

TEST REPORT

APPLICANT : Mid Ocean Brands B.V
ADDRESS : 7/F, Kings Tower, 111 King Lam
Street, Cheung Sha Wan,
Kowloon, Hong Kong.
SAMPLE DESCRIPTION : Antibacterial PU notebook, lined paper
ITEM NO. : MO6141-06
MANUFACTURER : 114628
COUNTRY OF ORIGIN : China
COUNTRY OF DESTINATION : Europe
SAMPLE RECEIVED DATE : 10-Oct-2020
TURN AROUND TIME : 10-Oct-2020 to 16-Oct-2020

The following test item(s) was/were performed on submitted sample(s) and/or component(s) confirmed by applicant

TEST REQUESTED	TEST METHOD/REGULATION	RESULT
Total Lead Content	REACH Annex XVII, Entry 63	Pass
Total Cadmium Content	REACH Annex XVII, Entry 23	Pass
Phthalates Content	REACH Annex XVII, Entry 51 & 52, (EU) 2018/2005	Pass
Measurement of antibacterial activity on plastics and other non-porous surfaces	ISO 22196-2011	See Test Result

Eurofins (Shanghai) contact information

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***** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) *****

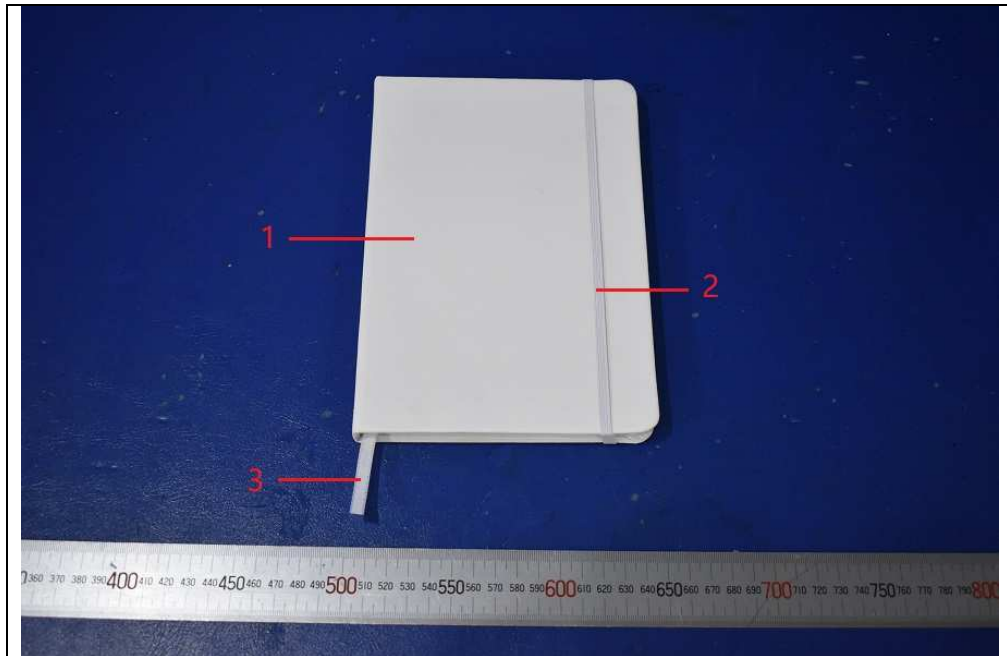
Signed for and on behalf of
Eurofins Product Testing Service (Shanghai) Co., Ltd



Joyce Liu
Lab Manager

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SAMPLE PHOTO



EFSH20100234-CG-01

TO BE CONTINUED

COMPONENT LIST

Component No.	Component
1	White PU
2	White elastic band
3	White fabric ribbon

TO BE CONTINUED

TEST RESULT

Total Lead Content

Test Request: Total lead content as specified in entry 63 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 2015/628.

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996
 Acid digestion/ microwave digestion method was used and total lead content was determined by ICP-OES.

Tested Item(s)	Unit	Limit	MDL	Result		
				1	2	3
Total Lead(Pb)	%	0.05	0.001	ND	ND	ND

Remark:

MDL = method detection limit

ND = Not detected, less than MDL

Total Cadmium Content

Test Request: Total cadmium content as specified in Commission Regulation (EU) 2016/217 amending entry 23 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: EPA 3050B:1996, EPA 3052:1996, EN 1122:2001 Method B, acid digestion method was used and total cadmium content was determined by ICP-OES.

Tested Item(s)	Unit	Limit	MDL	Result		
				1	2	3
Total Cadmium(Cd)	%	0.01	0.0005	ND	ND	0.0013

Remark:

MDL = method detection limit

ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Phthalates Content

Test Request: Phthalates content as specified in entry 51&52 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Commission Regulation (EU) 2018/2005.

Test Method: EPA 3550C:2007, EPA 8270E:2018, solvent extraction and quantification by GC-MS.

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result	
					1	2
Dibutylphthalate (DBP)	84-74-2	%	-	0.005	ND	ND
Benzylbutylphthalate (BBP)	85-68-7	%	-	0.005	ND	ND
Diethylhexylphthalate (DEHP)	117-81-7	%	-	0.005	ND	ND
Diisobutylphthalate (DIBP)	84-69-5	%	-	0.005	ND	ND
Sum (DBP + BBP + DEHP + DIBP)	-	%	0.1	-	ND	ND
Di-n-octylphthalate (DNOP)	117-84-0	%	-	0.005	ND	ND
Diisononylphthalate (DINP)	28553-12-0	%	-	0.005	ND	ND
Diisodecylphthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND
Sum (DNOP + DINP + DIDP)	-	%	0.1	-	ND	ND

Remark:

MDL = method detection limit

ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Measurement of antibacterial activity on plastics and other non-porous surfaces

Test Method: ISO 22196-2011

Sample processing: 70% alcohol Before
 test Neutralizing Solution: SCDLP

Contact Temperature: 35±1°C RH%>90%

Incubation Period: 24 h

Agar Medium: Plate count agar

Test Specimen: 5.0×5.0cm

Film size: 4.0×4.0 cm

Inoculum size: 0.4mL

Test Result:

Test Microorganism	Inoculation concentration (CFU/mL)	the average of the common logarithm of the number of viable bacteria recovered from CFU/cm ²			Antibacterial activity R	Antibacterial activity rate R' (%) *
		"0h" contact time U ₀	"24h" contact time U _t	"24h" contact time A _t		
Staphylococcus aureus (ATCC 6538P)	8.8×10 ⁵	4.2	3.3	-0.2	3.5	>99.9
Escherichia coli (ATCC 8739)	4.4×10 ⁵	4.1	4.2	-0.2	4.4	>99.9

Notice:

- 1、 R value of antibacterial activity =U_t-A_t
- 2、 U₀ -- --is the average of the common logarithm of the number of viable bacteria, in CFU/cm², recovered from the untreated test specimens immediately after inoculation
- 3、 U_t-- -- is the average of the common logarithm of the number of viable bacteria, in CFU/cm², recovered from the untreated test specimens after 24 h
- 4、 A_t -- -- is the average of the common logarithm of the number of viable bacteria, in CFU/cm², recovered from the treated test specimens after 24 h
- 5、 The untreated test samples are provided by the client
- 6、 *The calculation formula of the antibacterial activity rate is provided by client,R'=[(B-C)/B]*100%
- 7、 B-- -- is the average of the common logarithm of the number of viable bacteria, in CFU/cm², recovered from the untreated test specimens after 24 h
- 8、 c-- -- is the average of the common logarithm of the number of viable bacteria, in CFU/cm², recovered from test specimens after 24 h
- 9、 Test surface is PU surface

END OF THE REPORT