

TEST REPORT

WTF20F09071161C
Mid Ocean Brands B.V.
7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong 114276
Stainless steel cutlery set
MO6149
 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 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 Determine the specified AZO Colorants contents in the submitted sample in according to the Entries 43 in Annex XVII of the REACH Regulation (EC) No.1907/2006 and the Amendment Regulation (EC) No.552/ 2009 & No.126/ 2013 (previously restricted under Directive 2002/61/EC). As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample. Please refer to next page (s)
Please refer to next page (s)
2020-09-28
2020-09-28 to 2020-10-10
2020-10-10
Please refer to next page (s)
As specified by client, only test the designated sample.

Remarks:

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Prepared By: Waltek Testing Group (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:+86-757-23811381 E-mail:info@waltek.com.cn

Compiled by:

Rena.Chen / Project Engineer Waltek Testing Group (Foshan) Co., Ltd. http://www.waltek.com.cn Approved by:

Swing.Liang / Technical Manager

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Test Result:

1) Lead (Pb)

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

Test Kern	LOQ	Results (mg/kg)	Limit
Test Item	(mg/kg)	No.1+No.2	مNo.3	(mg/kg)
Lead(Pb)	2	ND*	ND	500
Conclusion	m - m	Pass	Pass	white -white

Test Ham	LOQ	JEX JIEK	Results (mg/kg)		
Test Item	(mg/kg)	No.4	No.5	No.6	(mg/kg)
Lead(Pb)	1 2 1t	36	ND V	34	500
Conclusion	n n	Pass	Pass	Pass	Not white white

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than LOQ)
- (3) LOQ = Limit of quantitation
- (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) "*" = Results are calculated by the minimum weight of mixed components.

2) Cadmium (Cd)

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

Toot have when y	LOQ		Results (mg/kg)	MALTER WALTE WAL
Test Item	(mg/kg)	No.3	No.6	
Cadmium(Cd)	2	ND	ND	ND M
Conclusion	t NITER MILE	Pass	Pass	Pass

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than LOQ)
- (3) LOQ = Limit of quantitation
- (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	J 100 V
Metal parts of jewellery and hair accessories	100

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3) AZO

Test Method: With reference to BS EN ISO 14362-1: 2017 and BS EN ISO 14362-3: 2017, analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS)

No.	Amines Substances	CAS No.	Limit	Result (mg/kg)	
			(mg/kg)	No.1+No.2	
1	4-Aminobiphenyl	92-67-1	30	ND*	
2	Benzidine	92-87-5	_/- 30 _/ [↓]	ND*	
3	4-chloro-o-Toluidine	95-69-2	30	ND*	
4.0	2-Naphthylamine	91-59-8	30	ND*	
5	o-Aminoazotoluene	97-56-3	30	ND*	
6	2-Amino-4-nitrotoluene	99-55-8	_30<	ND*	
7	p-Chloroaniline	106-47-8	30 🔊	ND*	
8	2,4-diaminoanisol	615-05-4	<u>30</u>	ND*	
9	4,4'-Diaminodiphenylmethane	101-77-9	30	ND*	
10	3,3'-Dichlorobenzidine	91-94-1	30	ND*	
11	3,3'-Dimethoxybenzidine	119-90-4	30	ND*	
12	3,3'-Dimethylbenzidine	119-93-7	30	ND*	
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	30	ND*	
14	p-cresinin	120-71-8	30	ND*	
15	4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	30	ND*	
16	4,4'-Oxydianiline	101-80-4	30 <	ND*	
17	4,4'-Thiodianiline	139-65-1	30	ND*	
18	o-Toluidine	95-53-4	30	ND* ND*	
19	2,4-Toluylendiamine	95-80-7	30	ND*	
20	2,4,5 – Trimethylaniline	137-17-7	30	ND*	
21	o-anisidine	90-04-0	30	ND*	
22	4-aminoazobenzene	60-09-3	30	ND*	
23	2,4-Xylidin	95-68-1	30	ND*	
24	2,6-Xylidin	87-62-7	30	ND*	
	Conclusion	mr m.	11. 11	Pass	

Note:

- ND = Not detected or less than limit of quantitation
- mg/kg=Milligram per kilogram
- Limit of quantitation (mg/kg): Each 5mg/kg
- The CAS-numbers 97-56-3 and 99-55-8 are further reduced to CAS-numbers 95-53-4 and 95-80-7.
- AZO colorants that are able to form 4-aminoazobenzene, generate under the condition of this method aniline and 1,4-phenylenediamine. The presence of these colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorant used.
- The CAS-numbers 95-68-1 and 87-62-7 are not proscribed under REACH Regulation (EC) No 1907/2006
- "*" = Results are calculated by the minimum weight of mixed components.

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4) Colour Fastness to Rubbing

Colour Fastness to Rubbing					
(ISO 105 X12: 2001/Cor 2002; Size of rubbing finger: 16mm diameter.)					
NIT WALL WALL WA	No.1	No.2	Client's Limit		
Dry staining	- 1 4 1	4-5	2-3		
Wet staining	4-5	4-5	2-3		
Conclusion	Pass	Pass	1 Mr. M. M.		

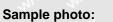
Note:

(1) Grey Scale Rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good.

Test Specimen Description:

- No.1: Black main fabric
- No.2: Black drawstring
- No.3: Black plastic zipper tooth
- No.4: Silvery metal zipper head with black coating
- No.5: Silvery metal bursh
- No.6: White plastic bursh hair

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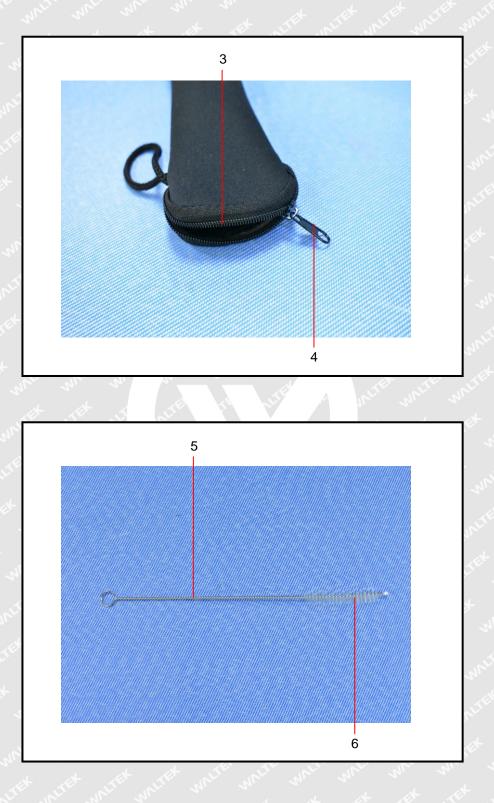
Photographs of parts tested:



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