

Test Report

Report No. : AGC05443221101-001

SAMPLE NAME : Ceramic mug with bamboo lid and handle

MODEL NAME : MO6781

APPLICANT: MID OCEAN BRANDS B.V

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

DATE OF ISSUE : Nov. 22, 2022

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





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Applicant : MID OCEAN BRANDS B.V

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

Kong.

Test Site : 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 : Ceramic mug with bamboo lid and handle

Model : MO6781

Vendor code : 106613

Country of Origin : CHINA

Country of Destination : EUROPE

Sample Received Date : Nov. 01, 2022

Testing Period : Nov. 01, 2022 to Nov. 18, 2022

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

Approved by:

Approved by:

Qinlianzhi, Reed

Liangdan, Jessie.Liang

Laboratory Supervisor

Technical Director



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Report Revise Record

Report Version	Issued Date	Valid Version	Notes
/	Nov. 22, 2022	Valid	Initial release



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Test Requested:	Conclusion
- Formaldehyde Release	Pass
Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50 -Polycyclic-aromatic Hydrocarbons (PAHs) Content	Pass
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 23 -Cadmium(Cd) Content	Pass
Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63 - Lead(Pb) Content	Pass
- Mechanical dishwashing safe test	/
- Microwave test EU regulation 1935/2004/EC and LFGB §64 BVL B 82.02 Part 8	/
- Pentachlorophenol (PCP) Content	Pass
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 Formaldehyde	Pass
- Overall Migration	Pass
- Bisphenol A(BPA) content	Pass
- Specific migration of Bisphenol A(BPA) DM-4B-COM-003-v01	Pass
-Volatile Organic Matter	Pass
- Peroxide value	Pass
- Specific Migration of Organotin (measured as Tin)	Pass
Regulation 1935/2004/EC, Council Directive 84/500/EEC and Commission Directive	
2005/31/EC	Pass

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- Leachable Lead and Cadmium



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The photo of the sample





The photo of AGC05443221101-001 is for use only with the original report.

Test Point Description

Test point	Test point description
1-1	Lid: Bamboo
1-2	Handle: bamboo
1-3	Silicone sealing
1-4	Lid: Bamboo+ Handle: bamboo

Test Results:

Note: N.D.=Not Detected (less than method detection limit), MDL = Method Detection Limit %= percentage (W/W), mg/kg = milligram per kilogram, mg/dm²= milligrams per decimeter squared, mg/L= milligrams per litre

 \triangle = As specified by client, the submitted samples were mixed to test.

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Test Methods and Equipment: EN 717-3:1996; UV-Vis

Test Item(s)	T India	Timit	MDI	Test Result(s)		
Test Item(s)	Unit	Limit	MDL	1-1	1-2	
Formaldehyde Release	mg/kg	80	1	5	N.D.	
Co	Conformity	Conformity				

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) 1-3
Benzo[a]pyrene(BaP)	mg/kg	1	0.1	N.D.
Benzo[e]pyrene(BeP)	mg/kg	1	0.1	N.D.
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	nclusion	·		Conformity

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	/	/



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

- Phthalates Content

Test Methods and Equipment: EN 14372:2004; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s) 1-3
Diisobutyl phthalate (DIBP) CAS:84-69-5	%	0.1	0.01	N.D.
Dibutyl phthalate (DBP) CAS:84-74-2	%	0.1	0.01	N.D.
Butylbenzyl phthalate (BBP) CAS:85-68-7	%	0.1	0.01	N.D.
Di-(2-ethylhexyl) Phthalate (DEHP) CAS:117-81-7	%	0.1	0.01	N.D.
Di-n-octyl phthalate (DNOP) CAS:117-84-0	%	/	0.01	N.D.
Di-isononyl phthalate (DINP) CAS:28553-12-0, 68515-48-0	%	/	0.01	N.D.
Di-isodecyl phthalate(DIDP) CAS:26761-40-0, 68515-49-1	%	/	0.01	N.D.
Sum of DIBP +DBP+BBP+DEHP	%	0.1	/	N.D.
Sum of DNOP+DINP+DIDP	%	0.1	/	N.D.
Co	Conformity			

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	DINP, DIDP, DNOP each less than 0.1%

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 Itam(s)	T Lait	Limit	MDL	Test Result(s)	
Test Item(s)	Unit			1-3	
Cadmium(Cd)	mg/kg	100	10	N.D.	
Co	Conformity				

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

T4 I4(-)	T I 14	T 114	MDI	Test Result(s)		
Test Item(s)	Unit	Limit	MDL	1-3	1-4△	
Lead(Pb)	mg/kg	500	10	N.D.	N.D.	
Co	Conformity	Conformity				

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- Mechanical dishwashing safe test

Test method: BS EN 12875-1:2005

Washing temperature: 60° C Number of cycle: Ten (10) cycles

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

For all tested ceramic articles:

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

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

3) No cracking was found on the tested samples after wash.

4) No decoration was detached after wash.

- Microwave test

Test method: BS EN 15284-2007 Microwave power out: 533W

Short period: 135 s Long period: 878 s

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

Specimen(s)	Maximum handle temperature after short period of heating		Maximum surface temperature after long period of heating
1(Waad)	1	42.7°C	94.2°C
1(Wood)	2	54.3°C	81.2°C

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Specimen(s)	Specimen(s) Maximum handle temperature after short period of heating		Maximum surface temperature after long period of heating
2(G	1	51.9℃	97.5°C
2(Ceramic)	2	58.4°C	78.7°C

For all tested ceramic articles:

- 1) No visible change of color was found on the tested samples after test.
- 2) No visible cracking, crazing, scaling was found on the tested samples after test.



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- Pentachlorophenol (PCP) content

Test Item	Test Method/ Equipment	MDL	Test result	Limit
		MIDL	1-1	
Pentachlorophenol (PCP)/ (mg/kg)	ENISO 15320-2011/ GC-MS	0.05	N.D.	0.15
Conclusion	/	/	Conformity	/

- Specific migration of Formaldehyde

Specific 1	ingration of ro	'i maracity ac		
		Test Result		
Tes	st point	Specific migration of Formaldehyde/ (mg/kg)	Conclusion	
		3% Acetic acid, 70°C,2h		
	1 st migration	N.D.		
1-1	2 nd migration	N.D.	Conformity	
	3 rd migration	N.D.		
I	Limit	15	/	
N	MDL	5	/	

- Overall Migration

	Test Result		
Test point	Overall migration/ (mg/dm²)		Conclusion
•	3% Acetic acid, 70°C,2h	50% Ethanol, 70°C,2h	
1-3	N.D.	N.D.	Conformity
Limit	10	10	/
MDL	5	5	/



- Bisphenol A(BPA) content

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Test Item	Bisphenol A (BPA)	
Limit(Client's Requirement) (mg/kg)	Prohibited	
MDL(mg/kg)	1	
Test Method/Instrument	EPA 3540C:1996& EPA 8321B:2007/ LC-MS-MS	

Tost maint	Test Result (mg/kg)	Conclusion
Test point	Bisphenol A (BPA)	Conclusion
1-3	N.D.	Conformity

- Specific migration of Bisphenol A(BPA)

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	Test Result		
Test point	Specific migration of Bisphenol A(BPA)/ (mg/kg)	Conclusion	
	3% Acetic acid, 70°C,2h		
1-3	N.D.	Conformity	
Limit (Client's Requirement)	0.05	/	
MDL	0.02	/	



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	nit:	%
		- / (
_	1110.	/ '

Test item(s)	Test Condition	MDL	Result(s)	Limit
Volatile Organic Matter	200°C, 4h	0.1	0.13	0.5
Conclusion		/	Conformity	/

- Peroxide value

Unit: %

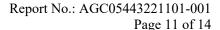
Test Item	MDL	Result(s) 1-3	Limit
Peroxide value	0.2	N.D.	Absent
Conclusion	/	Conformity	/

- Specific Migration of Organotin (measured as Tin)

	Test Result	
Test point	Specific Migration of Organotin (measured as Tin)/ (mg/kg)	Conclusion
	3% Acetic acid, 70°C,2h	
1-3	N.D.	Conformity
Limit	0.1	/
MDL	0.01	/

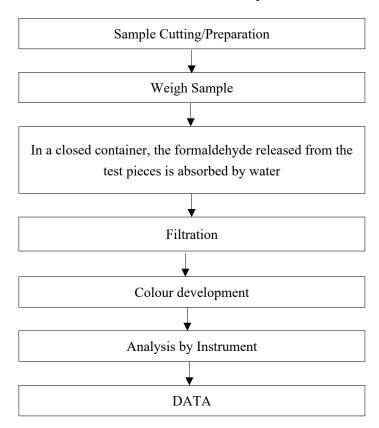
- Leachable Lead and Cadmium

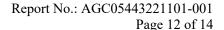
	Tes		
Test point	Extractable Lead(Pb)/(mg/L)	Extractable Cadmium(Cd)/(mg/L)	Conclusion
	4% Acetic		
1-5	N.D. N.D.		Conformity
Limit	4.0	0.3	/
MDL	0.1	0.01	/





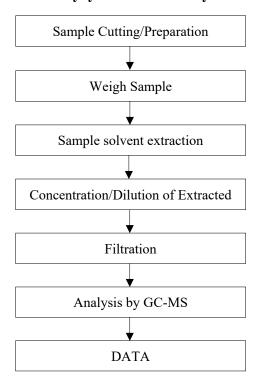
Test Flow Chart of Formaldehyde Release

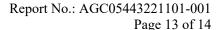






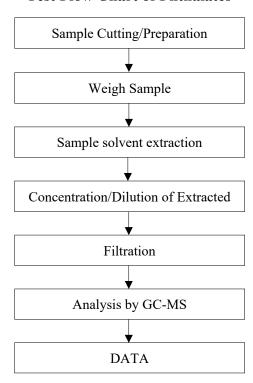
Test Flow Chart of Polycyclic-aromatic Hydrocarbons (PAHs)

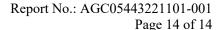






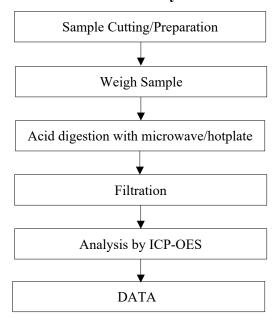
Test Flow Chart of Phthalates







Test Flow Chart of Heavy Metal Content



*** End of Report ***



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