



**CENTRE OF TESTING SERVICE  
INTERNATIONAL**

**OPERATE ACCORDING TO ISO/IEC 17025**

# **TEST REPORT**

**Test Report Number : CNB3180919-02518-C**

**CTS (Ningbo) Testing Service Technology Co., Ltd.  
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**1 General Information****1.1 Application Details**

Name : Mid Ocean Brands B.V.  
Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon,  
Hong Kong.  
Contact : /  
Telephone : +86-852-29982344  
Fax : +86-852-29982305  
Mobile telephone : /  
Email : /

**1.2 Manufacturer & Buyer**

Manufacturer name : Mid Ocean Brands B.V.  
Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon,  
Hong Kong.  
Contact : /  
Telephone : +86-852-29982344  
Fax : +86-852-29982305  
Mobile telephone : /  
Email : /  
Buyer name : MID OCEAN HONGKONG LIMITED

**1.3 Description of the Test Item**

Sample name : Plastic whistle  
Model No. : MO7168  
Brand name : /  
Condition of sample(s) : EFFECTIVE

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## 2 Test Results

### 2.1 General Information

#### 2.1.1 Sample Receiving Date

Sep. 20, 2018

#### 2.1.2 Testing Period

Sep. 20, 2018 to Sep. 29, 2018

#### 2.1.3 Test Requested

Please refer to the following page(s)

#### 2.1.4 Test Method

Please refer to the following page(s)

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### 2.2 Results

#### 2.2.1 Cadmium Content

With reference to EN1122:2001B

	Sample Description	Result (mg/kg)	Limit (mg/kg)	Conclusion
		Cadmium (Cd)		
No.1*	Red plastic whistle/red plastic bead (mixed)	N.D.	100	Pass
No.2	Red rope	N.D.	100	Pass

- Note :
1. 1mg/kg=1ppm=0.0001%
  2. N.D. = not detected (less than 2 mg/kg)
  3. The limit refers to ANNEX XVII of the REACH Regulation (EC) No.1907/2006 & Amendment No. 552/2009 (formerly known as Directive 91/338/EEC).
  4. \*The Testing results are based on the mixing of the sample which applicant required, the mixed test results in this test report do not represent individual content of a single material.
  5. The tested part of the sample was specified by client.

#### 2.2.2 Benzene Content

With reference to EPA 3550C:2007, analyzed by Gas Chromatograph-Mass Spectrometry (GC-MS).

	Sample Description	Result (mg/kg)	Limit (mg/kg)	MDL (mg/kg)	Conclusion
		Benzene			
No.2	Red rope	N.D.	N.D.	5	Pass
No.3	Red plastic whistle	N.D.	N.D.	5	Pass
No.4	Red plastic bead	N.D.	N.D.	5	Pass

- Note :
1. N.D.=Not Detected (less than MDL)
  2. 1mg/kg=1ppm=0.0001%
  3. MDL= Method Detect Limit
  4. The limit refers to ANNEX XVII of the REACH Regulation (EC) No.1907/2006 & Amendment No. 552/2009
  5. The tested part of the sample was specified by client.

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### 2.2.3 AZO Compounds Content

- 1) With reference to EN ISO 14362-1:2017, Analysis was performed by GC-MS.  
 2) p-Aminoazobenzene: With reference to EN ISO 14362-3:2017, Analysis was performed by GC-MS.

No.2	Sample Description	Result (mg/kg)	Limit (mg/kg)	Conclusion
		AZO		
	Red rope	N.D.	30	Pass

- Note : 1. N.D. = not detected (less than MDL)  
 2. 1 mg/kg=1 ppm=0.0001%  
 3. Method Detection Limit=5 mg/kg  
 4. The limit refers to ANNEX XVII of the REACH Regulation (EC) No.1907/2006 & Amendment No. 552/2009 (formerly known as Directive 76/769/EEC and 2002/61/EC).  
 5. The tested part of the sample was specified by client.  
 6. List of prohibitive aromatic amines to be tested :

No.	Prohibitive Aromatic Amines	CAS NO.	No.	Prohibitive Aromatic Amines	CAS NO.
1	O-Toluidine	95-53-4	13	4-Aminobiphenyl	92-67-1
2	2,6-Xylidine	87-62-7	14	4-Aminoazobenzene	60-09-03
3	2,4-Xylidine	95-68-1	15	4,4'-oxydianiline	101-80-4
4	O-Anisidine	90-04-0	16	Benzidine	92-87-5
5	4-Chloroaniline	106-47-8	17	4,4'-methylenedianiline	101-77-9
6	P-Cresidine	120-71-8	18	O-Aminoazotoluene	97-56-3
7	2,4,5-Trimethylaniline	137-17-7	19	4,4'-methylenedi-o-toluidine	838-88-0
8	4-Chloro-o-toluidine	95-69-2	20	3,3'-Dimethylbenzidine	119-93-7
9	4-methyl-m-phenylenediamine	95-80-7	21	4,4'-Thiodianiline	139-65-1
10	4-methoxy-m-phenylenediamine	615-05-4	22	3,3'-Dichlorobenzidine	91-94-1
11	2-Naphthylamine	91-59-8	23	4,4'-Methylene-bis-(2-Chloro-aniline)	101-14-4
12	5-nitro-o-toluidine	99-55-8	24	3,3'-Dimethoxybenzidine	119-90-4

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### 2.2.4 Polycyclic Aromatic Hydrocarbon (PAHs) Content

With reference to EPA 3540C and EPA 8270D: Solvent extraction, followed by analysis using Gas Chromatography-Mass Spectrometry

Sample Description	No.1*	Red plastic whistle/red plastic bead (mixed)		
	No.2	Red rope		
Compounds	CAS Number	Result (mg/kg)		Maximum permissible limit (mg/kg)
		No.1*	No.2	
(1) Benz(a)anthracene (BaA)	56-55-3	N.D.	N.D.	<1.0
(2) Chrysene (CHR)	218-01-9	N.D.	N.D.	<1.0
(3) Benzo(b)fluoranthene (BbF)	205-99-2	N.D.	N.D.	<1.0
(4) Benzo(k)fluoranthene (BkF)	207-08-9	N.D.	N.D.	<1.0
(5) Benzo(a)pyrene (BaP)	50-32-8	N.D.	N.D.	<1.0
(6) Dibenz(a,h)anthracene (DBA)	53-70-3	N.D.	N.D.	<1.0
(7) Benzo(j)fluoranthene (BjF)	205-82-3	N.D.	N.D.	<1.0
(8) Benzo(e)pyrene (BeP)	192-97-2	N.D.	N.D.	<1.0
Conclusion	--	PASS	PASS	--

- Note :
- 1 mg/kg=1 ppm=0.0001%.
  - Method detection limit of each of the individual compound is 0.1 mg/kg.
  - N.D. = not detected (less than MDL).
  - The limit refers to ANNEX XVII of the REACH Regulation (EC) No.1907/2006 & Amendment No. 552/2009 ( REGULATION (EU) No 1272/2013).
  - The tested part of the sample was specified by client.
  - \*The Testing results are based on the mixing of the sample which applicant required, the mixed test results in this test report do not represent individual content of a single material.

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### 2.2.5 Phthalates Content

With reference to EPA 3540C and EPA 8270D: Solvent extraction, followed by analysis using Gas Chromatography-Mass Spectrometry

Sample Description		Result (%)			Total (%)	Maximum Allowable Limit (%)	Conclusion
		DEHP	DBP	BBP			
No.1*	Red plastic whistle/red plastic bead (mixed)	N.D.	N.D.	N.D.	N.D.	0.1	Pass
No.2	Red rope	N.D.	N.D.	N.D.	N.D.	0.1	Pass

Sample Description		Result (%)			Total (%)	Maximum Allowable Limit (%)	Conclusion
		DINP	DNOP	DIDP			
No.1*	Red plastic whistle/red plastic bead (mixed)	N.D.	N.D.	N.D.	N.D.	0.1	Pass
No.2	Red rope	N.D.	N.D.	N.D.	N.D.	0.1	Pass

- Note :
1. N.D.=Not Detected (<MDL)
  2. 1mg/kg=1ppm=0.0001%
  3. The limit refers to ANNEX XVII of the REACH Regulation (EC) No.1907/2006 & Amendment No. 552/2009 (formerly known as Directive 2005/84/EC).
  4. \*The Testing results are based on the mixing of the sample which applicant required, the mixed test results in this test report do not represent individual content of a single material.
  5. The tested part of the sample was specified by client.
  6. The method detect limit for each Phthalates are:

Method Detect Limit		
Phthalates	DEHP (Di- (2-ethylhexyl)phthalate)	0.005%
	DBP (Dibutyl phthalate)	0.005%
	BBP (Benzyl butyl phthalate)	0.005%
	DINP (Di-isononyl phthalate)	0.005%
	DNOP (Di-n-octyl phthalate)	0.005%
	DIDP (Di-isodecyl phthalate)	0.005%

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### 2.2.6 DIBP Content

With reference to EPA 3540C and EPA 8270D: Solvent extraction, followed by analysis using Gas Chromatography-Mass Spectrometry.

	Sample Description	Result (%)	Limit (%)	Conclusion
		DIBP (Di-isobutyl phthalate)		
No.1*	Red plastic whistle/red plastic bead (mixed)	N.D.	0.1	Pass
No.2	Red rope	N.D.	0.1	Pass

- Note :
1. 1mg/kg=1ppm=0.0001%
  2. N.D. = not detected (<MDL)
  3. The method detect limit is 0.005%
  4. The limit refers to SVHC of the REACH Regulation (EC) No.1907/2006.
  5. \*The Testing results are based on the mixing of the sample which applicant required, the mixed test results in this test report do not represent individual content of a single material.
  6. The tested part of the sample was specified by client.

### 2.2.7 Colour Fastness to Rubbing

BS EN ISO 105-X12:2016

Test Items	Result	Limit <sup>#</sup> (Grade)
	No.2	
	Red rope	
Length		
Dry	4	2-3
Wet	4-5	2-3
Conclusion	Pass	--

- Note : 1. <sup>#</sup>=client's limit requirement

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Colourfastness rating

Grade 5	Negligible or no change or staining
Grade 4	Slightly changed or stained
Grade 3	Noticeably changed or stained
Grade 2	Considerably changed or stained
Grade 1	Much changed or stained

Written by: *Jessie*

Inspected by: *Susei*

Approved by: *Jan*



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

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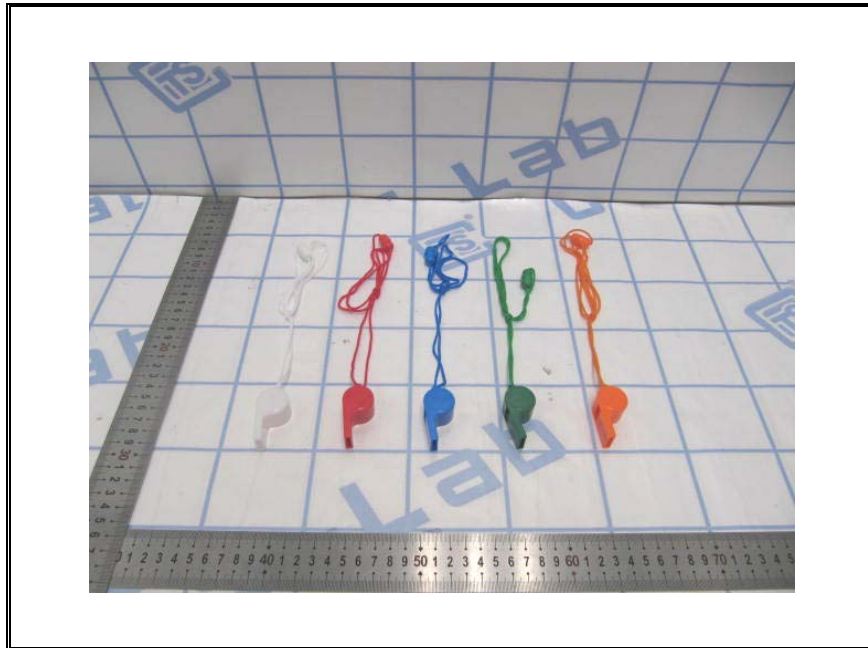
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**3 Sample Reference Photo**



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