



中国认可
国际互认
检测
TESTING
CNAS L6478



TEST REPORT

Reference No. : WTF21F11130390F

Applicant : Mid Ocean Brands B.V.

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

Manufacturer : 114276

Sample Name : Aluminum bottle with hanger

Model No. : MO6469

Test Requested : 1. In accordance with Regulation (EU) No 10/2011 with amendments, Council of Europe Resolution CM/Res(2013)9, Resolution AP(2004)5 and Regulation (EC) No 1935/2004.
2 In accordance with French Décret n°2007-766 with amendments and Regulation (EC) No 1935/2004.

Test Conclusion : **Pass** (Please refer to next pages for details)

Date of Receipt sample : 2021-11-26

Date of Test : 2021-11-26 to 2021-12-17

Date of Issue : 2021-12-17

Test Result : Please refer to next page (s)

Note Selected test(s) as requested by applicant

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:

Approved by:

Abby Zhou

Abby.Zhou / Project Engineer

Dino Zhang

Dino.Zhang / Technical Manager



Test Results:

1. Overall Migration Test

Food Simulant	Test Condition	Result (mg/dm ²)		LOQ (mg/dm ²)	Limit (mg/dm ²)
		1 st Migration			
		No.1	No.2		
3% Acetic Acid	70°C for 2 hours	ND	ND	3	--
10% Ethanol	70°C for 2 hours	ND	ND	3	--

Food Simulant	Test Condition	Result (mg/dm ²)		LOQ (mg/dm ²)	Limit (mg/dm ²)
		2 nd Migration			
		No.1	No.2		
3% Acetic Acid	70°C for 2 hours	ND	ND	3	--
10% Ethanol	70°C for 2 hours	ND	ND	3	--

Food Simulant	Test Condition	Result (mg/dm ²)		LOQ (mg/dm ²)	Limit (mg/dm ²)
		3 rd Migration			
		No.1	No.2		
3% Acetic Acid	70°C for 2 hours	ND	ND	3	10
10% Ethanol	70°C for 2 hours	ND	ND	3	10

Note:

1. Test method: With reference to BS EN 1186-1: 2002 and BS EN 1186-3: 2002.
2. "mg/dm²" = milligram per square decimetre
3. "°C" = Celsius degree
4. LOQ = Limit of quantitation
5. ND = Not Detected or lower than limit of quantitation
6. The specification was quoted from (EU) No 10/2011 and its amendments (EU) 2016/1416, (EU) 2017/752, (EU) 2019/37 and (EU) 2020/1245.

Food Simulant	Test Condition	Result (mg/kg)	LOQ(mg/kg)	Limit (mg/kg)
		No.4		
3% Acetic Acid	70°C for 2 hours	ND	20	60
10% Ethanol	70°C for 2 hours	ND	20	60



Note:

1. Test method: With reference to BS EN 1186-1: 2002 and BS EN 1186-3: 2002
2. "mg/kg" = milligram per kilogram of foodstuff in contact with
3. "°C" = Celsius degree
4. LOQ = Limit of quantitation
5. ND = Not Detected or lower than limit of quantitation
6. The specification was quoted from Council of Europe Resolution AP (2004)5 and French Arrêté du 25 novembre 1992 for Silicone Elastomers.

2. Specific Migration of heavy metal

Test Items	Result(mg/kg)		LOQ (mg/kg)	Limit (mg/kg)
	1 st Migration			
	No.1	No.2		
Specific migration of Nickel	ND	ND	0.01	--
Specific migration of Aluminium	ND	ND	0.1	--
Specific migration of Barium	ND	ND	0.1	--
Specific migration of Cobalt	ND	ND	0.01	--
Specific migration of Copper	ND	ND	0.1	--
Specific migration of Iron	ND	ND	0.1	--
Specific migration of Lithium	ND	ND	0.01	--
Specific migration of Manganese	ND	ND	0.01	--
Specific migration of Zinc	ND	ND	0.1	--
Specific migration of Antimony	ND	ND	0.01	--
Specific migration of Arsenic*	ND	ND	0.01	Not detected
Specific migration of Cadmium*	ND	ND	0.002	Not detected
Specific migration of Chromium*	ND	ND	0.01	Not detected
Specific migration of Mercury*	ND	ND	0.01	Not detected
Specific migration of Lead*	ND	ND	0.01	Not detected
Specific migration of Europium *	ND	ND	0.02	--
Specific migration of Gadolinium*	ND	ND	0.02	
Specific migration of Lanthanum*	ND	ND	0.02	
Specific migration of Terbium*	ND	ND	0.02	



Test Items	Result(mg/kg)		LOQ (mg/kg)	Limit (mg/kg)
	2 nd Migration			
	No.1	No.2		
Specific migration of Nickel	ND	ND	0.01	--
Specific migration of Aluminium	ND	ND	0.1	--
Specific migration of Barium	ND	ND	0.1	--
Specific migration of Cobalt	ND	ND	0.01	--
Specific migration of Copper	ND	ND	0.1	--
Specific migration of Iron	ND	ND	0.1	--
Specific migration of Lithium	ND	ND	0.01	--
Specific migration of Manganese	ND	ND	0.01	--
Specific migration of Zinc	ND	ND	0.1	--
Specific migration of Antimony	ND	ND	0.01	--
Specific migration of Arsenic*	ND	ND	0.01	Not detected
Specific migration of Cadmium*	ND	ND	0.002	Not detected
Specific migration of Chromium*	ND	ND	0.01	Not detected
Specific migration of Mercury*	ND	ND	0.01	Not detected
Specific migration of Lead*	ND	ND	0.01	Not detected
Specific migration of Europium *	ND	ND	0.02	--
Specific migration of Gadolinium*	ND	ND	0.02	
Specific migration of Lanthanum*	ND	ND	0.02	
Specific migration of Terbium*	ND	ND	0.02	



Test Items	Result(mg/kg)		LOQ (mg/kg)	Limit (mg/kg)
	3 rd Migration			
	No.1	No.2		
Specific migration of Nickel	ND	ND	0.01	0.02
Specific migration of Aluminium	ND	ND	0.1	1
Specific migration of Barium	ND	ND	0.1	1
Specific migration of Cobalt	ND	ND	0.01	0.05
Specific migration of Copper	ND	ND	0.1	5
Specific migration of Iron	ND	ND	0.1	48
Specific migration of Lithium	ND	ND	0.01	0.6
Specific migration of Manganese	ND	ND	0.01	0.6
Specific migration of Zinc	ND	ND	0.1	5
Specific migration of Antimony	ND	ND	0.01	0.04
Specific migration of Arsenic*	ND	ND	0.01	Not detected
Specific migration of Cadmium*	ND	ND	0.002	Not detected
Specific migration of Chromium*	ND	ND	0.01	Not detected
Specific migration of Mercury*	ND	ND	0.01	Not detected
Specific migration of Lead*	ND	ND	0.01	Not detected
Specific migration of Europium *	ND	ND	0.02	Sum<0.05
Specific migration of Gadolinium*	ND	ND	0.02	
Specific migration of Lanthanum*	ND	ND	0.02	
Specific migration of Terbium*	ND	ND	0.02	

Note:

1. Test Method: With reference to BS EN 13130-1: 2004, sample preparation in 3% acetic acid at 70°C for 2 hours, analysis was performed by ICP-MS.
2. "mg/kg" = milligram per kilogram of foodstuff in contact with
3. LOQ = Limit of quantitation
4. ND = Not Detected or lower than limit of quantitation
5. The specification was quoted from (EU) No 10/2011 and its amendments (EU) 2016/1416, (EU) 2017/752 and (EU) 2020/1245.
6. The testing item marked with "*" does not been accredited by CNAS.

**3. Specific Migration of Primary Aromatic Amines**

Test Item	Result (mg/kg)		LOQ (mg/kg)	Limit (mg/kg)
	No.1	No.2		
Migration of Primary aromatic amines	ND	ND	0.002	<0.01mg/kg

Note:

1. Test Method: With reference to § 64 LFGB L No. 00.00-6, analysis was performed by UV-visible Spectrometer.
2. Test Condition and simulant: 3% acetic acid at 70°C for 2 hours.
3. "mg/kg" = milligram per kilogram of foodstuff in contact with
4. LOQ = Limit of quantitation
5. ND = Not Detected or lower than limit of quantitation
6. The specification was quoted from (EU) No 10/2011 and its amendments (EU) 2016/1416, (EU) 2017/752 and (EU) 2020/1245.

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**4. Specific Migration of Primary Aromatic Amines (single substance)***

Test Items	CAS No.	Result(mg/kg)		LOQ (mg/kg)	Limit (mg/kg)
		1 st Migration			
		No.1	No.2		
2-methoxyaniline	90-04-0	ND	ND	0.002	--
4,4'-Diaminobiphenyl	92-87-5	ND	ND	0.002	--
4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	ND	ND	0.002	--
4,4'-Diaminodiphenylmethane	101-77-9	ND	ND	0.002	--
4,4'-Oxydianiline	101-80-4	ND	ND	0.002	--
4-chloroaniline	106-47-8	ND	ND	0.002	--
3,3'-Dimethoxybenzidine	119-90-4	ND	ND	0.002	--
3,3'-Dimethylbenzidine	119-93-7	ND	ND	0.002	--
2-Methoxy-5-methylaniline	120-71-8	ND	ND	0.002	--
2,4,5 – Trimethylaniline	137-17-7	ND	ND	0.002	--
4,4'-Thiodianiline	139-65-1	ND	ND	0.002	--
4-aminoazobenzene	60-09-3	ND	ND	0.002	--
2,4-diaminoanisol	615-05-4	ND	ND	0.002	--
4,4'-diamino-3,3'- dimethyldiphenylmethane	838-88-0	ND	ND	0.002	--
2-Naphthylamine	91-59-8	ND	ND	0.002	--
3,3'-Dichlorobenzidine	91-94-1	ND	ND	0.002	--
4-Aminobiphenyl	92-67-1	ND	ND	0.002	--
2-methylaniline	95-53-4	ND	ND	0.002	--
4-chloro-o-Toluidine	95-69-2	ND	ND	0.002	--
2,4-Toluylendiamine	95-80-7	ND	ND	0.002	--
2,4-Aminoazotoluene	97-56-3	ND	ND	0.002	--
2-Amino-4-nitrotoluene	99-55-8	ND	ND	0.002	--
2,4-Xylidin	95-68-1	ND	ND	0.002	--
2,6-Xylidin	87-62-7	ND	ND	0.002	--
1, 3 - phenylene diamine	108-45-2	ND	ND	0.002	--



Test Items	CAS No.	Result(mg/kg)		LOQ (mg/kg)	Limit (mg/kg)
		2 nd Migration			
		No.1	No.2		
2-methoxyaniline	90-04-0	ND	ND	0.002	--
4,4'-Diaminobiphenyl	92-87-5	ND	ND	0.002	--
4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	ND	ND	0.002	--
4,4'-Diaminodiphenylmethane	101-77-9	ND	ND	0.002	--
4,4'-Oxydianiline	101-80-4	ND	ND	0.002	--
4-chloroaniline	106-47-8	ND	ND	0.002	--
3,3'-Dimethoxybenzidine	119-90-4	ND	ND	0.002	--
3,3'-Dimethylbenzidine	119-93-7	ND	ND	0.002	--
2-Methoxy-5-methylaniline	120-71-8	ND	ND	0.002	--
2,4,5 – Trimethylaniline	137-17-7	ND	ND	0.002	--
4,4'-Thiodianiline	139-65-1	ND	ND	0.002	--
4-aminoazobenzene	60-09-3	ND	ND	0.002	--
2,4-diaminoanisol	615-05-4	ND	ND	0.002	--
4,4'-diamino-3,3'- dimethyldiphenylmethane	838-88-0	ND	ND	0.002	--
2-Naphthylamine	91-59-8	ND	ND	0.002	--
3,3'-Dichlorobenzidine	91-94-1	ND	ND	0.002	--
4-Aminobiphenyl	92-67-1	ND	ND	0.002	--
2-methylaniline	95-53-4	ND	ND	0.002	--
4-chloro-o-Toluidine	95-69-2	ND	ND	0.002	--
2,4-Toluylendiamine	95-80-7	ND	ND	0.002	--
2,4-Aminoazotoluene	97-56-3	ND	ND	0.002	--
2-Amino-4-nitrotoluene	99-55-8	ND	ND	0.002	--
2,4-Xylidin	95-68-1	ND	ND	0.002	--
2,6-Xylidin	87-62-7	ND	ND	0.002	--
1, 3 - phenylene diamine	108-45-2	ND	ND	0.002	--



Test Items	CAS No.	Result(mg/kg)		LOQ (mg/kg)	Limit (mg/kg)
		3 rd Migration			
		No.1	No.2		
2-methoxyaniline	90-04-0	ND	ND	0.002	ND
4,4'-Diaminobiphenyl	92-87-5	ND	ND	0.002	ND
4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	ND	ND	0.002	ND
4,4'-Diaminodiphenylmethane	101-77-9	ND	ND	0.002	ND
4,4'-Oxydianiline	101-80-4	ND	ND	0.002	ND
4-chloroaniline	106-47-8	ND	ND	0.002	ND
3,3'-Dimethoxybenzidine	119-90-4	ND	ND	0.002	ND
3,3'-Dimethylbenzidine	119-93-7	ND	ND	0.002	ND
2-Methoxy-5-methylaniline	120-71-8	ND	ND	0.002	ND
2,4,5 – Trimethylaniline	137-17-7	ND	ND	0.002	ND
4,4'-Thiodianiline	139-65-1	ND	ND	0.002	ND
4-aminoazobenzene	60-09-3	ND	ND	0.002	ND
2,4-diaminoanisol	615-05-4	ND	ND	0.002	ND
4,4'-diamino-3,3'- dimethyldiphenylmethane	838-88-0	ND	ND	0.002	ND
2-Naphthylamine	91-59-8	ND	ND	0.002	ND
3,3'-Dichlorobenzidine	91-94-1	ND	ND	0.002	ND
4-Aminobiphenyl	92-67-1	ND	ND	0.002	ND
2-methylaniline	95-53-4	ND	ND	0.002	ND
4-chloro-o-Toluidine	95-69-2	ND	ND	0.002	ND
2,4-Toluylendiamine	95-80-7	ND	ND	0.002	ND
2,4-Aminoazotoluene	97-56-3	ND	ND	0.002	ND
2-Amino-4-nitrotoluene	99-55-8	ND	ND	0.002	ND
2,4-Xylidin	95-68-1	ND	ND	0.002	ND
2,6-Xylidin	87-62-7	ND	ND	0.002	ND
1, 3 - phenylene diamine	108-45-2	ND	ND	0.002	ND

**Note:**

1. Test Method: With reference to EN 13130-1:2004, analysis was performed by LC-MS-MS.
2. Test Condition and simulant: 3% acetic acid at 70°C for 2 hours.
3. "mg/kg" = milligram per kilogram of foodstuff in contact with
4. LOQ = Limit of quantitation
5. ND = Not Detected or lower than limit of quantitation
6. The specification was quoted from (EU) No 10/2011 and its amendments (EU) 2016/1416, (EU) 2017/752 and (EU) 2020/1245.
7. The testing item marked with '*' does not been accredited by CNAS.

5. Bisphenol A Content*

Test Item	Result (mg/kg)			LOQ (mg/kg)	Limit (mg/kg)
	No.1	No.2	No.4		
Bisphenol A	ND	ND	ND	0.1	Not Detected

Note:

1. Test Method: With reference to EPA3550C:2007, analysis was performed by GC-MS.
2. "mg/kg" = milligram per kilogram
3. LOQ = Limit of quantitation
4. ND = Not Detected or lower than limit of quantitation
5. The specification was quoted from Law No 2012-1442.
6. The testing item marked with '*' does not been accredited by CNAS.

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**6. Council of Europe Resolution CM/Res(2013)9-Specific Migration of Heavy Metal**

Test Items	1st+2nd Migration (mg/kg)	LOQ (mg/kg)	Limit (mg/kg)
	No.3		
Aluminium (Al)	0.2	0.2	35
Antimony (Sb)	ND	0.02	0.28
Chromium (Cr)	ND	0.04	1.75
Cobalt (Co)	ND	0.02	0.14
Copper (Cu)	ND	0.2	28
Iron (Fe)	ND	0.4	280
Manganese (Mn)	ND	0.2	12.6
Molybdenum (Mo)	ND	0.02	0.84
Nickel (Ni)	ND	0.02	0.98
Silver (Ag)	ND	0.02	0.56
Tin (Sn)	ND	0.2	700
Vanadium (V)	ND	0.01	0.07
Zinc (Zn)	ND	0.2	35
Arsenic (As)	ND	0.002	0.014
Barium (Ba)	ND	0.2	8.4
Beryllium (Be)	ND	0.01	0.07
Cadmium (Cd)	ND	0.002	0.035
Lead (Pb)	ND	0.01	0.07
Lithium (Li)	ND	0.01	0.336
Mercury (Hg)	ND	0.002	0.021
Thallium (Tl)	ND	0.0002	0.0007
Magnesium (Mg)	ND	0.2	--
Titanium (Ti)	ND	0.02	--



Test Items	3rd Migration (mg/kg)	LOQ (mg/kg)	Limit (mg/kg)
	No.3		
Aluminium (Al)	ND	0.1	5
Antimony (Sb)	ND	0.01	0.04
Chromium (Cr)	ND	0.02	0.25
Cobalt (Co)	ND	0.01	0.02
Copper (Cu)	ND	0.1	4
Iron (Fe)	ND	0.2	40
Manganese (Mn)	ND	0.1	1.8
Molybdenum (Mo)	ND	0.01	0.12
Nickel (Ni)	ND	0.01	0.14
Silver (Ag)	ND	0.01	0.08
Tin (Sn)	ND	0.1	100
Vanadium (V)	ND	0.005	0.01
Zinc (Zn)	ND	0.1	5
Arsenic (As)	ND	0.001	0.002
Barium (Ba)	ND	0.1	1.2
Beryllium (Be)	ND	0.005	0.01
Cadmium (Cd)	ND	0.001	0.005
Lead (Pb)	ND	0.005	0.01
Lithium (Li)	ND	0.005	0.048
Mercury (Hg)	ND	0.001	0.003
Thallium (Tl)	ND	0.0001	0.0001
Magnesium (Mg)	ND	0.1	--
Titanium (Ti)	ND	0.01	--

Note:

1. Test Method: With reference to BS EN 13130-1: 2004, analysis was performed by ICP-OES and ICP-MS.
2. Test Condition and simulant: Sample(s) were migrated with artificial tap water at 70°C for 2 hours.
3. "mg/kg" = milligram per kilogram of foodstuff in contact with
4. LOQ = Limit of quantitation
5. ND = Not Detected or lower than limit of quantitation
6. "--" = Not regulated
7. The specification was quoted from Technical Guide on Metals and alloys used in food contact materials of Council of Europe Resolution CM/Res(2013)9.

**7. Peroxide Value Test***

Test Item	Result	Limit
	No.4	
Peroxide Value	Absent	Absent

Note:

1. Test method: With reference to European Pharmacopeia (2005) ANNEX X F, Clause 2.5.5, method A.
2. The specification was quoted from French Arrêté du 25 novembre 1992 for Silicone Elastomers.
3. The testing item marked with '*' does not been accredited by CNAS.

8. Volatile Organic Compounds

Test Item	Result (%)	LOQ (%)	Limit (%)
	No.4		
Volatile Organic compounds	0.08	0.05	0.5

Note:

1. Test method: With reference to French Arrêté du 25 novembre 1992 Annex III for silicone Elastomers.
2. "%" = percentage by weight
3. LOQ = Limit of quantitation
4. The specification was quoted from French Arrêté du 25 novembre 1992 for Silicone Elastomers.

9. Specific Migration of Organotin (as Tin)

Test Item	Result (mg/kg)	LOQ (mg/kg)	Limit (mg/kg)
	No.4		
Specific Migration of Organotin (as Tin)	ND	0.01	0.1

Note:


1. Test Method: With reference to BS EN 13130-1: 2004, sample preparation in 3% acetic acid at 70°C for 2 hours, analysis was performed by ICP-MS.
2. "mg/kg" = milligram per kilogram
3. LOQ = Limit of quantitation
4. ND = Not Detected, less than LOQ
5. The specification was quoted from French Arrêté du 25 novembre 1992 for Silicone Elastomers.



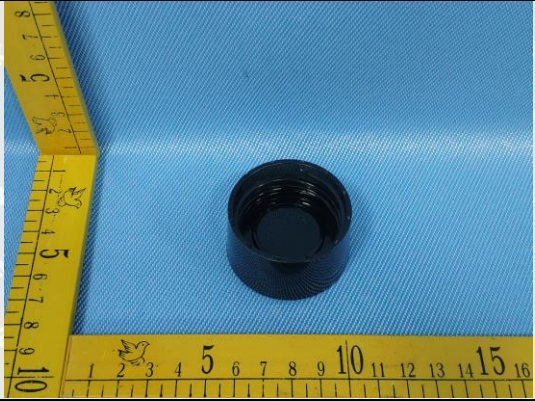


Sample Photo:



Photograph of parts tested:

No.	Photo of testing part	Parts Description	Client Claimed Material
1		Gray plastic	PP



No.	Photo of testing part	Parts Description	Client Claimed Material
2		Black plastic	PS
3		Silvery metal	Aluminum
4		Transparent silicone rubber	Silicone rubber

===== End of Report =====