

TEST REPORT

Test Report # 23A-006565(A1) Date of Report Issue: June 6, 2023
Date of Sample Received: June 2, 2023 Pages: Page 1 of 12

CLIENT INFORMATION:

Company: Mid Ocean Brands B.V.
Address: 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong



SAMPLE INFORMATION:

Product Name: Reflective baseball cap
Style No.: MO6982-16 Labeled Age Grade: -
Order No.(PO No.): - Client Request Age Grade: -
Country of Origin: - Recommended Age Grade: -
Country of Distribution: - Tested Age Grade: -
Composition/Main Material: polyester
Supplier Name: 118518
Testing Period: 06/02/2023-06/06/2023

OVERALL RESULT:

PASS

Please refer to the following pages for test result summary and appropriate notes.

QIMA (HANGZHOU) TESTING CO., LTD.

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Test(s) marked with 'φ' was subcontracted to external laboratory.

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TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 27 Nickel Release
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 43 Azocolorants in Textiles
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)
PASS	Colour Fastness to Rubbing



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DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials

Test Method: CPSC-CH-E1001-08.3 (Metal) and/or CPSC-CH-E1002-08.3 (Non-Metal)
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	2+6	3	5+7+8	9+10	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	ND	ND	ND	ND	500
Conclusion	PASS	PASS	PASS	PASS	PASS	

Specimen No.	11	---	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	---	---	---	---	500
Conclusion	PASS	---	---	---	---	

Note:
 mg/kg = Milligrams per kilogram
 LT = Less than
 ND = Not detected (Reporting Limit = 15 mg/kg)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

Data Consolidation Reference:

Specimen No.	Transferred from		Date of Issue
	Report No.	Specimen No.	
2+6	23A-005490(A1)	2+6	May 29, 2023
3	23A-005490(A1)	3	May 29, 2023



DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials

Test Method: ASTM F963-17 Clause 8.3.1
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	2+6	3	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	ND	---	---	---	100
Conclusion	PASS	PASS	---	---	---	

Note:
 mg/kg = Milligrams per kilogram
 LT = Less than
 ND = Not detected (Reporting Limit = 15mg/kg)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

Data Consolidation Reference:

Specimen No.	Transferred from		Date of Issue
	Report No.	Specimen No.	
2+6	23A-005490(A1)	2+6	May 29, 2023
3	23A-005490(A1)	3	May 29, 2023



DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 27 Nickel Release

Test Method: EN 12472:2020&EN 1811:2011+A1:2015¹/ EN 1811:2011+A1:2015²
 Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Direct and Prolonged Contact with Skin

Specimen No.	4			Limit
	Trial 1	Trial 2	Trial 3	
Test Item	Result	Result	Result	
Size of Tested Sample Area (cm ²)	1	1	1	
Volume of Test solution Used (mL)	1	1	1	
Nickel result (µg/cm ² /week) ¹	ND	ND	ND	0.5*
Nickel result (µg/cm ² /week) ²	ND	ND	ND	
Conclusion	PASS			

Note:

cm² = Square centimeters

µg/cm²/week = Micrograms per square centimeter per week

mL = Millilitres

LT = Less than

ND = Not detected (Reporting Limit = 0.1 µg/cm²/week)

*According to EN 1811:2011+A1:2015 Section 9.2.2, the compliance shall be evaluated with the combined measurement uncertainty, an article is:

Pass and permitted to be placed on the market when the nickel release value is less than 0.88

µg/cm²/week;

Fail when the nickel release value is greater than or equal to 0.88 µg/cm²/week.

Data Consolidation Reference:

Specimen No.	Transferred from		Date of Issue
	Report No.	Specimen No.	
4	23A-005490(A1)	4	May 29, 2023



DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 43 Azocolorants in Textiles

Test Method: EN ISO 14362-1:2017, EN ISO 14362-3:2017
 Analytical Method: Gas Chromatography with Mass Spectrometry, Liquid Chromatography with Diode Array Detection / Liquid Chromatography with Mass Spectrometry

Specimen No.		1+5	---	---	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
4-aminobiphenyl	92-67-1	ND	---	---	---	30
Benidine	92-87-5	ND	---	---	---	30
4-chloro-o-toluidine	95-69-2	ND	---	---	---	30
2-naphtylamine	91-59-8	ND	---	---	---	30
o-Aminoazotoluene	97-56-3	ND	---	---	---	30
5-nitro-o-toluidine	99-55-8	ND	---	---	---	30
4-chloroaniline	106-47-8	ND	---	---	---	30
2,4-diaminoanisole	615-05-4	ND	---	---	---	30
4,4'-methylenedianiline	101-77-9	ND	---	---	---	30
3,3'-dichlorobenzidine	91-94-1	ND	---	---	---	30
o-dianisidine	119-90-4	ND	---	---	---	30
3,3'-dimethylbenzidine	119-93-7	ND	---	---	---	30
4,4'-methylenedi-o-toluidine	838-88-0	ND	---	---	---	30
p-cresidine	120-71-8	ND	---	---	---	30
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	ND	---	---	---	30
4,4'-oxydianiline	101-80-4	ND	---	---	---	30
4,4'-thiodianiline	139-65-1	ND	---	---	---	30
o-toluidine	95-53-4	ND	---	---	---	30
2,4-diaminotoluene	95-80-7	ND	---	---	---	30
2,4,5-trimethylaniline	137-17-7	ND	---	---	---	30
2-methoxyaniline	90-04-0	ND	---	---	---	30
4-aminoazobenzene	60-09-3	ND	---	---	---	30
Conclusion		PASS	---	---	---	



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Note:

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 5 mg/kg)

Composite results are based on total mass of the composite test portion.

Remark:

In the case of levels per amine component less than or equal to 30 mg/kg, according to the analysis as carried out, azo colorants which can release one or more of certain listed amines by cleavage of their azo group/s were not detected in the commodity submitted.

Data Consolidation Reference:

Specimen No.	Transferred from		Date of Issue
	Report No.	Specimen No.	
1+5	23A-005490(A1)	1+5	May 29, 2023



DETAILED RESULTS:

Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)

Test Method: CPSC-CH-C1001-09.4
 Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		2+6	---	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	---	---	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	---	---	1000
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	---	---	1000
Diisobutyl phthalate (DIBP)	84-69-5	ND	---	---	1000
Sum of DBP, BBP, DEHP, DIBP		ND	---	---	1000
Di-n-octyl phthalate (DnOP)	117-84-0	ND	---	---	
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	---	---	
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	---	---	
Sum of DnOP, DINP, DIDP		ND	---	---	1000
Conclusion		PASS	---	---	

Note:
 mg/kg (Milligrams per kilogram) = ppm (Parts per million) = 0.0001 % w/w (Percent by weight)
 LT = Less than
 ND = Not detected (Reporting Limit = 150 mg/kg)
 Composite results are based on specimen of least mass resulting in highest potential concentration.

Data Consolidation Reference:

Specimen No.	Transferred from		Date of Issue
	Report No.	Specimen No.	
2+6	23A-005490(A1)	2+6	May 29, 2023



DETAILED RESULTS:

Colour Fastness to Rubbing

Test Method: ISO 105-X12: 2016, Size of rubbing finger: 16mm dia.

Specimen No.	12-Silvery fabric	12-Sweatband	---	---	---	Client's requirement
Items	Result (Grade)	Result (Grade)	Result (Grade)	Result (Grade)	Result (Grade)	
Dry staining	4-5	4-5	---	---	---	Min. 2-3
Wet staining	4-5	4-5	---	---	---	Min. 2-3
Conclusion	PASS	PASS	---	---	---	-

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good.

Data Consolidation Reference:

Specimen No.	Transferred from		Date of Issue
	Report No.	Specimen No.	
12	23A-005490(A1)	7	May 29, 2023



SPECIMEN DESCRIPTION:

Specimen No.	Specimen Description	Location
1	Silvery coated grey textile	Main body
2	White plastic	Brim filler
3	Silvery metal	Top button
4	Silvery metal	Top button base
5	Grey textile	Sweatband
6	Grey plastic	Velcro hook
7	White non-woven textile	Sweatband inside
8	White non-woven textile	Sweatband base
9	White textile with glue	Front surround lining
10	Grey textile	Velcro loop
11	White sponge	Sweatband filler
12	Silvery cap	Finished product



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SAMPLE PHOTO:



SAMPLE PHOTO:



-End Report-

