



中国认可  
国际互认  
检测  
TESTING  
CNAS L6478



# TEST REPORT

**Reference No.** ..... : WTF19F11080316C  
**Applicant** ..... : Mid Ocean Brands B.V.  
**Address** ..... : 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong  
**Manufacturer** ..... : 112585  
**Sample Name** ..... : Wooden Ludo Game  
**Model No.** ..... : MO6110  
**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 specified Phthalates content according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & No. 2018/2005  
 3) Determination of specified Polycyclic Aromatic Hydrocarbons (PAHs) content in submitted sample in accordance with Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013.  
 4) Determination of Benzene content in the submitted sample in accordance with Annex XVII Entries 5 of the REACH Regulation (EC) No. 1907/2006 and the Amendment (EU) No. 2015/1494  
 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**..... : 2019-11-20  
**Date of Test**..... : 2019-11-20 to 2019-11-25  
**Date of Issue** ..... : 2019-11-25  
**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 compiler and approver.  
 If the report is not stamped with the accreditation recognized seal, it will only be used for scientific research, education, and internal quality control activities, and is not used for the purpose of issuing supporting data to the society.

**Prepared By:**

**Waltek Services (Foshan) Co., Ltd.**

Address: No.13-19, 2/F., 2nd Building, Sunlink International Machinery City, Chencun, Shunde District, Foshan, Guangdong, China

Tel:+86-757-23811398 Fax:+86-757-23811394 E-mail:info@waltek.com.cn

Compiled by:

Approved by:

*Rena Chen*



*Swing Liang*

Rena.Chen / Project Engineer

Swing.Liang / Lab Manager

**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.2+No.4+No.5	No.3+No.6
Cadmium(Cd)	2	ND*	ND*
<b>Conclusion</b>	--	<b>Pass</b>	<b>Pass</b>

**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) "\*" = Results are calculated by the minimum weight of mixed components.

**2) Phthalates**

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

Test Items	MDL (%)	Results (%)		Limit (%)
		No.2+No.4+No.5	No.3+No.6	
Benzyl butyl phthalate (BBP)	0.005	ND*	ND*	sum of four phthalates < 0.1
Di (2-ethyl hexyl)- phthalate (DEHP)	0.005	ND*	ND*	
Dibutyl phthalate (DBP)	0.005	ND*	ND*	
Diisobutyl phthalate (DIBP)	0.005	ND*	ND*	
Diisodecyl phthalate (DIDP)	0.01	ND*	ND*	sum of three phthalates < 0.1
Diisononyl phthalate (DINP)	0.01	ND*	ND*	
Di-n-octyl phthalate (DNOP)	0.005	ND*	ND*	
<b>Conclusion</b>	--	<b>Pass</b>	<b>Pass</b>	--

**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  
 DIBP= Diisobutyl 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 & No. 2018/2005 (formerly known as Directive 2005/84/EC) for phthalate content in toys and child care articles.
- (6) "\*" = Results are calculated by the minimum weight of mixed components.

**3) Polycyclic Aromatic Hydrocarbons (PAHs)**

Test Method: With reference to AFPS GS 2014:01 PAK method, analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS).

Test Items	Unit	Results		MDL	Limit
		No.2+No.4+No.5	No.3+No.6		
Benzo(a)anthracene (BaA)	mg/kg	ND*	ND*	0.2	0.5
Chrysene (CHR)	mg/kg	ND*	ND*	0.2	0.5
Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	ND*	0.2	0.5
Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	ND*	0.2	0.5
Benzo(a)pyrene (BaP)	mg/kg	ND*	ND*	0.2	0.5
Dibenzo[a,h]anthracene (DBAhA)	mg/kg	ND*	ND*	0.2	0.5
Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	ND*	0.2	0.5
Benzo[e]Pyrene (BeP)	mg/kg	ND*	ND*	0.2	0.5
<b>Conclusion</b>	--	<b>Pass</b>	<b>Pass</b>	--	--

**Note:**

- (1) ND = Not Detected or less than method detection limit
- (2) mg/kg=milligram per kilogram=ppm
- (3) MDL = Method Detection Limit
- (4) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Articles shall not be placed on the market for supply to the general public, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 1 mg/kg (0,0001 % by weight of this component) of any of the listed PAHs.
- (5) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Toys, including activity toys, and childcare articles, shall not be placed on the market, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 0,5 mg/kg (0,00005 % by weight of this component) of any of the listed PAHs.
- (6) "\*" = Results are calculated by the minimum weight of mixed components.



#### 4) Benzene

Test Method: With reference to US EPA 3550C:2007& US EPA 8270D:2014, analysis was performed by GC-MS

Test Item	MDL (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.2+No.4+No.5	No.3+No.6	
Benzene <sup>#</sup>	1	ND*	ND*	5
Conclusion	--	Pass	Pass	--

#### Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (4) As per Annex XVII Items 5 of the REACH Regulation (EC) No. 1907/2006 and the Amendment (EU) No. 2015/1494, benzene shall not be used in toys or parts of toys where the concentration of benzene in the free state is greater than 5 mg/kg (0,0005 %) of the weight of the toy or part of toy.
- (5) The testing item marked with <sup>#</sup> do not been accredited by CNAS
- (6) "\*" = Results are calculated by the minimum weight of mixed components.

#### 5) Formaldehyde

Test Method: With reference to EN717-3:1996, analysis was performed by UV-VIS

Test Item	Unit	Result		MDL	Client's Limit
		No.1	No.7		
Formaldehyde (CH <sub>2</sub> O)	mg/kg	ND	ND	10	80
Conclusion	--	Pass	Pass	--	--

#### Note:

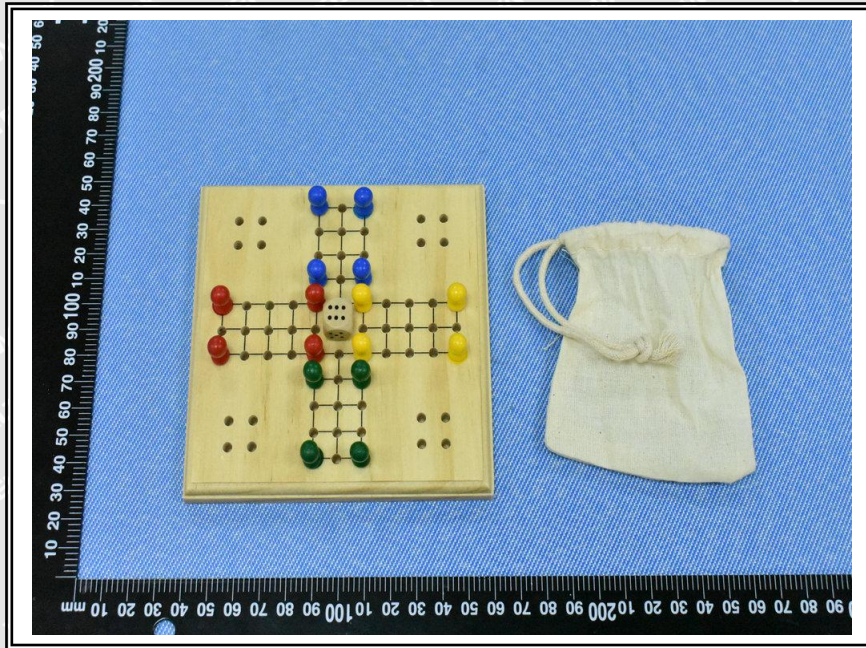
- ND = Not detected or less than the method detection limit
- mg/kg =milligram per kilogram=ppm
- MDL= Method Detection Limit

#### Test Specimen Description:

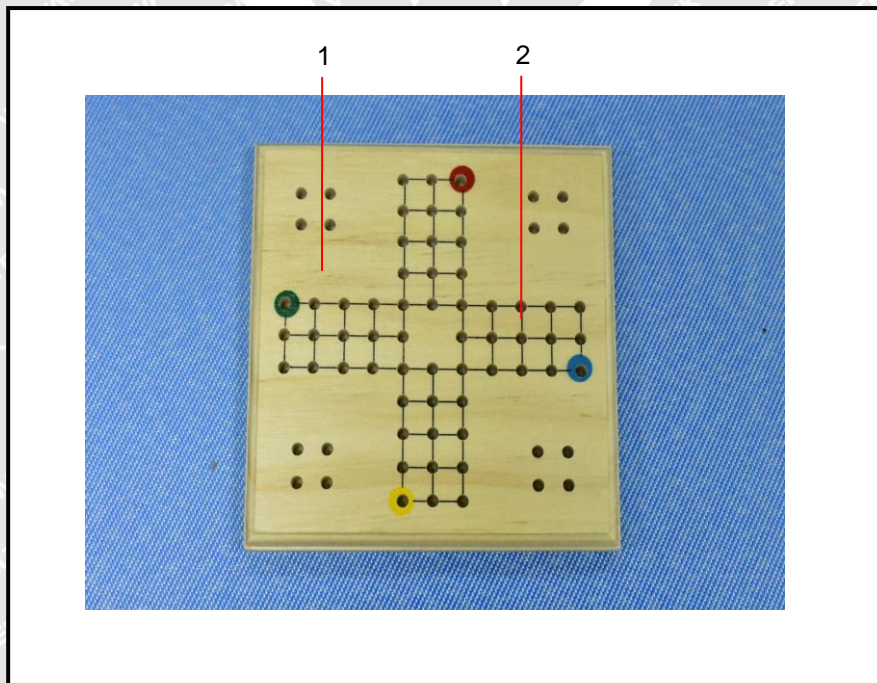
- No.1: Beige wooden chessboard
- No.2: Black coating
- No.3: Red coating
- No.4: Blue coating
- No.5: Yellow coating
- No.6: Green coating
- No.7: Beige wooden dice

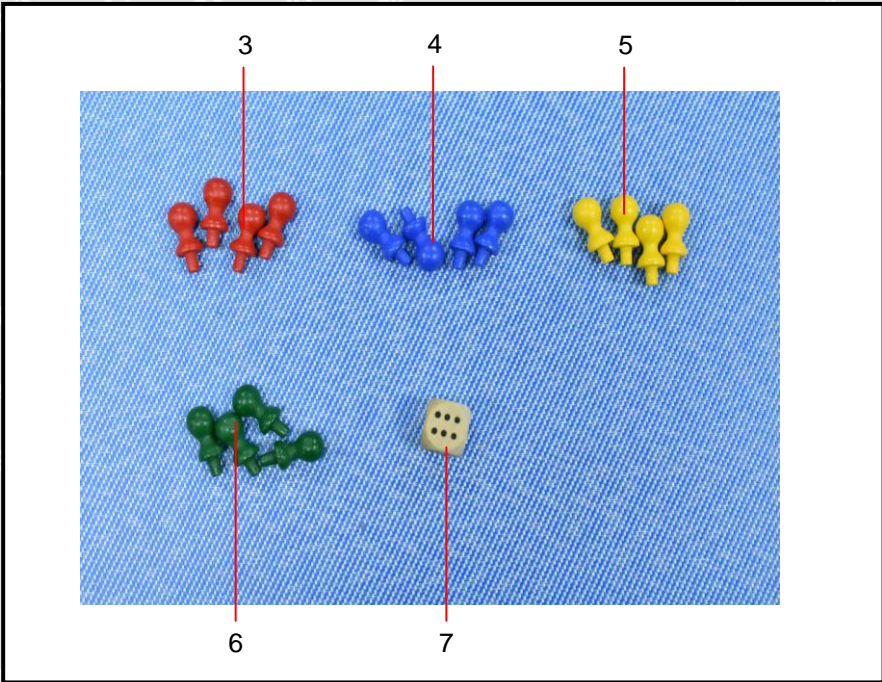


**Sample photo:**



**Photographs of parts tested:**





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

# WALTEK