



中国认可
国际互认
检测
TESTING
CNAS L6478



TEST REPORT

Reference No. : WTF18F08120781A1C

Applicant : Mid Ocean Brands B.V.

Address : 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

Manufacturer : 109980

Sample Name : Playing card set

Model No. : KC6572, MO7529, MO8614

Test Requested : 1) Determination of Cadmium content in the submitted sample in accordance with REACH regulation Annex XVII Entries 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011, No. 835/2012 and (EU) 2016/217
2) Determination of Lead content in the submitted sample in accordance with REACH regulation Annex XVII Entries 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628
3) Determination of specified Phthalates content according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009
4) As requested by client, to determine the Diisobutyl phthalate (DIBP) content in the submitted samples
5) As specified by client, determination of the free and hydrolysed formaldehyde content in submitted sample

Test Method : Please refer to next page (s)

Test Conclusion : Please refer to next page (s)

Date of Receipt sample : 2018-08-09 & 2018-08-29

Date of Test : 2018-08-09 to 2018-08-31

Date of Issue : 2018-09-01

Test Result : Please refer to next page (s)

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of reporter and reviewer.

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**Test Result:****1) Cadmium (Cd)**

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	MDL (mg/kg)	Results (mg/kg)	
		No.1	No.2
Cadmium(Cd)	2	ND	ND
Conclusion	--	Pass	Pass

Test Item	MDL (mg/kg)	Results (mg/kg)	
		No.3+No.5+No.11	No.7
Cadmium(Cd)	2	ND*	ND
Conclusion	--	Pass	Pass

Note:

(1) mg/kg = milligram per kilogram

(2) ND = Not Detected (lower than MDL)

(3) MDL = Method Detection Limit

(4) Limit of Cadmium according to REACH regulation Annex XVII Item 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011 and No. 835/2012 and (EU) 2016/217.

Category	Limit (mg/kg)
Wet paint	100
Surface coating	1000
Plastic	100
Metal parts of jewellery and hair accessories	100

(5) "*" = As per applicant's requirement, the testing was conducted based on mixed components, the test result is for reference only

WALTEK



2) Lead (Pb)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	MDL (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.1	No.2	
Lead(Pb)	2	35	ND	500
Conclusion	--	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.3+No.5+No.11	No.4	
Lead(Pb)	2	ND*	ND	500
Conclusion	--	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.6+No.9	No.7	
Lead(Pb)	2	ND*	ND	500
Conclusion	--	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)			Limit (mg/kg)
		No.8	No.10	No.12	
Lead(Pb)	2	ND	ND	ND	500
Conclusion	--	Pass	Pass	Pass	--

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (4) Limit of Lead was quoted from REACH regulation Annex XVII Item 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628.
- (5) "*" = As per applicant's requirement, the testing was conducted based on mixed components, the test result is for reference only



3) Phthalates

Test Method: With reference to EN14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test Items	BBP	DBP	DEHP	DIDP	DINP	DNOP	--
MDL (%)	0.005	0.005	0.005	0.01	0.01	0.005	--
Limit (%)	sum of three phthalates < 0.1			sum of three phthalates < 0.1			--
Specimen No.	Result (%)						Conclusion
No.2	ND	ND	0.029	ND	ND	ND	Pass

Note:

DBP= Dibutyl phthalate

BBP= Benzyl butyl phthalate

DEHP= Bis-(2-ethylhexyl)- phthalate

DINP= Di-isononyl phthalate

DNOP= Di-n-octyl phthalate

DIDP= Di-isodecyl phthalate

(1) % = percentage by weight

(2) ND = Not detected or Less than the method detection limit

(3) MDL=Method Detection Limit

(4) "<" = less than

(5) The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009(formerly known as Directive 2005/84/EC) for phthalate content in toys and child care articles.

4) Diisobutyl Phthalate(DIBP)

Test Method: With reference to EN14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test Item(s)	MDL (mg/kg)	Results (mg/kg)	Client's Limit (mg/kg)
		No.2	
Diisobutyl phthalate (DIBP)	50	ND	1000
Conclusion	--	Pass	--

Note:

(1) mg/kg=milligram per kilogram=ppm

(2) ND = Not detected or Less than the method detection limit

(3) MDL=Method Detection Limit



5) Formaldehyde

Test Method: With reference to EN 717-3:1996, analysis was performed by UV-VIS

Test Item	Unit	Result	MDL	Client's Limit
		No.8		
Formaldehyde (CH ₂ O)	mg/kg	ND	10	80
Conclusion	--	Pass	--	--

Note:

- ND = Not detected or less than the method detection limit
- mg/kg =milligram per kilogram=ppm
- MDL= Method Detection Limit

Test Specimen Description:

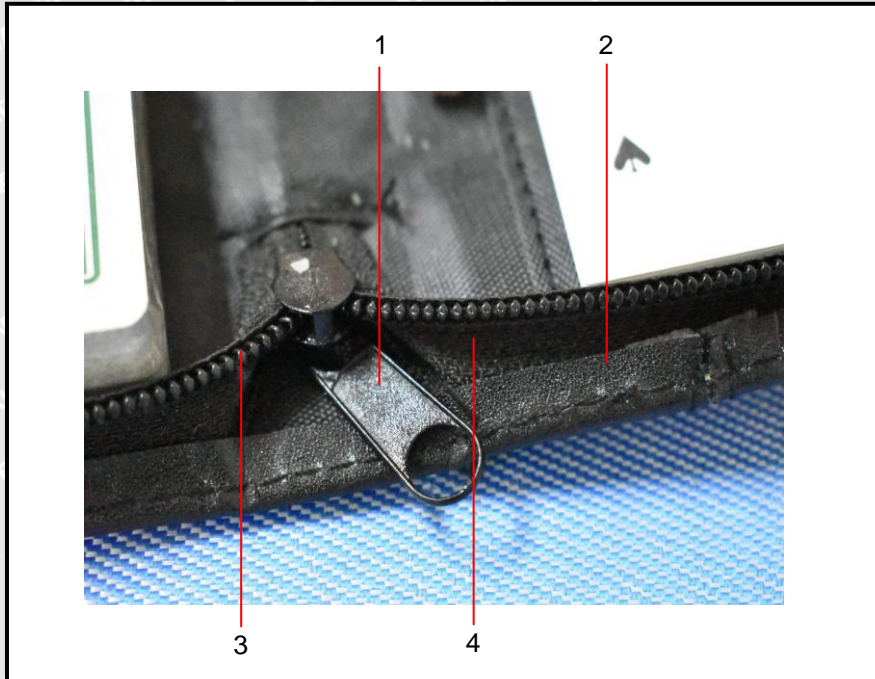
- No.1: Silvery metal zipper head with black coating
- No.2: Black plastic case
- No.3: Black plastic zipper tooth
- No.4: Black zipper fabric
- No.5: Black elastic band
- No.6: Multicolor paper card
- No.7: Yellow coating
- No.8: Beige wood without yellow coating
- No.9: White paper with black printing
- No.10: Black core
- No.11: Transparent plastic case
- No.12: Silvery metal box

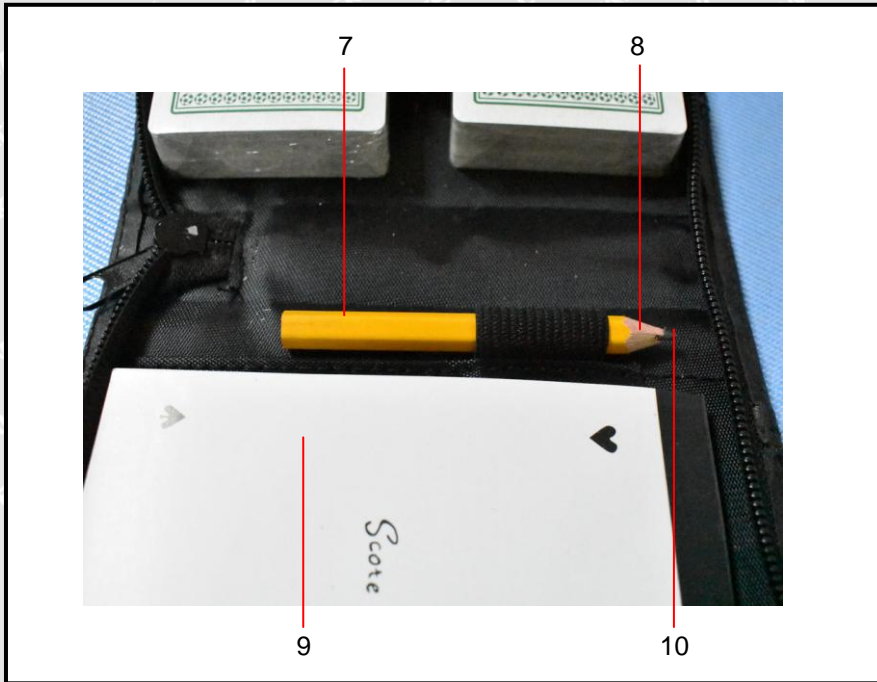
Sample photo:





Photographs of parts tested:





===== End of Report =====