



TEST REPORT

Reference No...... : WTF20F12100598C
Applicant..... : Mid Ocean Brands B.V.
Address..... : 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer..... : 111903
Sample Name..... : Apron canvas with leather details
Model No...... : MO9237
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) 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).
3) Determination of Hexavalent Chromium(Cr(VI)) content according to Annex XVII Items 47 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 301/2014
4) Determination of Chlorinated Paraffins (C₁₀-C₁₃)(SCCP) content in the submitted sample in accordance with REACH regulation Annex XVII Entries 42 (EC) No. 1907/2006
5) As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.
Test Method..... : Please refer to next page (s)
Test Conclusion..... : Please refer to next page (s)
Date of Receipt sample : 2020-12-22
Date of Test..... : 2020-12-22 to 2020-12-29
Date of Issue..... : 2020-12-29
Test Result..... : Please refer to next page (s)

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 compiler and approver. If the report is not stamped with the accreditation recognized seal, it will only be used for scientific research, education, and internal quality control activities, and is not used for the purpose of issuing supporting data to the society.

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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	LOQ (mg/kg)	Results (mg/kg)				Limit (mg/kg)
		No.1	No.2	No.3+No.4	No.5	
Lead(Pb)	2	ND	ND	ND*	ND	500
Conclusion	--	Pass	Pass	Pass	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) 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.1	No.2
1	4-Aminobiphenyl	92-67-1	30	ND	ND
2	Benzidine	92-87-5	30	ND	ND
3	4-chloro-o-Toluidine	95-69-2	30	ND	ND
4	2-Naphthylamine	91-59-8	30	ND	ND
5	o-Aminoazotoluene	97-56-3	30	ND	ND
6	2-Amino-4-nitrotoluene	99-55-8	30	ND	ND
7	p-Chloroaniline	106-47-8	30	ND	ND
8	2,4-diaminoanisol	615-05-4	30	ND	ND
9	4,4'-Diaminodiphenylmethane	101-77-9	30	ND	ND
10	3,3'-Dichlorobenzidine	91-94-1	30	ND	ND
11	3,3'-Dimethoxybenzidine	119-90-4	30	ND	ND
12	3,3'-Dimethylbenzidine	119-93-7	30	ND	ND
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	30	ND	ND
14	p-cresinin	120-71-8	30	ND	ND
15	4,4'-Methylen-bis-(2-chloroaniline)	101-14-4	30	ND	ND
16	4,4'-Oxydianiline	101-80-4	30	ND	ND
17	4,4'-Thiodianiline	139-65-1	30	ND	ND
18	o-Toluidine	95-53-4	30	ND	ND
19	2,4-Toluylendiamine	95-80-7	30	ND	ND
20	2,4,5 – Trimethylaniline	137-17-7	30	ND	ND
21	o-anisidine	90-04-0	30	ND	ND
22	4-aminoazobenzene	60-09-3	30	ND	ND
23	2,4-Xylidin	95-68-1	30	ND	ND
24	2,6-Xylidin	87-62-7	30	ND	ND
Conclusion		--	--	Pass	Pass



No.	Amines Substances	CAS No.	Limit (mg/kg)	Result (mg/kg)
				No.5
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

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



3) Chromium (Cr(VI))

Test Method: As requested by client and with reference to ISO 17075-1:2017, analysis was performed by UV-Visible Spectrophotometry.

Test Item	LOQ (mg/kg)	Results (mg/kg)	Limit (mg/kg)
		No.2	
Hexavalent Chromium Cr(VI) content	2	ND	3
Conclusion	--	Pass	--

Note:

- (1) ND = Not Detected or less than limit of quantitation
- (2) mg/kg = milligram per kilogram= ppm
- (3) LOQ = Limit of quantitation
- (4) The above limit was quoted according to Annex XVII Items 47 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 301/2014 for Hexavalent Chromium Cr(VI) content in articles containing leather parts.

4) Chlorinated Paraffins (C10-C13) (SCCP)

Test Method: With reference to US EPA 3550C-2007, qualitative and semi-quantitative analysis was performed by GC-MS

Test Item	LOQ (mg/kg)	Results (mg/kg)	Limit (mg/kg)
		No.2	
Chlorinated Paraffins C ₁₀ -C ₁₃ (SCCP)	100	ND	10000
Conclusion	--	Pass	--

Note:

- mg/kg = ppm
- ND = Not detected or less than limit of quantitation
- LOQ = Limit of quantitation
- Limit of Chlorinated Paraffins C₁₀-C₁₃(SCCP) was quoted from REACH regulation Annex XVII Item 42 (EC) No.1907/2006.



5) Colour Fastness to Rubbing

Colour Fastness to Rubbing			
(ISO 105 X12: 2001/Cor 2002; Size of rubbing finger: 16mm diameter.)			
Length	No.1	No.5	Client's Limit
Dry staining	4-5	4-5	2-3
Wet staining	2-3	4	2-3
Width	--	--	--
Dry staining	4-5	4-5	2-3
Wet staining	2-3	4	2-3
Conclusion	Pass	Pass	--

Colour Fastness to Rubbing		
(ISO 11640: 2018)		
Dry, after 100 cycles	No.2	Client's Limit
Colour staining	4-5	2-3
Colour change	4-5	2-3
Wet, after 50 cycles	--	--
Colour staining	2-3	2-3
Colour change	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.

Test Specimen Description:

- No.1: Black main fabric
- No.2: Brown leather
- No.3: Silvery metal ring
- No.4: Silvery metal rivet
- No.5: Brown main fabric

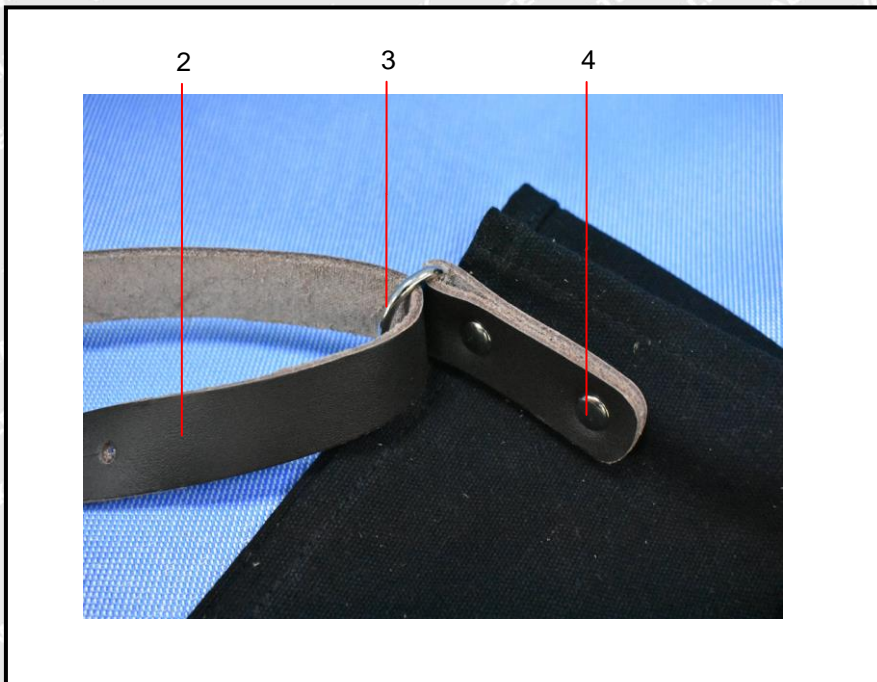


Sample photo:





Photographs of parts tested:





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

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