

Test report

T-25093573-11-R1



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

SKU/style #: IT3874

Country of origin: -Country of distribution: **Europe**

Material/composition: ABS,aluminum

Quantity submitted: 6 pcs

Labeled age grade: -Tested age grade: -

Vendor code: 118518

General information

Sample receipt date: 05-Mar-2025

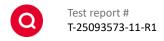
Testing period: 12-Mar-2025 to 27-Mar-2025

Report date: 31-Mar-2025

QIMA (Hangzhou) Testing Co., Ltd.

leremy Xu

Chemical Laboratory Manager



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 ⁶	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) $^{\phi}$	Pass

Note:

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



Detailed results

Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Phthalates Content ⁶

Test Method: EN 62321-8:2017

Analytical Method: Gas Chromatography/Mass Spectrometry

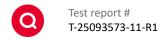
Spec	imen No.	1	2+3+8	4+7		Limit
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	(mg/kg)
DBP	84-74-2	ND	ND	ND		1000
BBP	85-68-7	ND	ND	ND		1000
DEHP	117-81-7	ND	ND	ND		1000
DIBP	84-69-5	ND	ND	ND		1000
Cor	nclusion	Pass	Pass	Pass		

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)

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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), Heavy metals and Flame retardants content (Pb, Cd, Hg, Cr (VI), PBBs and PBDEs) ⁶

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)					Conducion	
Specimen No.	Pb	Cd	Hg	Cr (VI)	PBBs	PBDEs	Conclusion
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/cm²	1000	Positive(>0.13ug/cm²)/Nega- tive(<0.10ug/cm²) /Inconclusive(0.10ug-0.13ug/cm²)
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

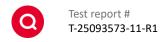
As specified by client, with XRF analysis toxic harmful substance content, All kinds of matrixes screening of the element is limited see chart (Unit: mg/kg)

Elements	Polymer material	Metal material/ Inorganic nonmet- allic material	Electronic component
Lead (Pb)	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(700-3σ)<x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<(1300+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<< td=""></x<<>
Leau (PD)	BLS(700-30) <x<(1300+30)sol< td=""><td>BLS(700-30)\\(\(1300+30)\)SOL</td><td>(1500+3σ) ≤OL</td></x<(1300+30)sol<>	BLS(700-30)\\(\(1300+30)\)SOL	(1500+3σ) ≤OL
Cadmium (Cd)	BL≤(70-3σ) <x(130+3σ)≤ol< td=""><td>BL≤(70-3σ)<x<(130+3σ)≤ol< td=""><td>LOD<x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<></td></x<(130+3σ)≤ol<></td></x(130+3σ)≤ol<>	BL≤(70-3σ) <x<(130+3σ)≤ol< td=""><td>LOD<x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<></td></x<(130+3σ)≤ol<>	LOD <x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<>
Moroury (Hg)	DI 700 3-0 < V </1200 2-0 < O </td <td>BL≤(700-3σ)<x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<(1300+3σ)≤ol<></td>	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<< td=""></x<<>
Mercury (Hg)	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BLS(700-30)<x<(1300+30)sol< td=""><td>(1500+3σ)≤OL</td></x<(1300+30)sol<></td></x<(1300+3σ)≤ol<>	BLS(700-30) <x<(1300+30)sol< td=""><td>(1500+3σ)≤OL</td></x<(1300+30)sol<>	(1500+3σ)≤OL
Chromium (Cr)	BL≤(700-3σ) <x< td=""><td>BL≤(700-3σ)<x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<></td></x<>	BL≤(700-3σ) <x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<>	BL≤(500-3σ) <x< td=""></x<>
Bromine (Br)	BL≤(300-3σ) <x< td=""><td>-</td><td>BL≤(250-3σ)<x< td=""></x<></td></x<>	-	BL≤(250-3σ) <x< td=""></x<>

Note:

- 1. Unit: mg/kg= Milligrams per kilogram, 1mg/kg=1ppm=0.0001%
- 2. MDL=Method Detection Limit
- 3. "NA" = Not Regulated or Not Applicable.
- 4. 3σ = Analysis shows that the instrument reproducibility.
- 5. BL = Below Limit by XRF screening.
 - OL = Over Limit by XRF screening.
 - IN = Inconclusive.
- 6. ND=Not Detected (< MDL), Result reported with wet chemical confirmation test with ICP-OES and GC-MS.
- 7. Ne=Negative, Absence of Cr(VI), the concentration of Cr (VI) in sample solution is less than $0.10\mu g/cm^2$. Po = Positive, Presence of Cr(VI), the concentration of Cr (VI) in sample solution is more than $0.13\mu g/cm^2$. Result reported with wet chemical confirmation test with UV-Vis.
- 8. "Results of XRF" is the result on total Br and total Cr while restricted substances are PBB, PBDE and Cr(VI).
- 9. 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.

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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.

