



中国认可
国际互认
检测
TESTING
CNAS L6478



TEST REPORT

Reference No. : WTF19F03010756X1C

Applicant : Mid Ocean Brands B.V.

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

Manufacturer : 114103

Sample Name : Lanyard with metal hook

Model No. : MO9661, MO8595, MO9058, MO9354

Test Requested : 1) Determination of Lead content in the submitted sample in accordance with REACH regulation Annex XVII Entries 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628
2) Determination of Cadmium content in the submitted sample in accordance with REACH regulation Annex XVII Entries 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011, No. 835/2012 and (EU) 2016/217
3) Determine the specified AZO Colorants contents in the submitted sample in according to the Entries 43 in Annex XVII of the REACH Regulation (EC) No.1907/2006 and the Amendment Regulation (EC) No.552/ 2009 & No.126/ 2013 (previously restricted under Directive 2002/61/EC).
4) As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.
5) Nickel content requirement in Annex XVII Item 27 of the REACH Regulation (EC) No. 1907/2006 & amendment No.552/2009 (formerly known as Directive 94/27/EC and 2004/96/EC)

Test Method : Please refer to next page (s)

Test Conclusion : Please refer to next page (s)

Date of Receipt sample : 2019-03-01

Date of Test : 2019-03-01 to 2019-03-13

Date of Issue : 2019-03-14

Test Result : Please refer to next page (s)

Note : This report is based on Waltek test report WTF19F03010756C for revising, and replaced report WTF19F03010756C.

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of reporter and reviewer.

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**Test Result:****1) Lead (Pb)**

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	MDL (mg/kg)	Results (mg/kg)				Limit (mg/kg)
		No.1	No.2	No.3	No.4	
Lead(Pb)	2	ND	ND	ND	57	500
Conclusion	--	Pass	Pass	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)				Limit (mg/kg)
		No.5	No.6	No.7	No.8	
Lead(Pb)	2	92	38	ND	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	--

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (4) Limit of Lead was quoted from REACH regulation Annex XVII Item 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628.

2) Cadmium (Cd)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	MDL (mg/kg)	Results (mg/kg)	
		No.1	No.2
Cadmium(Cd)	2	ND	ND
Conclusion	--	Pass	Pass

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (4) Limit of Cadmium according to REACH regulation Annex XVII Item 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011 and No. 835/2012 and (EU) 2016/217.

Category	Limit (mg/kg)
Wet paint	100
Surface coating	1000
Plastic	100
Metal parts of jewellery and hair accessories	100



3) AZO

Test Method: With reference to BS EN ISO 14362-1: 2017 and BS EN ISO 14362-3: 2017, analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS)

No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)
				No.3
1	4-Aminobiphenyl	92-67-1	30	ND
2	Benidine	92-87-5	30	ND
3	4-chloro-o-Toluidine	95-69-2	30	ND
4	2-Naphthylamine	91-59-8	30	ND
5	o-Aminoazotoluene	97-56-3	30	ND
6	2-Amino-4-nitrotoluene	99-55-8	30	ND
7	p-Chloroaniline	106-47-8	30	ND
8	2,4-diaminoanisol	615-05-4	30	ND
9	4,4'-Diaminodiphenylmethane	101-77-9	30	ND
10	3,3'-Dichlorobenzidine	91-94-1	30	ND
11	3,3'-Dimethoxybenzidine	119-90-4	30	ND
12	3,3'-Dimethylbenzidine	119-93-7	30	ND
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	30	ND
14	p-cresinin	120-71-8	30	ND
15	4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	30	ND
16	4,4'-Oxydianiline	101-80-4	30	ND
17	4,4'-Thiodianiline	139-65-1	30	ND
18	o-Toluidine	95-53-4	30	ND
19	2,4-Toluylendiamine	95-80-7	30	ND
20	2,4,5 – Trimethylaniline	137-17-7	30	ND
21	o-anisidine	90-04-0	30	ND
22	4-aminoazobenzene	60-09-3	30	ND
23	2,4-Xylidin	95-68-1	30	ND
24	2,6-Xylidin	87-62-7	30	ND
Conclusion		--	--	Pass

Note:

- ND = Not detected or less than the method detection limit
- mg/kg=Milligram per kilogram
- Method Detection Limit (mg/kg): Each 5mg/kg
- The CAS-numbers 97-56-3 and 99-55-8 are further reduced to CAS-numbers 95-53-4 and 95-80-7.
- AZO colorants that are able to form 4-aminoazobenzene, generate under the condition of this method aniline and 1,4-phenylenediamine. The presence of these colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorant used.
- The CAS-numbers 95-68-1 and 87-62-7 are not proscribed under REACH Regulation (EC) No 1907/2006



4) Colour Fastness to Rubbing

Colour Fastness to Rubbing*		
(ISO 105 X12: 2001/Cor 2002; Size of rubbing finger: 16mm diameter.)		
	No.3	Client's Limit
Dry staining	4-5	2-3
Wet staining	4-5	2-3
Conclusion	Pass	--

Note:

- (1) Grey Scale Rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good.
- (2) The testing item marked with '*' does not been accredited by CNAS

5) Nickel release

Test method: With reference BS EN1811: 2011+A1:2015, Nickel content was determined by Inductively Coupled Argon Plasma Spectrometry

Item No.	Sample Area (cm ²)	Volume of Test Solution(ml)	Nickel release (µg/cm ² /week)				Conclusion
			Trial 1	Trial 2	Trial 3	Average	
No.4+ No.5+No.6+ No.7+No.8	11.20	15	ND*	ND*	ND*	ND*	Pass

Note:

- (1) µg/cm²/week = microgram per square centimetre per week
- (2) Method Detection limit = 0.05 µg/cm²/week
- (3) ND = Not detected or less than the value of Method Detection Limit
- (4) Interpretation of test results:

Type of sample	Nickel Release(µg/cm ² /week)	
	Pass	Fail
Other components in direct and prolonged contact with the skin	<0.88	≥0.88
Post assemblies and body piercings (Post assemblies which are inserted into pierced parts of the human body)	<0.35	≥0.35

- (5) "*" = As per applicant's requirement, the testing was conducted based on mixed components, the test result is for reference only



Test Specimen Description:

- No.1: Black plastic buckle
- No.2: Black plastic buckle
- No.3: Orange fibrous lanyard
- No.4: Silvery metal sheet of hook
- No.5: Silvery metal sheet of hook
- No.6: Silvery metal frame of hook
- No.7: Silvery metal rivet
- No.8: Silvery metal spring

Sample photo:



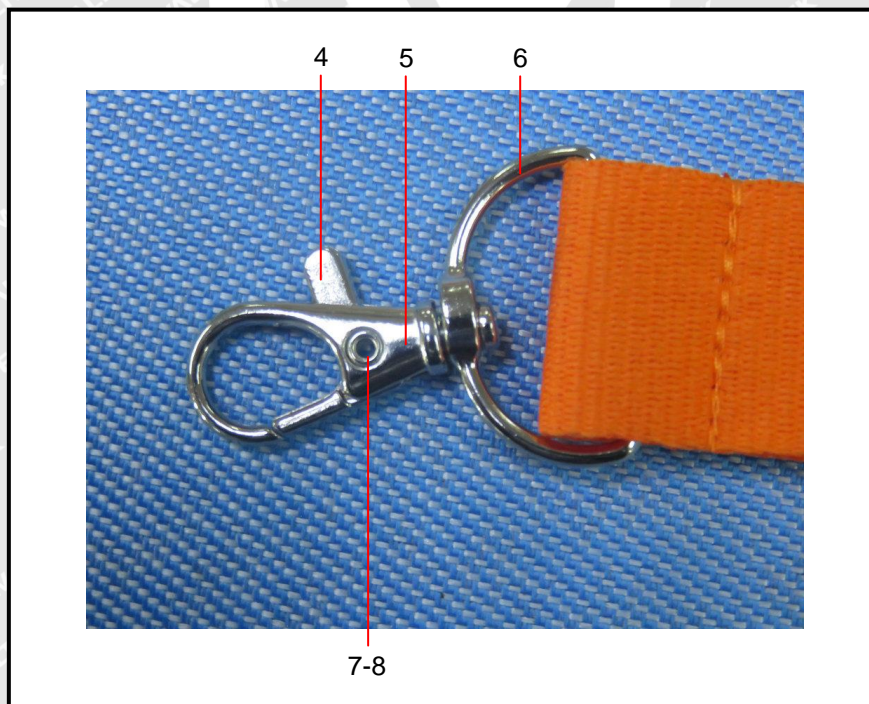
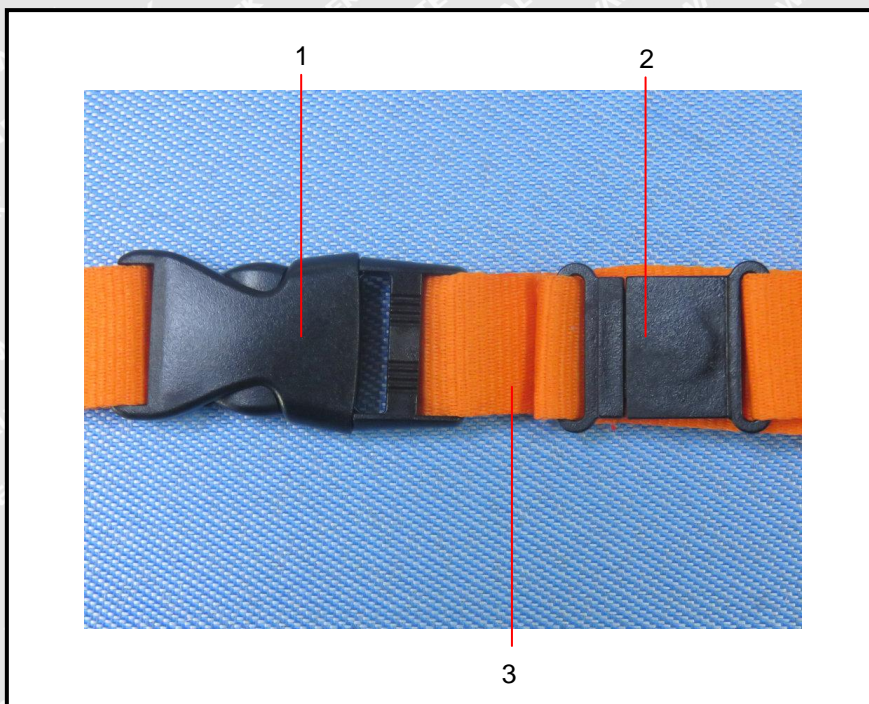




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Photographs of parts tested:



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