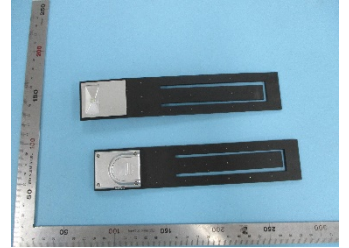


TEST REPORT

Test Report # 20A-004660(A1) Date of Report Issue: August 20, 2020
Date of Sample Received: July 31, 2020 Pages: Page 1 of 9

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: Book light
Style No.: - Labeled Age Grade: -
Order No.(PO No.): - Client Request Age Grade: -
Country of Origin: - Recommended Age Grade: -
Country of Distribution: Europe Tested Age Grade: -
Model No.: MO9460
Composition/Main Material: TPR
Buyer Name: Mid Ocean Brands B.V.
Supplier Name: 100396
Testing Period: 07/31/2020-08/07/2020, 08/11/2020-08/13/2020, 08/18/2020-08/20/2020

OVERALL RESULT:

φ PASS

Please refer to the following pages for test result summary and appropriate notes.
QIMA (HANGZHOU) TESTING CO., LTD.

Contrary Kong

Contrary Kong
Chemical Laboratory Manager



TEST RESULTS SUMMARY:

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

CONCLUSION	TEST(S) CONDUCTED
PASS	Directive 2011/65/EU and it's amend regulation 2015/863/EU, Restriction of the Use of Certain Hazardous Substances (RoHS)
PASS	EC Directive 2006/66/EC and Amendment 2013/56/EU, Lead, cadmium and mercury content



DETAILED RESULTS:

Directive 2011/65/EU and it's amend regulation 2015/863/EU, Restriction of the Use of Certain Hazardous Substances (RoHS)

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	Black plastic main body	BL	BL	BL	BL	BL	BL	PASS
2	Silvery metal big holder	ND	ND	ND	Ne	-	-	PASS
3	Silvery coating	BL	BL	BL	BL	BL	BL	PASS
4	Black plastic upper cover	BL	BL	BL	BL	BL	BL	PASS
5	Black plastic lower cover	BL	BL	BL	BL	BL	BL	PASS
6	Black plastic rear cover	BL	BL	BL	BL	BL	BL	PASS
7	Bright silvery coating	BL	BL	BL	BL	BL	BL	PASS
8	Black plastic lamp door	BL	BL	BL	BL	BL	BL	PASS
9	Transparent plastic sheet	BL	BL	BL	BL	BL	BL	PASS
10	Black plastic switch	BL	BL	BL	BL	BL	BL	PASS
11	Silvery metal screw	ND	ND	ND	Ne	-	-	PASS
13	Electrode slice	141	ND	ND	Ne	-	-	PASS
14	Electrode slice-soldering tin	470	ND	ND	BL	-	-	PASS
15	Red wire sheath	BL	BL	BL	BL	BL	BL	PASS
16	Copper wire	ND	ND	ND	Ne	-	-	PASS
17	Light-transparent plastic shell	BL	BL	BL	BL	ND	ND	PASS
18	Light-wick	ND	ND	ND	Ne	-	-	PASS
19	Light-pin	ND	ND	ND	Ne	-	-	PASS
20	Light-soldering tin	391	ND	ND	BL	-	-	PASS
21	Resistor-blue ceramics	BL	BL	BL	BL	BL	BL	PASS
22	Resistor-pin	ND	ND	ND	Ne	-	-	PASS
23	Toggle switch-silvery metal shell	ND	ND	ND	Ne	-	-	PASS
24	Toggle switch-black plastic switch	BL	BL	BL	BL	BL	BL	PASS
25	Toggle switch-silvery metal plectrum	127	ND	24	Ne	-	-	PASS
26	Toggle switch-pin	ND	ND	ND	Ne	-	-	PASS
27	Toggle switch-yellow plastic base	BL	BL	BL	BL	BL	BL	PASS
28	Toggle switch-soldering tin	281	ND	ND	BL	-	-	PASS



QIMA (HANGZHOU) TESTING CO., LTD. ♦ 4-5/F A2 BLDG NO. 1213 HUOJU SOUTH ROAD PUYAN STREET BINJIANG DISTRICT HANGZHOU CHINA

♦ Email: Labtesting@qima.com ♦ Tel: (86) 571 8999 7158.

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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Parameter	Unit	Requirement	Method Detection Limit (MDL)
Lead (Pb)	mg/kg	1000	15
Cadmium (Cd)	mg/kg	100	15
Mercury (Hg)	mg/kg	1000	15
Chromium VI (Cr VI)	mg/kg	1000	15
Group PBBs	mg/kg	1000	20
Group PBDEs	mg/kg	1000	20

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:

1. Unit: mg/kg= Milligrams per kilogram, 1mg/kg=1ppm=0.0001%
2. MDL=Method Detection Limit
3. “-”= 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.
6. ND=Not Detected (< MDL), Result reported with wet chemical confirmation test with ICP-OES / GC-MS / UV-Vis
7. Ne=Negative, Absence of Cr(VI), the concentration of Cr (VI) in sample solution is less than 0.10μg/cm².
Po = Positive, Presence of Cr(VI), the concentration of Cr (VI) in sample solution is more than 0.13μg/cm².
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 PBBs/PBDEs and Cr(VI).



DETAILED RESULTS:

Directive 2011/65/EU and it's amend regulation 2015/863/EU, Restriction of the Use of Certain Hazardous Substances (RoHS) (DBP, BBP, DEHP, DIBP)

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

Specimen No.	1	3+7	4+5+8	6+10+24	9+17+27	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	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	

Specimen No.	15	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
DBP	ND	---	---	---	---	1000
BBP	ND	---	---	---	---	1000
DEHP	ND	---	---	---	---	1000
DIBP	ND	---	---	---	---	1000
Conclusion	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)
12: Battery	Lead (Pb)	5	9	40
	Cadmium (Cd)	5	ND	20
	Mercury (Hg)	5	ND	5
Conclusion		-	PASS	-

Note:

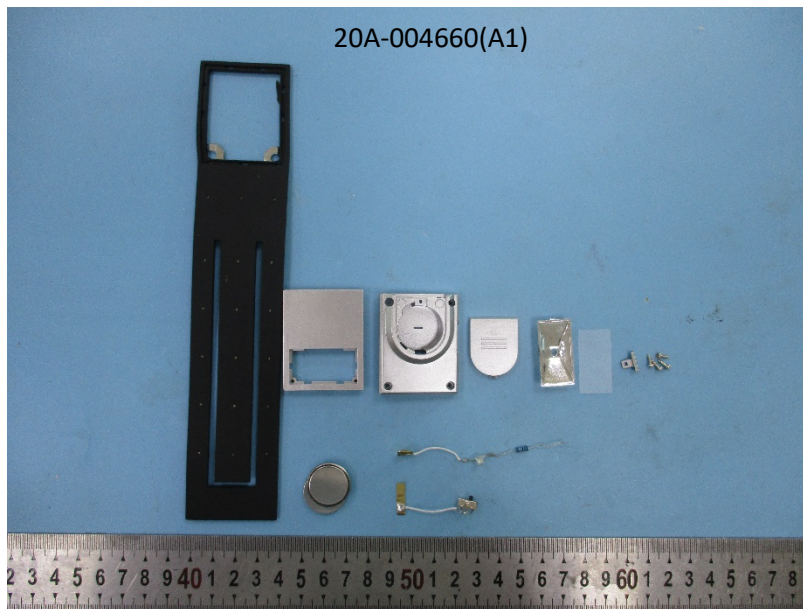
mg/kg = Milligrams per kilogram

MDL=Method Detection Limit

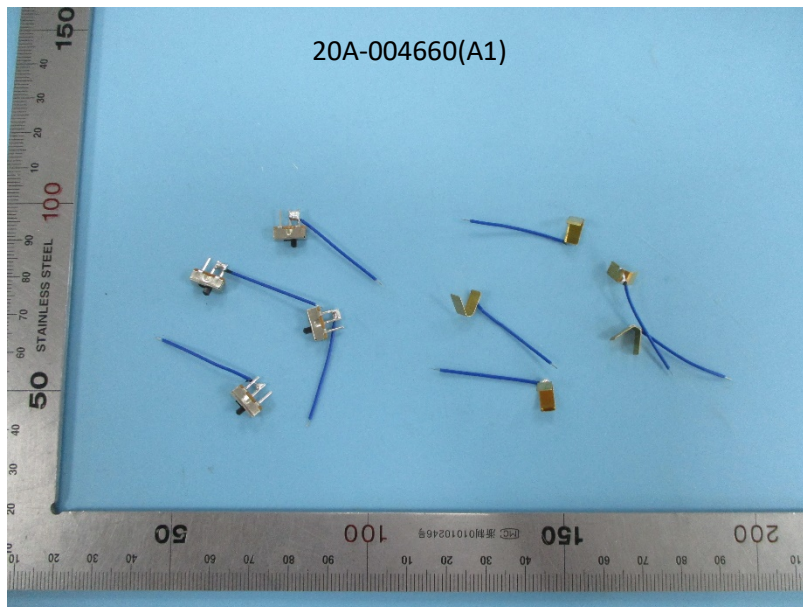
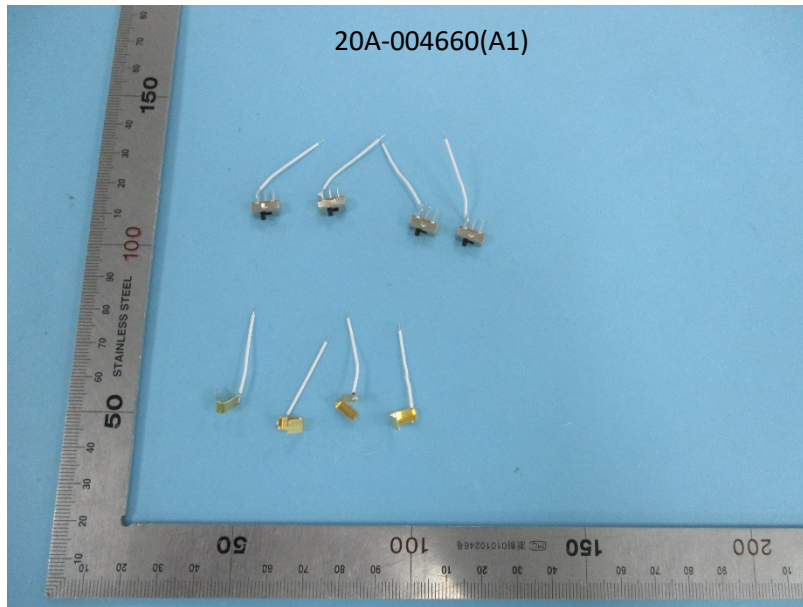
ND = Not detected (< MDL)



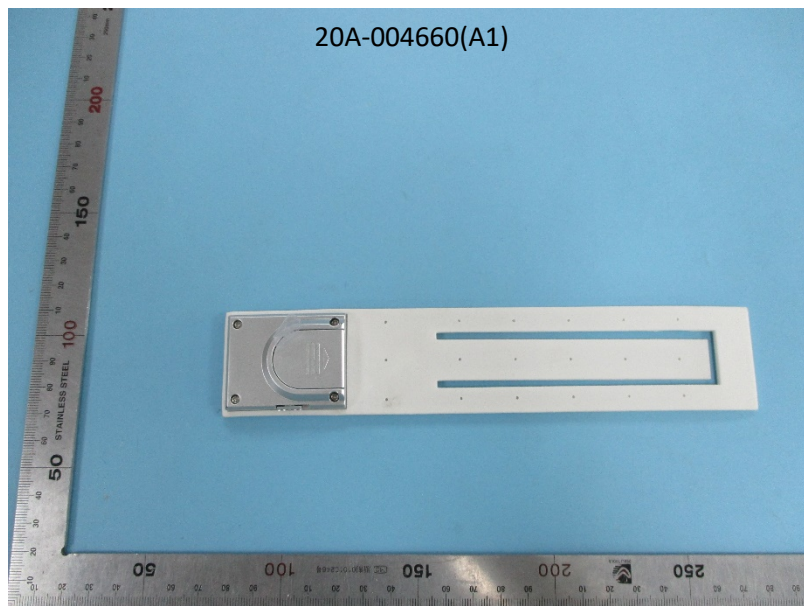
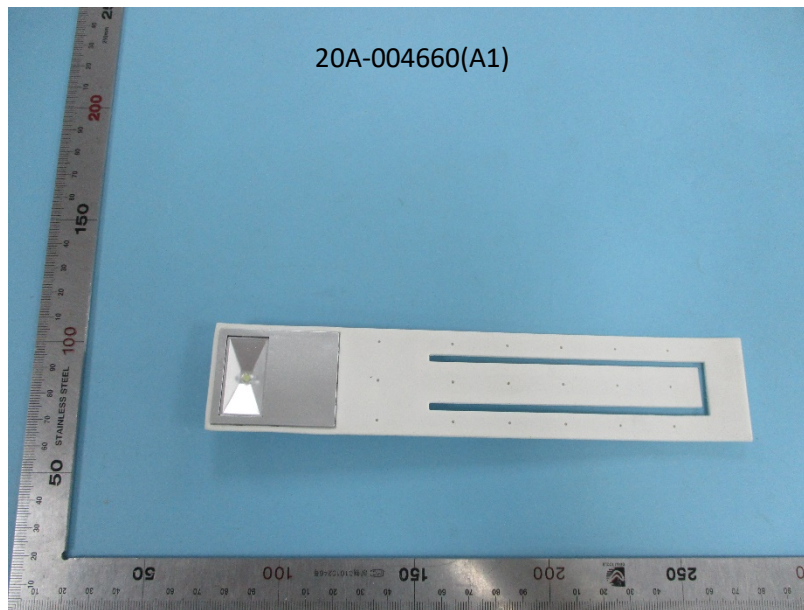
SAMPLE PHOTO:



SAMPLE PHOTO:



PRODUCT PHOTO:



-End Report-

