

Test Report

Report No. : AGC05443240532-002

SAMPLE NAME : Single wall recycled S/S tumbler with walnut grip and lid

MODEL NAME : MO2322

APPLICANT: MID OCEAN BRANDS B.V

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

DATE OF ISSUE : Jun. 14, 2024

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





Report No.: AGC05443240532-002 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 Single wall recycled S/S tumbler with walnut grip and lid

Model MO2322 Vendor code 114276 Country of Origin **CHINA** Country of Destination **EUROPE** Sample Received Date May 24, 2024

Testing Period May 24, 2024 to Jun. 07, 2024

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

Approved by: Leon

Suhongliang, Leon

Technical Director



Conclusion Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63 Pass - Lead(Pb) Content Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23 Pass -Cadmium(Cd) Content Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52 **Pass** - Phthalates Content Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50 **Pass** - Polycyclic-aromatic Hydrocarbons (PAHs) Content Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 77 Pass - Formaldehyde Release Regulation (EU) 2019/1021 on persistent organic pollutants (POPs) Pass - Pentachlorophenol (PCP) Content Regulation 1935/2004/EC, Regulation(EU) No 10/2011 and Regulation (EU) 2018/213 and Council of Europe Resolution AP(2004)5and Council of Europe Resolution AP (2004) 2 - Overall migration Pass - Specific migration of Bisphenol A(BPA) Pass - Bisphenol A(BPA) content Pass - Specific Migration of Formaldehyde in 3% acetic acid Pass - Pentachlorophenol (PCP) Content Pass LFGB §64 BVL B 82.02 Part 8 - Pentachlorophenol (PCP) Content **Pass** DM-4B-COM-003-v01 for: -Volatile Organic Matter Pass - Peroxide value Pass - Specific Migration of Organotin (measured as Tin) **Pass**

Regulation 1935/2004/EC and Technical Guide on Metals and alloys used in food contact materials

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of Council of Europe Resolution CM/Res(2013)9

- Specific migration of Heavy metal

Pass

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Report Revise Record

Report No.: AGC05443240532-002

Report Version	Issued Date	Valid Version	Notes
/	Jun. 14, 2024	Valid	Initial release



The photo of the sample



The photo of AGC05443240532-002 is for use only with the original report.

Test Point Description

Test point	Test point description
1-1	Black coating
1-2+1-3	Wood lid+Wood grip
1-4	Silicone sealing
1-5	Inner S/S mug
1-2	Wood lid
1-3	Wood grip



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

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

Tost Itom(s)	I Init	Unit Limit		Test Result(s)	
Test Item(s)	Onit	LIIIII	MDL	1-1	1-2+1-3
Lead(Pb)	mg/kg	500	10	N.D.	N.D.
Conclusion				Conformity	Conformity

Tost Itom(s)	Unit	Limit MDL		Test Result(s)	
Test Item(s)	Unit	LIIIII	MIDL	1-4	1-5
Lead(Pb)	mg/kg	500	10	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-2+1-3

Remark: As client's request, test results of No.1-1, No.1-2+1-3, No.1-4, No.1-5 copied from test results of No.1-1, No.1-2+1-3, No.1-4, No.1-5 of test report No. AGC05443240532-001 respectively.

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

Tost Itam(s)	Unit Limit MDL		Limit MDL		ult(s)
Test Item(s)	Unit	Lillit	MIDL	1-1	1-4
Cadmium(Cd)	mg/kg	100	10	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark: As client's request, test results of No.1-1, No.1-4 copied from test results of No.1-1, No.1-4 of test report No. AGC05443240532-001 respectively.



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

Tost Itom(s)	Unit	Limit	MDL	Test Resi	ult(s)
Test Item(s)	Onit	Lillit	MDL	1-1	1-4
Diisobutyl phthalate (DIBP) CAS:84-69-5	%	0.1	0.005	N.D.	N.D.
Dibutyl phthalate (DBP) CAS:84-74-2	%	0.1	0.005	N.D.	N.D.
Butylbenzyl phthalate (BBP) CAS:85-68-7	%	0.1	0.005	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate (DEHP) CAS:117-81-7	%	0.1	0.005	N.D.	N.D.
Di-n-octyl phthalate (DNOP) CAS:117-84-0	%	/	0.005	N.D.	N.D.
Di-isononyl phthalate (DINP) CAS:28553-12-0, 68515-48-0	%	/	0.005	N.D.	N.D.
Di-isodecyl phthalate(DIDP) CAS:26761-40-0, 68515-49-1	%	/	0.005	N.D.	N.D.
Sum of DIBP +DBP+BBP+DEHP	%	0.1	/	N.D.	N.D.
Sum of DNOP+DINP+DIDP	%	0.1	/	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark: As client's request, test results of No.1-1, No.1-4 copied from test results of No.1-1, No.1-4 of test report No. AGC05443240532-001 respectively.

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%

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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

Tost Itom(s)	Unit Limit	Limit	MDL	Test Result(s)	
Test Item(s)	Test Item(s) Unit Limit MDL		MIDL	1-1	1-4
Benzo[a]pyrene(BaP)	mg/kg	1	0.1	N.D.	N.D.
Benzo[e]pyrene(BeP)	mg/kg	1	0.1	N.D.	N.D.
Benzo[a]anthracene(BaA)	mg/kg	1	0.1	N.D.	N.D.
Benzo[b]fluoranthene(BbF)	mg/kg	1	0.1	N.D.	N.D.
Benzo[j]fluoranthene(BjFA)	mg/kg	1	0.1	N.D.	N.D.
Benzo[k]fluoranthene(BkF)	mg/kg	1	0.1	N.D.	N.D.
Chrysene(CHR)	mg/kg	1	0.1	N.D.	N.D.
Dibenzo[a,h]anthracene(DBA)	mg/kg	1	0.1	N.D.	N.D.
Co	Conformity	Conformity			

Remark: As client's request, test results of No.1-1, No.1-4 copied from test results of No.1-1, No.1-4 of test report No. AGC05443240532-001 respectively.

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 77

- Formaldehyde Release

Test Methods and Equipment: EN 717-1:2004; UV-Vis

Test Item(s)	Unit Limit		MDL	Test Result(s)
Test Item(s)	Onit Limit	MDL	1-3	
Formaldehyde Release	mg/m³	0.062	0.006	N.D. (240h)
Со	Conformity			

Report No.: AGC05443240532-002

Remark: As client's request, test results of No.1-3 copied from test results of No.1-2 of test report No. AGC05443240532-001.

Regulation (EU) 2019/1021 on persistent organic pollutants (POPs)

- Pentachlorophenol (PCP) Content

Test Methods and Equipment: EPA 3550C:2007 & EPA 8270E:2018; GC-MS

Test Item(s)	Linit	Unit Limit		Test Result(s)
rest item(s)	Unit	Unit Limit	MDL	1-3
Pentachlorophenol (PCP)	mg/kg	5	5	N.D.
Co	Conformity			

Remark: As client's request, test results of No.1-3 copied from test results of No.1-2 of test report No. AGC05443240532-001.

- Overall Migration

	Test l	Result	
Test point	Overall migration/ (mg/dm²)		Conclusion
	3% Acetic acid, 70°C,2h	50% Ethanol, 70°C,2h	
1-4	N.D.	N.D.	Conformity
Limit	10	10	/
MDL	5	5	/

Remark: As client's request, test results of No.1-4 copied from test results of No.1-4 of test report No. AGC05443240532-001.



- Specific migration of Bisphenol A(BPA)

	Test Result	
Test point	Specific migration of Bisphenol A(BPA)/ (mg/kg)	Conclusion
	3% Acetic acid,70°C,2h	
1-4	N.D.	Conformity
Limit (Client's Requirement)	0.05	/
MDL	0.02	/

Remark: As client's request, test results of No.1-4 copied from test results of No.1-4 of test report No. AGC05443240532-001.

-Bisphenol A(BPA) content

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

Test point	Test Result (mg/kg)	Canalusian
Test point	Bisphenol A (BPA)	Conclusion
1-4	N.D.	Conformity

Remark: As client's request, test results of No.1-4 copied from test results of No.1-4 of test report No. AGC05443240532-001.

-Specific migration of Formaldehyde

	Test Result	
Test point	Specific migration of Formaldehyde/ (mg/kg)	Conclusion
	3% Acetic acid,70°C,1h	
1-2	N.D.	Conformity
Limit	15	/
MDL	5	/

Remark: As client's request, test results of No.1-2 copied from test results of No.1-2 of test report No. AGC05443240532-001.



	Report No.: AGC05443240532-002
-Pentachlorophenol (PCP) content	
Tost Itam	Pentachloronhenol (PCP)

Limit (mg/kg)	0.15
MDL(mg/kg)	0.05
Test Method/ Instrument	ENISO15320-2011/ GC-MS

Tost point	Test Result (mg/kg)	Conclusion
Test point	Pentachlorophenol (PCP)	Conclusion
1-2	N.D.	Conformity

Remark: As client's request, test results of No.1-2 copied from test results of No.1-2 of test report No. AGC05443240532-001.

LFGB §64 BVL B 82.02 Part 8

- Pentachlorophenol (PCP) Content

Tenental ophemor (1 of) content		
Test Item	Pentachlorophenol (PCP)	
Limit (mg/kg)	0.15	
MDL (mg/kg)	0.05	
Test Method/ Instrument	ENISO 15320-2011/GC-MS	

Test point	Test Point Test Result (mg/kg) Pentachlorophenol (PCP)	
1-2	N.D.	Conformity

Remark: As client's request, test results of No.1-2 copied from test results of No.1-2 of test report No. AGC05443240532-001.



- Volatile Organic Matter

Unit: %

Toot it am (a)	Test Candition	MDI	Result(s)	Limit
Test item(s)	Test Condition	MDL	1-4	Limit
Volatile Organic Matter	200°C, 4h	0.1	0.21	0.5
Conclusion		/	Conformity	/

Remark: As client's request, test results of No.1-4 copied from test results of No.1-4 of test report No. AGC05443240532-001.

- Peroxide value

Unit: %

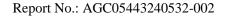
Test Item	MDL	Result(s)	Limit
		1-4	
Peroxide value	0.2	N.D.	Absent
Conclusion	/	Conformity	/

Remark: As client's request, test results of No.1-4 copied from test results of No.1-4 of test report No. AGC05443240532-001.

- 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	
1-4	N.D.	Conformity
Limit	0.1	/
MDL	0.01	/

Remark: As client's request, test results of No.1-4 copied from test results of No.1-4 of test report No. AGC05443240532-001.





- Specific migration of heavy metal:

Test Method: With reference to EDQM Technical Guide on Metals and alloys used in food contact materials 2013.

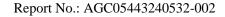
Unit: mg/kg

Test Item(s)	Test condition/ Equipment		Test Result(s)	Unit: m
		MDL	1st + 2nd extractives 1-5	Limit
Copper (Cu)		0.1	N.D.	28
Iron (Fe)		0.1	0.267	280
Tin (Sn)		0.1	N.D.	700
Chromium (Cr)		0.01	0.018	1.75
Manganese (Mn)		0.1	N.D.	12.6
Zinc (Zn)		0.1	N.D.	35
Aluminium (Al)		0.1	N.D.	35
Lithium (Li)		0.01	N.D.	0.336
Beryllium (Be)		0.005	N.D.	0.07
Vanadium (V)		0.005	N.D.	0.07
Nickel (Ni)	0.5% Citric acid,	0.01	N.D.	0.98
Cobalt (Co)	70°C, 2h ICP-OES	0.01	N.D.	0.14
Arsenic (As)		0.002	N.D.	0.014
Molybdenum (Mo)		0.01	N.D.	0.84
Silver (Ag)		0.01	N.D.	0.56
Cadmium (Cd)		0.002	N.D.	0.035
Antimony (Sb)		0.01	N.D.	0.28
Mercury (Hg)		0.002	N.D.	0.021
Thallium (Tl)		0.0001	N.D.	0.0007
Lead (Pb)		0.01	N.D.	0.07
Magnesium (Mg)		0.01	0.021	/
Titanium (Ti)		0.01	N.D.	/
Conclusion		/	Conformity	/



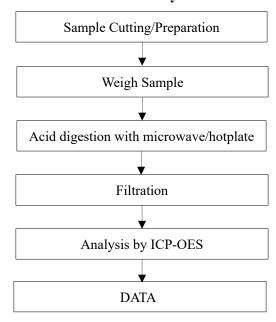
Test Item(s)		MDL	Test Result(s)	Limit
	Test condition/ Equipment		3 rd extractives 1-5	
	Equipment			
Barium (Ba)		0.1	N.D.	1.2
Copper (Cu)		0.1	N.D.	4
Iron (Fe)		0.1	N.D.	40
Tin (Sn)		0.1	N.D.	100
Chromium (Cr)		0.01	N.D.	0.25
Manganese (Mn)		0.1	N.D.	1.8
Zinc (Zn)		0.1	N.D.	5
Aluminium (Al)		0.1	N.D.	5
Lithium (Li)		0.01	N.D.	0.048
Beryllium (Be)		0.005	N.D.	0.01
Vanadium (V)		0.005	N.D.	0.01
Nickel (Ni)	0.5% Citric acid,	0.01	N.D.	0.14
Cobalt (Co)	70℃, 2h ICP-OES	0.01	N.D.	0.02
Arsenic (As)		0.002	N.D.	0.002
Molybdenum (Mo)		0.01	N.D.	0.12
Silver (Ag)		0.01	N.D.	0.08
Cadmium (Cd)		0.002	N.D.	0.005
Antimony (Sb)		0.01	N.D.	0.04
Mercury (Hg)		0.002	N.D.	0.003
Thallium (Tl)		0.0001	N.D.	0.0001
Lead (Pb)		0.01	N.D.	0.01
Magnesium (Mg)		0.01	N.D.	/
Titanium (Ti)		0.01	N.D.	/
Conclusion		/	Conformity	/

Remark: As client's request, test results of No.1-5 copied from test results of No.1-5 of test report No. AGC05443240532-001.

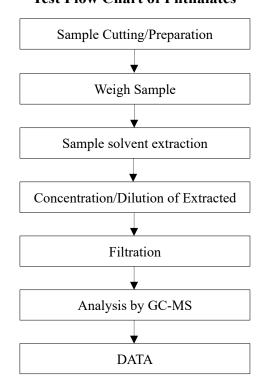


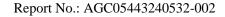


Test Flow Chart of Heavy Metal Content



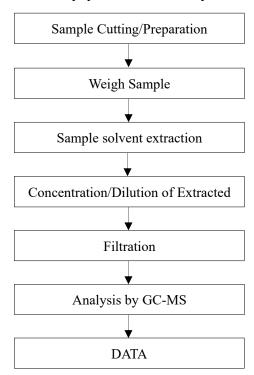
Test Flow Chart of Phthalates

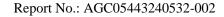






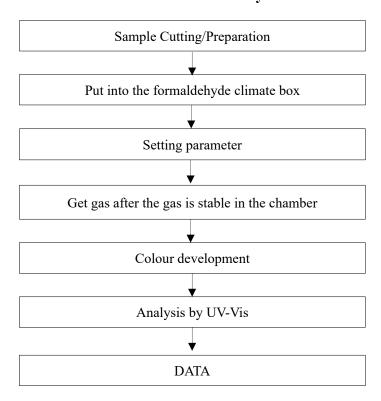
Test Flow Chart of Polycyclic-aromatic Hydrocarbons (PAHs)

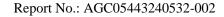






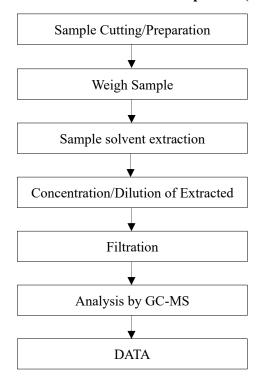
Test Flow Chart of Formaldehyde Release







Test Flow Chart of Pentachlorophenol (PCP)





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*** End of Report ***