

Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 1 of 11

Applicant: Mid Ocean Brands B.V.

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

The following sample(s) and sample information was/were submitted and identified by client as:

Sample Name: Double wall borosilicate mug

Model: MO2673

Vendor code: 107978

Receiving Date: Apr 21,2025

Test Period: From Apr 21,2025 to Apr 25,2025

Add Information: -

## **Test Summary:**

#	Test item(s)	Result
1	Item 50 of Annex XVII of REACH Regulation (EC) 1907/2006 & amendment (EU) No 1272/2013 Polycyclic-aromatic hydrocarbons (PAHs) content	PASS
2	Item 23 of Annex XVII of REACH Regulation (EC) 1907/2006 Cadmium content	PASS
3	Item 51&52 of Annex XVII of REACH Regulation (EC) 1907/2006.  Phthalate content ( DIBP、DEHP、DBP、BBP、DINP、DIDP、DNOP)	PASS
4	Item 63 of Annex XVII of REACH Regulation (EC) 1907/2006 Total Lead content	PASS
5	Dishwasher safe test (complied with the specification of dishwasher safe test according to PAS 54:2003)-BS EN 12875-1:2005	PASS
6	Microwave safe test-BS EN 15284:2007	PASS





Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 2 of 11

#	Test Item(s)	Conclusion
Reg	ulation (EC) No 1935/2004,French Decree 2007- 766,DGCCRF 2004-64	TO H
7	Specific Migration of Formaldehyde	PASS
8	Pentachlorophenol (PCP)	PASS
	ulation (EC) No 1935/2004,the Commission Regulation (EU) 2024/3190 and Council of Europe 2004) 5- For Silicone Material	Resolution
9	Overall migration	PASS
10	Bisphenol A Contents	PASS
11	Specific migration of Bisphenol A (BPA)	PASS
Frei	nch Arrêté du 25 Novembre 1992 and French Décret 2007-766 with amendments - For Silicone	Material
12	Overall migration	PASS
13	Specific migration of Bisphenol A (BPA)	PASS
14	Bisphenol A Contents	PASS
15	Specific migration of Organotin (as Tin)	PASS
16	Peroxide Value	PASS
17	Volatile organic matter	PASS
Reg	ulation (EC) No 1935/2004, the Council of Europe Directive 84/500/EEC and its amendment 20	005/31/EC
18	Extractable Lead, Cadmium For Glass Material	PASS



Page 3 of 11 Report No.: DPHTL2504213102E Date: Apr 29,2025

## Result:

Polycyclic-aromatic hydrocarbons (PAHs) content - Item 50 of Annex XVII of REACH Regulation (EC) 1907/2006 & amendment (EU) No 1272/2013 AfPS-GS-2019-01:PAK, determined by GC-MS

Test Item(s)		Res			
		categ	category I*1		
		1	3	(mg/kg)	(mg/kg)
1	Benz[a]anthracene(BaA) CAS#56-55-3	N.D.	N.D.	1	0.2
2	Chrysene(CHR) CAS#218-01-9	N.D.	N.D.	1	0.2
3	Benz[b]fluoranthene(BbFA) CAS#205-99-2	N.D.	N.D.	1	0.2
4	Benz[k]fluoranthene(BkFA) CAS#207-08-9	N.D.	N.D.	1	0.2
5	Benz[j]fluoranthene(BjFA) CAS#205-82-3	N.D.	N.D.	1	0.2
6	Benzo[a]pyrene(BaP) CAS#50-32-8	N.D.	N.D.	1	0.2
7	Benzo[e]pyrene(BeP) CAS#192-97-2	N.D.	N.D.	1	0.2
8	Dibenz [a,h]anthracene (DBahA) CAS#53-70-3	N.D.	N.D.	1	0.2
-	Conclusion	PASS	PASS	-	-

Remark:

Category II: Toys, including activity toys, and childcare articles, 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.

<sup>(</sup>a) mg/kg: milligram per kilogram (b) MDL: Method detected limit

<sup>(</sup>c) N.D.: Not detected (result is less than MDL)

<sup>1:</sup> Result category

Category I: Articles 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.



Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 4 of 11

#### 2. Cadmium content - Item 23 of Annex XVII of REACH Regulation (EC) 1907/2006 IEC 62321-5:2013, determined by AAS

Test item(s)		Result	Limit (mg/kg)	MDL (mg/kg)
		1	(99)	(5/18/
1	Cadmium (Cd) CAS#7440-43-9	N.D.	1000	10
-	Conclusion	PASS	-	-

Test item(s)		Result 3	Limit (mg/kg)	MDL (mg/kg)
1	Cadmium (Cd) CAS#7440-43-9	N.D.	100	10
-	Conclusion	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram

(b) MDL: Method detected limit
(c) N.D.: Not detected (result is less than MDL)

#### 3. Phthalate content (DIBP、DEHP、DBP、BBP、DINP、DIDP、DNOP) - Item 51& 52 of Annex XVII of REACH Regulation (EC) 1907/2006

EN 14372:2004 & IEC 62321-8:2017, determined by GC-MS

	Test item(s)		Res	Limit	MDL	
			1 3		(%)	(%)
1	DBP	Dibutyl Phthalate CAS# 84-74-2	N.D.	N.D.	0.1	0.005
2	BBP	Benzylbutyl Phthalate CAS# 85-68-7	N.D.	N.D.	0.1	0.005
3	DEHP	Bis-(2-ethylhexyl)Phthalate CAS# 117-81-7	N.D.	N.D.	0.1	0.005
4	DIBP	Diisobutyl phthalate CAS# 84-69-5	N.D.	N.D.	0.1	0.005
5	DNOP	Di-n-octyl phthalate CAS# 117-84-0	N.D.	N.D.	-	0.005
6	DINP	Di-iso-nonyl phthalate CAS# 28553-12-0	N.D.	N.D.	-	0.010
7	DIDP	Diisodecyl phthalate CAS# 26761-40-0	N.D.	N.D.	-	0.010
- Sum of 1, 2, 3 & 4		N.D.	N.D.	0.1	_	
-	Sum of	5, 6 & 7	N.D.	N.D.	0.1	-



Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 5 of 11

-	Conclusion	PASS	PASS	-	-

Remark(s): (a) MDL: Method detected limit

(b) N.D.: Not detected (result is less than MDL)

### Total Lead content -Item 63 of Annex XVII of REACH Regulation (EC) 1907/2006 IEC 62321-5:2013, determined by AAS

Test item(s)		Result				Limit	MDL
		1	2	3	4	(mg/kg)	(mg/kg)
1	Lead(Pb) CAS#7439-92-1	N.D.	N.D.	N.D.	N.D.	500	10
-	Conclusion	PASS	PASS	PASS	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram (b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

#### 5. Dishwasher safe test (complied with the specification of dishwasher safe test according to PAS 54:2003) BS EN 12875-1:2005

		Sample	5A	5B	5C
After 10 cycles	Color <sup>1)</sup>	0	0	0	
	Gloss	0	0	0	
	After 10 cycles	Clouding	0	0	0
		Resistant deposits and iridescent layers <sup>2)</sup>	0	0	0
		Other aspects	0	0	0

1). If several colours are present on one article to be inspected, the colour with the greatest change shall be chosen.

2). For the elimination of easily removable deposits.

3). See photo bar for test photos

Note: Pictures are for reference only. Actual colours of the pictures may vary due to lighting and output process. Evaluation of inspection criteria quoted from BS EN 12875-1:2005.

Classification	Rating
0	No visible change
1	First discernible change
2	Clearly visible change

Requirements quoted from Publicly Available Specification PAS 54: 2003

Articles that are designated "dishwasher resistant", "dishwasher proof", "dishwasher safe" or any other similar description that suggests that the articles can be safety cleaned in a dishwasher shall, either show no visible



Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 6 of 11

change compared with untreated tableware (Classification 0) or show very slightly visible change(Classification 1) but shall not show clearly visible change (Classification 2)

#### 6. Microwave safe test BS EN 15284:2007

#### 2.1 Test Standard:

BS EN 15284: 2007 Materials and articles in contact with food stuffs -Test method for the resistance to microwave heating of ceramic, glass, glass-ceramic or plastics cookware

2.2 No. of Specimen:

2.2 (to: or opcomion.	
Test sample description:	cup
Number of Tested Sample(s):	3Pieces
Number of Controlled Sample(s):	1Pieces

#### 2.3Test Procedure:

With reference to BS EN 15284: 2007 test method.

2.4. Test Requirement:

2.4.1 Visually inspect the test specimen for damage according to the criteria in Table 1.

Table 1—inspection criteria

			1 4510 1	mopodin	ori oritoria			
Material	Cracking	Crazing	Scaling	Color	Melting	Deformation	Suitability	Charring
							for re-use	
Ceramic	+	+ <sup>a</sup>	<b>+</b> b	+c				
Glass,	+		<b>+</b> b	+c				
glass-								
ceramic								
Plastics	+			+c	+d	+	+e	+

### (+)=to be inspected

NOTE 1 For the color criterion, an inspector and inspection site that meet the requirements of Clause 4 and 5.2 of EN 12875-2:2001 are required [2]

2.4.2 The maximum surface temperature of handles after the short period heating (6.6) shall not exceed the following limit values:

ceramic, glass-ceramic or glass:  $56\,^{\circ}\mathrm{C}$  plastics: 60  $^{\circ}\mathrm{C}$ 

NOTE 1 These temperatures can be found by reference to a one minute contact time in EN ISO 13732-1 [1].

NOTE 2 As temperatures measured after the long period of heating vary significantly depending on the microwave oven used for testing, no temperature limit values apart from those for handles are given.

2.5.Test Result:

#### Pass

- 1) Visually inspect the test specimen: No visible change.

52°C (after the long period)

a refers to the glaze

<sup>&</sup>lt;sup>b</sup> refers to on-glaze decoration

<sup>&</sup>lt;sup>c</sup> if several colors are present on one article to be inspected, the color with the greatest change shall be chosen

d article shall not be too soft to handle

e article shall be washable and stain resistant



Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 7 of 11

## Regulation (EC) No 1935/2004, French Decree 2007-766, DGCCRF 2004-64

7. Specific Migration of Formaldehyde

EN 13130-1:2004 and CEN/TS 13130-23:2005 determined by UV-Vis

Test condition: 3% acetic acid,70°C,2h

Test Item			Result			
		2		Limit (mg/kg)	MDL (mg/kg)	
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
1	Formaldehyde	0.3	0.2	0.1	15	0.1
	Conclusion	-	-	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram (b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

## 8. Pentachlorophenol (PCP)

NF B51-297

Took Hom		Result	Limit	MDL
	Test Item	2	(mg/kg)	(mg/kg)
1	Pentachlorophenol CAS# 87-86-5	N.D.	0.1	0.01
	Conclusion	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram

(b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

# Regulation (EC) No 1935/2004 ,the Commission Regulation (EU) 2024/3190 and Council of Europe Resolution AP (2004) 5- For Silicone Material

### 9. Overall Migration

EN 1186-1:2002 & EN 1186-3:2022

	Test Item	Result 3 <sup>-3rd</sup>	Limit (mg/dm²)	MDL (mg/dm²)
1	3% Acetic acid, 70℃, 2h	N.D.	10	3
2	50% Ethanol, 70℃, 2h	N.D.	10	3
-	Conclusion	PASS	-	-



Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 8 of 11

Remark(s): (a) mg/dm2: milligram square decimetre

(b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

### 10. Bisphenol A Contents

In-house Method, determined by LC-MS/MS

Test Item		Result	Limit	MDL
		3	(mg/kg)	(mg/kg)
1	Bisphenol A	N.D.	Prohibit	0.001
-	Conclusion	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram

(b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

## Specific migration of Bisphenol A

DD CEN/TS 13130-13:2005, determined by LC-MS-MS

Test Condition: 3% Acetic acid, 70°C, 2h

		Result	Limit	MDL
	Test Item	<b>3</b> -3rd	(mg/kg)	(mg/kg)
1	Bisphenol A (BPA)	N.D.	Prohibit	0.01
-	Conclusion	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram (b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

## French Arrêté du 25 Novembre 1992 and French Décret 2007-766 with amendments - For Silicone Material

### **Overall Migration for Silicone Materials in Contact with Foodstuffs** EN 1186-1:2002 & EN 1186-3:2022

	Test Item(s)	Result 3 <sup>-3rd</sup>	Limit (mg/dm²)	MDL (mg/dm²)
1	50%Ethanol, 70℃, 2h	N.D.	10	3
2	3%acetic acid , 70℃ , 2h	N.D.	10	3
-	Conclusion	PASS	-	-



Page 9 of 11 Report No.: DPHTL2504213102E Date: Apr 29,2025

Remark(s): (a) mg/dm2: milligram square decimetre

(b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

#### 13. Specific migration of Bisphenol A

DD CEN/TS 13130-13:2005, determined by LC-MS-MS

Test Condition: 3%Acetic acid, 70℃,2h

		Result		MDL
	Test Item(s)	<b>3</b> -3rd		(mg/kg)
1	Bisphenol A (BPA)	N.D.	Prohibit	0.01
-	Conclusion	PASS	-	-

(a) mg/kg: milligram per kilogram Remark(s):

(b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)

#### 14. Bisphenol A (BPA) content

In-house Method, determined by LC-MS-MS

Toot Itom(a)		Result	Client's Limit	MDL	
	Test Item(s)	3	(mg/kg)	(mg/kg)	
1	Bisphenol A	N.D.	Prohibit	0.001	
-	Conclusion	PASS	-	-	

Remark(s): (a) MDL: Method detected limit

(b) N.D.: Not detected (result is less than MDL)

#### 15. Specific migration of Organotin(as Tin)

EN 13130-1:2004, determined by ICP-OES

Test condition: 3% Acetic acid, 70°C, 2h

Test Item(s)		Result	Limit	MDL
	. ,	<b>3</b> -3rd	(mg/kg)	(mg/kg)
1	Organotin(as Sn)	N.D.	0.1	0.01
-	Conclusion	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram (b) MDL: Method detected limit

(c) N.D.: Not detected (result is less than MDL)



Page 10 of 11 Report No.: DPHTL2504213102E Date: Apr 29,2025

#### **Peroxide Value** 16.

Europe pharmacopoeia, 9.0 chapter 2.5.5.

	Test Item(s)	Result	Requirement
	rest item(s)	3	Requirement
1	Peroxide Value	Negative	Negative
-	Conclusion	PASS	-

#### 17. Volatile organic matter

French Arrêté du Novembre 1992 Annex III.

Test condition: 200°C, 4h

Toot Itom(a)		Result	Limit	MDL
	Test Item(s)	3	(%)	(%)
1	Volatile Compounds	0.27	0.5	0.1
-	Conclusion	PASS	-	-

Remark(s): (a) MDL: Method detected limit

## Regulation (EC) No 1935/2004, the Council of Europe Directive 84/500/EEC and its amendment 2005/31/EC

### **Extractable Lead, Cadmium For Glass Material** 84/500/EEC&2005/31/EC, determined by AAS

Test Condition: 4% Acetic acid, 22℃, 24h

Test Item(s)		Result(s)	Client's limit (mg/L)	MDL (mg/L)
		4		
1	Lead (Pb)	N.D.	4	0.1
2	Cadmium (Cd)	N.D.	0.3	0.01
-	Conclusion	PASS	-	-

Remark(s): (a) mg/L: milligram per litre

(b) MDL: Method detected limit
(c) N.D.: Not detected (result is less than MDL)
(d) According to customer requirements to determine.

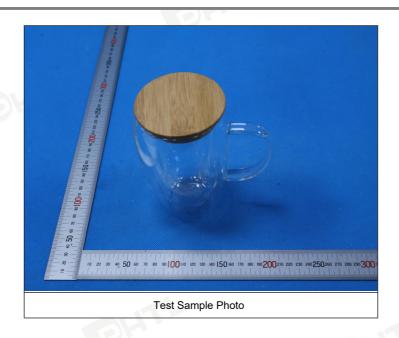


Report No.: DPHTL2504213102E Date: Apr 29,2025 Page 11 of 11

## **Material List:**

Material #	Sample Description / Position	Client's Material Statement
1	Transparent coating,lid	-
2	Brown bamboo,lid	Bamboo
3	Transparent silicone,seal ring	Silicone
4	Transparent glass,cup	Glass
5	Article	177-

## Photo(s):



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