

### **Test Report**

Report No. : AGC05443230935-001

**SAMPLE NAME** : Recycled PP cutlery set

MODEL NAME : MO6661

**APPLICANT**: MID OCEAN BRANDS B.V

**STANDARD(S)** : Please refer to the following page(s).

**DATE OF ISSUE** : Oct. 08, 2023

Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd.





Report No.: AGC05443230935-001

pplicant : MID OCEAN BRANDS B.V

Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong. Test Site : 5,6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community, Hangcheng

Street, Bao'an District, Shenzhen, Guangdong, China

#### Report on the submitted sample(s) said to be:

Sample Name : Recycled PP cutlery set

Model : MO6661
Country of Origin : CHINA
Country of Destination : EUROPE
Sample receiving state : Normal
Sample Received Date : Sep. 25, 2023

Testing Period : Sep. 25, 2023 to Oct. 08, 2023

Test Requested : Selected test(s) as requested by client.

Test Requested: Conclusion

Mechanical dishwashing safe test Pass

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23
-Cadmium(Cd) Content

Pass

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63

- Lead(Pb) Content

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52
- Phthalates Content

Pass

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50
- Polycyclic-aromatic Hydrocarbons (PAHs) Content

Pass

Regulation 1935/2004/EC, Regulation(EU) No 10/2011 and its amendment Regulation (EU) 2020/1245 and Regulation (EU) 2018/213

Overall Migration
 Bisphenol A(BPA) content
 Specific migration of Primary aromatic amines
 Specific migration of Heavy metals

Pass
Pass

Approved by : Jessie lian

Liangdan, Jessie.Liang

**Technical Director** 



Report Revise Record

Report No.: AGC05443230935-00	01
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Report Version	Report Version Issued Date Valid Version Notes		Notes
/	Oct. 08, 2023	Valid	Initial release



The photo of the sample



The photo of AGC05443230935-001 is for use only with the original report.

#### **Test Point Description**

Test point	Test point description	
1-1	Blue plastic box+Blue cutlery	
1-2	Blue cutlery	



Note: N.D.=Not Detected (less than method detection limit), MDL = Method Detection Limit, 1mg/kg=0.0001%

#### Mechanical dishwashing safe test

Test Result
of
mechanical
dishwashing
safe test:

Requirements:For dishwasher safe test, if there is no noticeable change in appearance (e.g. color, size and shape) and function, it should be "PASS"

Sample No.:

Test method: Refer BS EN 12875 -1-2005

Washing temperature: 60°C Number of cycle: 10 cycles

Number of tested sample: 2 pc(s). Number of control sample: 1 pc(s).

For all tested plastic or metal articles:

No visible change of color, gloss and clouding was found on the tested samples after wash.

No visible deposit or iridescent layer was found on the tested samples after wash.

No visible swelling, deformation, cracking, crazing or delamination was found on the tested samples after wash.

#### Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23

#### -Cadmium(Cd) Content

Test Methods and Equipment: IEC 62321-5:2013; ICP-OES

Test Item(s)	Unit Limit	MDL	Test Result(s)	
Test Item(s)			1-1	
Cadmium(Cd)	mg/kg	100	10	N.D.
Co	Conformity			

#### Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-1

#### Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63

#### - Lead(Pb) Content

Test Methods and Equipment: IEC 62321-5:2013; ICP-OES

Test Item(s)	Unit	Limit	MDL	Test Result(s)
Test Item(s)	Ollit	Lillit	MIDL	1-1
Lead(Pb)	mg/kg	500	10	N.D.
Со	Conformity			



1. As specified by client, the submitted samples were mixed to test, the test points: 1-1

#### Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52

#### - Phthalates Content

Test Methods and Equipment: IEC 62321-8:2017; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s)
Diisobutyl phthalate (DIBP) CAS:84-69-5	%	0.1	0.005	N.D.
Dibutyl phthalate (DBP) CAS:84-74-2	%	0.1	0.005	N.D.
Butylbenzyl phthalate (BBP) CAS:85-68-7	%	0.1	0.005	N.D.
Di-(2-ethylhexyl) Phthalate (DEHP) CAS:117-81-7	%	0.1	0.005	N.D.
Di-n-octyl phthalate (DNOP) CAS:117-84-0	%	/	0.005	N.D.
Di-isononyl phthalate (DINP) CAS:28553-12-0, 68515-48-0	%	/	0.005	N.D.
Di-isodecyl phthalate(DIDP) CAS:26761-40-0, 68515-49-1	%	/	0.005	N.D.
Sum of DIBP +DBP+BBP+DEHP	%	0.1	/	N.D.
Sum of DNOP+DINP+DIDP	%	0.1	/	N.D.
Co	Conformity			

#### Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-1

#### Limit requirements of Phthalates

Toys and childcare articles	Each of DEHP, DBP, BBP, DIBP is less than 0.1% or the sum of DEHP+DBP+BBP+DIBP is less than 0.1%
Toys and childcare articles which can be placed in the mouth by children	The sum of DINP+DIDP+DNOP is less than 0.1%

#### Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50

#### - Polycyclic-aromatic Hydrocarbons (PAHs) Content

Test Methods and Equipment: Afps GS 2019:01 PAK; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s)
Test Item(s)	Cint Limit	MDL	1-1	
Benzo[a]pyrene(BaP)	mg/kg	1	0.1	N.D.
Benzo[e]pyrene(BeP)	mg/kg	1	0.1	N.D.



Test Item(s)	Unit Limit		MDL	Test Result(s)
rest tieni(s)	Oilit	Lillit	MDL	1-1
Benzo[a]anthracene(BaA)	mg/kg	1	0.1	N.D.
Benzo[b]fluoranthene(BbF)	mg/kg	1	0.1	N.D.
Benzo[j]fluoranthene(BjFA)	mg/kg	1	0.1	N.D.
Benzo[k]fluoranthene(BkF)	mg/kg	1	0.1	N.D.
Chrysene(CHR)	mg/kg	1	0.1	N.D.
Dibenzo[a,h]anthracene(DBA)	mg/kg	1	0.1	N.D.
Co	Conformity			

#### Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-1

Limit requirements of Polycyclic-aromatic Hydrocarbons (PAHs) (Unit: mg/kg)

Items	CAS No.	Extender oils or used for the production of tyres or parts of tyres	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	Toys, including activity toys, and childcare articles, 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
Benzo[a]pyrene(BaP)	50-32-8	≤1	≤ 1	≤ 0.5
Benzo[e]pyrene(BeP)	192-97-2	/	≤ 1	≤ 0.5
Benzo[a]anthracene(BaA)	56-55-3	/	≤ 1	≤ 0.5
Benzo[b]fluoranthene(BbF)	205-99-2	/	≤ 1	≤ 0.5
Benzo[j]fluoranthene(BjFA)	205-82-3	/	≤ 1	≤ 0.5
Benzo[k]fluoranthene(BkF)	207-08-9	/	≤ 1	≤ 0.5
Chrysene(CHR)	218-01-9	/	≤ 1	≤ 0.5
Dibenzo[a,h]anthracene(DBA)	53-70-3	/	≤ 1	≤ 0.5
Sum of BaP+ BeP+ BaA+ BbF+ BjFA+ BkF+ CHR+ DBA	/	≤ 10	/	/



### Regulation 1935/2004/EC, Regulation(EU) No 10/2011 and its amendment Regulation (EU) 2020/1245 and Regulation (EU) 2018/213 and Council of Europe Resolution AP(2004)5:

#### - Overall Migration

	Test result						
Tes	Test point Overall migration/ (mg/dm <sup>2</sup> )					Conclusion	
		3% Acetic acid, 70°C,2h	50% Ethanol, 70°C,2h	95% Ethanol, 60°C,3h	Isooctane 40°C,0.5h		
	1 <sup>st</sup> migration	N.D.	N.D.	N.D.	N.D.		
1-2	2 <sup>nd</sup> migration	N.D.	N.D.	N.D.	N.D.	Conformity	
	3 <sup>rd</sup> migration	N.D.	N.D.	N.D.	N.D.		

# Regulation 1935/2004/EC, Regulation(EU) No 10/2011 and its amendment Regulation (EU) 2020/1245 and Regulation (EU) 2018/213 and Council of Europe Resolution AP(2004)5:

#### - Bisphenol A(BPA) content

Test Item	Bisphenol A (BPA)			
Limit(mg/kg)	Prohibited			
MDL(mg/kg)	0.1			
Test Method/Instrument	EPA 3540C:1996& EPA 8321B:2007/ LC-MS-MS			

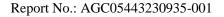
Tost maint	Test Result (mg/kg)	Caral da	
Test point	Bisphenol A (BPA)	Conclusion	
1-2	N.D.	Conformity	



## Regulation 1935/2004/EC, Regulation(EU) No 10/2011 and its amendment Regulation (EU) 2020/1245 and Regulation (EU) 2018/213 and Council of Europe Resolution AP(2004)5:

#### - Specific migration of Primary aromatic amines

Test Item(s)	MDL (mg/kg)	Limit (mg/kg)
4-Aminobiphenyl	0.002	N.D.
Benzidine	0.002	N.D.
4-Chloro-o-Toluidine	0.002	N.D.
2-Naphthylamine	0.002	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.
5-Nitro-o-toluidine	0.002	N.D.
4-Chloroaniline	0.002	N.D.
4-Methoxy-m-phenylenediamine	0.002	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.
3,3'-Dichlorobenzidine	0.002	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.
3,3'-Dimethybenzidine	0.002	N.D.
4,4'-Methylenedi-o-toluidine	0.002	N.D.
6-methoxy-m-toluidine	0.002	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.
4,4'-Oxydianiline	0.002	N.D.
4,4'-Thiodianiline	0.002	N.D.
2-Aminotoluene	0.002	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.
2,4,5-Trimethylaniline	0.002	N.D.
2-Methoxyaniline	0.002	N.D.
4-Aminoazobenzene	0.002	N.D.
1,3 phenylenediamine	0.002	N.D.
Total of other primary aromatic amines	0.01	0.01





	Test Result (mg/kg)		
Test Item(s)	1-2		
	3% Acetic acid 70°C, 2h		
4-Aminobiphenyl	N.D.		
Benzidine	N.D.		
4-Chloro-o-Toluidine	N.D.		
2-Naphthylamine	N.D.		
4-amino-2',3-dimethylazobenzene	N.D.		
5-Nitro-o-toluidine	N.D.		
4-Chloroaniline	N.D.		
4-Methoxy-m-phenylenediamine	N.D.		
4,4'-Diaminodiphenylmethane	N.D.		
3,3'-Dichlorobenzidine	N.D.		
3,3'-Dimethoxybenzidine	N.D.		
3,3'-Dimethybenzidine	N.D.		
4,4'-Methylenedi-o-toluidine	N.D.		
6-methoxy-m-toluidine	N.D.		
4,4'-methylenebis[2-chloroaniline]	N.D.		
4,4'-Oxydianiline	N.D.		
4,4'-Thiodianiline	N.D.		
2-Aminotoluene	N.D.		
4-methyl-m-phenylenediamine	N.D.		
2,4,5-Trimethylaniline	N.D.		
2-Methoxyaniline	N.D.		
4-Aminoazobenzene	N.D.		
1,3 phenylenediamine	N.D.		
Total of other primary aromatic amines	N.D.		
Conclusion	Conformity		



## Regulation 1935/2004/EC, Regulation(EU) No 10/2011 and its amendment Regulation (EU) 2020/1245 and Regulation (EU) 2018/213 and Council of Europe Resolution AP(2004)5:

#### - Specific migration of Heavy metals

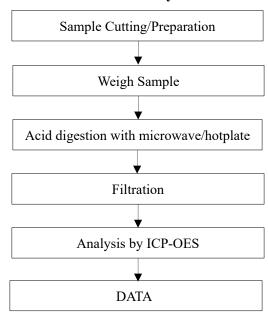
Specific migration of Hea	Test condition/ Equipment	MDL (mg/kg)	Test Result(s) (mg/kg) 1-2			Limit
			1 <sup>st</sup> migration	2 <sup>nd</sup> migration	3 <sup>rd</sup> migration	(mg/kg)
Barium (Ba)		0.1	N.D.	N.D.	N.D.	1
Cobalt (Co)		0.01	N.D.	N.D.	N.D.	0.05
Copper (Cu)		0.25	N.D.	N.D.	N.D.	5
Iron (Fe)		0.25	N.D.	N.D.	N.D.	48
Lithium (Li)		0.1	N.D.	N.D.	N.D.	0.6
Manganese (Mn)		0.1	N.D.	N.D.	N.D.	0.6
Zinc (Zn)		0.25	N.D.	N.D.	N.D.	5
Aluminum (Al)		0.1	N.D.	N.D.	N.D.	1
Conclusion		/	/	/	Conformity	/
Europium (Eu)		0.01	N.D.	N.D.	N.D.	/
Gadolinium (Gd)		0.01	N.D.	N.D.	N.D.	/
Lanthanum (La)		0.01	N.D.	N.D.	N.D.	/
Terbium (Tb)	3% Acetic acid/	0.01	N.D.	N.D.	N.D.	/
Conclusion	70°C, 2h/ ICP-OES/ IC	/	/	/	/	/
Sum(Eu+Gd+La+Tb)		/	N.D.	N.D.	N.D.	0.05
Antimony (Sb)		0.01	N.D.	N.D.	N.D.	0.04
Arsenic (As)		0.01	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)		0.002	N.D.	N.D.	N.D.	N.D.
Chromium (Cr)		0.01	N.D.	N.D.	N.D.	N.D.
Lead (Pb)		0.01	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)		0.01	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)		0.01	N.D.	N.D.	N.D.	0.02
Conclusion		/	/	/	Conformity	/
Ammonium (NH <sub>4</sub> <sup>+</sup> )	]	0.10	N.D.	N.D.	N.D.	/
Calcium (Ca)		0.01	0.229	0.123	0.042	/
Magnesium (Mg)		0.01	0.020	N.D.	N.D.	/

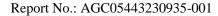


Conclusion

		Report N	No.: AGC05443	230935-001
0.01	0.027	N.D.	N.D.	/
0.01	0.056	N.D.	N.D.	/
/	/	/	/	/

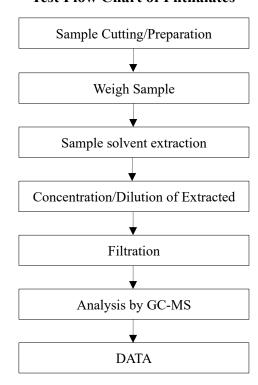
#### **Test Flow Chart of Heavy Metal Content**

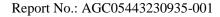






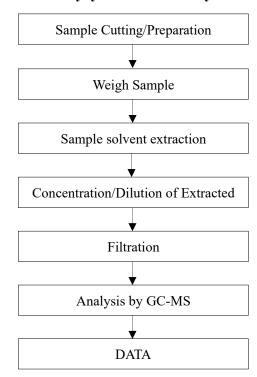
#### **Test Flow Chart of Phthalates**







### Test Flow Chart of Polycyclic-aromatic Hydrocarbons (PAHs)





### Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
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- 4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations. 7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

\*\*\* End of Report \*\*\*