mg/kg= Milligrams per kilogram, 1mg/kg=1ppm=0.0001%
- MDL=Method Detection Limit
- "NA"= Not Regulated or Not Applicable.
- 3σ = Analysis shows that the instrument reproducibility.
- BL = Below Limit by XRF screening.
OL = Over Limit by XRF screening.
IN = Inconclusive.
- ND=Not Detected (< MDL), Result reported with wet chemical confirmation test with ICP-OES and GC-MS.
- Ne=Negative, Absence of Cr(VI), the concentration of Cr (VI) in sample solution is less than $0.10\mu\text{g}/\text{cm}^2$.
Po = Positive, Presence of Cr(VI), the concentration of Cr (VI) in sample solution is more than $0.13\mu\text{g}/\text{cm}^2$.
Result reported with wet chemical confirmation test with UV-Vis.
- "Results of XRF" is the result on total Br and total Cr while restricted substances are PBB, PBDE and Cr(VI).
- EX(*)= Exemption item.
*=6(a) Lead as alloying element in steel for machining purposes and in galvanized steel containing up to 0,35% lead by weight.
*=6(b) Lead as an alloying element in aluminum containing up to 0,4 % lead by weight
*=6(c) Copper alloy containing up to 4% lead by weight.
*=7(a) Lead in high-melting point solder (i.e. lead-based alloys with lead containing more than 85% lead by weight).
*=7(c)-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound.
*=8(b) Cadmium and its compounds in electrical contacts.





Specimen description

Specimen #	Specimen description	Location
1	Transparent soft plastic label with black printing	Body
2	Black plastic with silvery coating	Body
3	Grey translucent plastic	Body
4	Transparent LED	LED
5	Silvery metal	Battery holder
6	Silvery metal spring	Battery holder
7	Black plastic	Switch
8	Grey translucent plastic	Accessory
9	Silvery metal	Accessory





Pictures

Sample photo:



End of the report

The test result(s) and conclusion(s) in this report relate only to the sample(s) as received and the method /regulation section(s) tested as described herein. If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA decision rule. (<https://www.qima.com/conditions-of-service#decisionRule>). This test report may not be reproduced in whole or in part, without the written approval of QIMA (Hangzhou) Testing Co., Ltd.



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