

TEST REPORT

Test Report # 23A-003480(A1) Date of Report Issue: April 28, 2023
Date of Sample Received: April 7, 2023 Pages: Page 1 of 8

CLIENT INFORMATION:

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



SAMPLE INFORMATION:

Product Name: MDF Wood ornament LED light
Style No.: CX1527 Labeled Age Grade: -
Order No.(PO No.): - Client Request Age Grade: -
Country of Origin: - Recommended Age Grade: -
Country of Distribution: Europe Tested Age Grade: -
Composition/Main Material: MDF
Testing Period: 04/10/2023-04/17/2023, 04/24/2023-04/28/2023

OVERALL RESULT:

PASS

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

QIMA (HANGZHOU) TESTING CO., LTD.

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Chemical Laboratory Supervisor



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Test(s) marked with 'φ' was subcontracted to external laboratory.

The test result(s) and conclusion(s) in this report relate only to the sample(s) as received and 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

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TEST RESULTS SUMMARY:

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

CONCLUSION	TEST(S) CONDUCTED
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)
PASS	Directive 2011/65/EU and its amendment Directive (EU) 2015/863, Restriction of the Use of Certain Hazardous Substances (RoHS), Phthalates Content (DBP, BBP, DEHP, DIBP)
PASS	EC Directive 2006/66/EC and Amendment 2013/56/EU, Lead, cadmium and mercury content



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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)

Test Method: IEC 62321-3-1:2013 for Cadmium, Lead, Mercury, Chromium and Bromine by XRF
 IEC 62321-4:2013/AMD1:2017 for Mercury by ICP-OES
 IEC 62321-5:2013 for Lead, Cadmium and Chromium by ICP-OES
 IEC 62321-6:2015 for PBBs and PBDEs by GC-MS
 IEC 62321-7-1:2015, IEC62321-7-2:2017 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

No.	Parts Name	Test Item (mg/kg)						Conclusion
		Pb	Cd	Hg	CrVI	PBBs	PBDEs	
1	Brown rope	BL	BL	BL	BL	BL	BL	PASS
2	White plastic patch	BL	BL	BL	BL	BL	BL	PASS
3	Wood main body	BL	BL	BL	BL	BL	BL	PASS
4	Wood slice with black coating	BL	BL	BL	BL	BL	BL	PASS
5	Black coating	BL	BL	BL	BL	BL	BL	PASS
6	White hot melt adhesive	BL	BL	BL	BL	BL	BL	PASS
7	Silver metal screw	BL	BL	BL	BL	-	-	PASS
8	Golden pendant	BL	BL	BL	BL	-	-	PASS
9	Battery box-metal spring	BL	BL	BL	BL	-	-	PASS
10	Battery box-silvery metal pin	BL	BL	BL	BL	-	-	PASS
11	Battery box-white plastic main body	BL	BL	BL	BL	BL	BL	PASS
12	Battery box-soldering tin	BL	BL	BL	BL	-	-	PASS
13	Black element-black metal shell	BL	BL	BL	BL	-	-	PASS
14	Black element-black plastic button	BL	BL	BL	BL	BL	BL	PASS
15	Black element-metal small spring	BL	BL	BL	BL	-	-	PASS
16	Black element-silver metal end cover	BL	BL	BL	BL	-	-	PASS
17	Lamp-shade	BL	BL	BL	BL	ND	ND	PASS
18	Lamp-yellow wick	BL	BL	BL	BL	BL	BL	PASS
19	Lamp-silver wire	BL	BL	BL	BL	-	-	PASS
20	Lamp-silver metal square piece of pin	BL	BL	BL	BL	-	-	PASS
21	Lamp-brown plastic base	BL	BL	BL	BL	BL	BL	PASS
22	Lamp-soldering tin	BL	BL	BL	BL	-	-	PASS



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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
- “-”= Not Regulated or Not Applicable
- 3σ = Analysis shows that the instrument reproducibility
- BL = Below Limit by XRF screening;
OL = Over Limit by XRF screening.
- ND=Not Detected (< MDL), Result reported with wet chemical confirmation test with ICP-OES
- 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 PBBs/PBDEs and Cr(VI).



DETAILED RESULTS:

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

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

Specimen No.	1	2+11+14	3+4+5	6	17+18+21	Limit (mg/kg)
Test Item	Result (mg/kg)					
DBP	ND	ND	ND	ND	ND	1000
BBP	ND	ND	ND	ND	ND	1000
DEHP	ND	ND	ND	ND	ND	1000
DIBP	ND	ND	ND	ND	ND	1000
Conclusion	PASS	PASS	PASS	PASS	PASS	

Note:

DBP = Dibutyl phthalate; BBP = Benzyl butyl phthalate; DEHP = Di-(2-ethylhexyl) phthalate
 DIBP = Di-iso-Butylphthalate Phthalate;
 mg/kg = Milligrams per kilogram
 ND = Not detected (Reporting Limit =150mg/kg)



DETAILED RESULTS:

EC Directive 2006/66/EC and Amendment 2013/56/EU, Lead, cadmium and mercury content

Test Method: US EPA 3052:1996 & US EPA 6010D:2014
Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Components and Parts Name	Item	MDL (mg/kg)	Result (mg/kg)	Limit (mg/kg)
23:Battery	Lead (Pb)	5	ND	40
	Cadmium (Cd)	5	ND	20
	Mercury (Hg)	5	ND	5
Conclusion		-	PASS	-

Note:

mg/kg = Milligrams per kilogram
MDL=Method Detection Limit
ND = Not detected (< MDL)



SAMPLE PHOTO:



SAMPLE PHOTO:



-End Report-

