



TEST REPORT

Report No. : WTF22F04067405C
Applicant : Mid Ocean Brands B.V.
Address : 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan,
Kowloon, Hong Kong
Manufacturer : 116737
Sample Name : Pair of ankle socks in box M, Pair of ankle socks in box L,
Seasonal ankle socks in box M, Seasonal ankle socks in box L
Sample Model : MO6609, MO6610, CX1503, CX1504
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.
Test Conclusion : Refer to next page (s)
Date of Receipt sample : 2022-04-12
Testing period : 2022-04-12 to 2022-04-21
Date of Issue : 2022-04-21
Test Result : Refer to next page (s)

Prepared By:

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Signed for and on behalf of
Waltek Testing Group (Foshan) Co., Ltd.

Swing.Liang



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Sample photo:





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Test Results:

1) Lead (Pb)

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

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.1+No.2+No.3	No.4+No.5+No.6	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)	Limit (mg/kg)
		No.7+No.8	
Lead(Pb)	2	ND*	500
Conclusion	--	Pass	--

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than LOQ)
- (3) LOQ = Limit of quantitation
- (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.
- (5) "*" = Results are calculated by the minimum weight of mixed components.



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2) Cadmium (Cd)

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

Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.1+No.2+No.3	No.4+No.5+No.6
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	Pass

Test Item	LOQ (mg/kg)	Results (mg/kg)
		No.7+No.8
Cadmium(Cd)	2	ND*
Conclusion	--	Pass

Note:

(1) mg/kg = milligram per kilogram

(2) ND = Not Detected (lower than LOQ)

(3) LOQ = Limit of quantitation

(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

(5) “*” = Results are calculated by the minimum weight of mixed components.



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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.2+No.3
1	4-Aminobiphenyl	92-67-1	30	ND*
2	Benzidine	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



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No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)
				No.4+No.5+No.6
1	4-Aminobiphenyl	92-67-1	30	ND*
2	Benzidine	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



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No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)
				No.7+No.8
1	4-Aminobiphenyl	92-67-1	30	ND*
2	Benzidine	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-Toluyldiamine	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 lower than limit of quantitation
- mg/kg=Milligram per kilogram
- Limit of quantitation (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
- “*” = Results are calculated by the minimum weight of mixed components.



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4) Colour Fastness to Rubbing

Colour Fastness to Rubbing					
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)					
		No.2	No.3	No.4	Client's Limit
Length	Dry staining	4-5	4-5	4-5	2-3
	Wet staining	2-3	3	3-4	2-3
Width	Dry staining	4-5	4-5	4-5	2-3
	Wet staining	2-3	3	3-4	2-3
Conclusion		Pass	Pass	Pass	--

Colour Fastness to Rubbing				
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)				
		No.5+No.6	No.7+No.8	Client's Limit
Length	Dry staining	4-5*	4-5*	2-3
	Wet staining	3-4*	4*	2-3
Width	Dry staining	4-5*	4-5*	2-3
	Wet staining	3-4*	4*	2-3
Conclusion		Pass	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) "*" = As per applicant's requirement, the testing was conducted based on mixed components.

Description for Specimen:

- No.1: White fibrous socks
- No.2: Black fibrous socks
- No.3: Grey fibrous socks
- No.4: Red fibrous socks with multicolour pattern
- No.5: Multicolour fibrous pattern
- No.6: Green fibrous socks
- No.7: Multicolour fibrous pattern
- No.8: Dark green fibrous socks



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Photograph of parts tested:





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Remarks:

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

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