TEST REPORT

Report No.	:	WTF23F10227049A2C
Applicant	:	Mid Ocean Brands B.V.
Address	:	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	:	106461
Sample Name	:	Cotton oven glove
Sample Model	:	MO7244
Test Requested	:	Refer to next page (s)
Test Conclusion	:	**Pass** (Please refer to next pages for details)
Date of Receipt sample	:	2023-10-24 & 2023-11-10 & 2023-12-18
Testing period	:	2023-10-24 to 2023-11-16 & 2023-12-18 to 2023-12-22
Date of Issue	:	2023-12-22
Test Result	:	Refer to next page (s)
Note	:	As specified by client, only test the designated sample.

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

Swing Liang

Swing.Liang

Summary

Item No.	Test Requested	Test Conclusion
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	**Pass**
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	**Pass**
3	Determination of specified Phthalates content according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & No. 2018/2005	**Pass**
4	As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.	**Pass**

Sample photo:

 1	 2
 3	/

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	
Lead(Pb)	2	ND	ND*	500
Conclusion	--	**Pass**	**Pass**	--

Test Item	LOQ (mg/kg)	Results (mg/kg)	Limit (mg/kg)
		No.5+No.6+No.7	
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.

(6) The test sample of specimen No.3 is received on the date of 2023-10-24.

(7) The test sample of specimen No.1 is received on the date of 2023-12-18.

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
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) The test sample of specimen No.1 is received on the date of 2023-12-18.

3) Phthalates

Test Method: With reference to EN14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

Test Items	LOQ (%)	Results (%)	Limit (%)
		No.1	
Benzyl butyl phthalate (BBP)	0.005	ND	sum of four phthalates < 0.1
Di (2-ethyl hexyl)- phthalate (DEHP)	0.005	ND	
Dibutyl phthalate (DBP)	0.005	ND	
Diisobutyl phthalate (DIBP)	0.005	ND	
Diisodecyl phthalate (DIDP)	0.01	ND	sum of three phthalates < 0.1
Diisononyl phthalate (DINP)	0.01	ND	
Di-n-octyl phthalate (DNOP)	0.005	ND	
Conclusion	--	**Pass**	--

Note:

DBP= Dibutyl phthalate
BBP= Benzyl butyl phthalate
DEHP= Bis-(2-ethylhexyl)- phthalate
DINP= Di-isononyl phthalate
DNOP= Di-n-octyl phthalate
DIDP= Di-isodecyl phthalate
DIBP= Diisobutyl phthalate

(1) % = percentage by weight
(2) ND = Not Detected or lower than limit of quantitation
(3) LOQ = Limit of quantitation
(4) “<” = less than
(5) The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009 & No. 2018/2005 (formerly known as Directive 2005/84/EC) for phthalate content in toys and child care articles.
(6) The test sample of specimen No.1 is received on the date of 2023-12-18.

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**	**No.5**	**Client's Limit**
Length	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	3	3	2-3	2-3	2-3
Width	Dry staining	4-5	4-5	4-5	4-5	2-3
	Wet staining	3	3	2-3	2-3	2-3
Conclusion		**Pass**	**Pass**	**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) The test sample of specimen No.3 is received on the date of 2023-11-10.

Description for Specimen:

Specimen No.	Specimen Description
1	Black main sponge
2	Red main fabric
3	Black main fabric
4	Blue main fabric
5	Green main fabric
6	White main fabric
7	White cotton

Photograph of parts tested:

Remarks:

1. The results shown in this test report refer only to the sample(s) tested;
2. This test report cannot be reproduced, except in full, without prior written permission of the company;
3. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver;
4. The Applicant name and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which Waltek hasn't verified;
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6. The sample material information (Model No. information) is provided by client, not verified by test laboratory. The samples of reference Model No. are not tested. Test laboratory not responsible for the accuracy, appropriateness, completeness and authenticity of the information provided by client.

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

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TEST REPORT

Number: GZHT91224600

Applicant: MID OCEAN BRANDS B.V.
7/F, KINGS TOWER, 111 KING LAM STREET,
CHEUNG SHA WAN, KOWLOON, HONG KONG
Attn: DEREK HUI

Date: Nov 24, 2023

Sample Description:
Five (5) groups of submitted samples said to be:
(A) Eight and a half (8.5) pairs of Red oven gloves.
(B) One (1) pair of Green oven gloves.
(C) One (1) pair of Blue oven gloves.
(D) One (1) pair of Black oven gloves.
(E) One (1) pair of White oven gloves.

Standard	:	BS EN ISO 21420:2020 / ISO 21420:2020 EN 407:2020
Size	:	--
Ref.	:	Manufacturer: 106461 Style No.: MO7244 Cotton oven glove
Goods Exported to	:	Europe
Date Received/Date Test Started:		Nov 03, 2023
Date Final Information Confirmed/ Date Payment Received:		Nov 24, 2023

Test Result Please Refer To Attached Page(S).

Should you have any query on this report, you may contact at gzfootwear@intertek.com

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Tests Conducted (As Requested By The Applicant)

1 Cleaning (BS EN ISO 21420:2020 / ISO 21420:2020, 4.3)

As Care Instructions Were Provided, The Relevant Performance-related Tests Of This Document And The Specific Standards Were Performed On The Gloves, Before And After They Had Been Subjected To The Maximum Recommended Number Of Cleaning Cycles.

(A)	
Wash Condition:	
Washing Standard:	ISO 6330:2012
Machine:	Type A
Reagent:	Reference Detergent 3
Washing Procedure:	Wash By Hand Maximum Washing Temperature 40℃
Bleaching Procedure:	Do Not Bleach
Drying Procedure:	Line Dying
Ironing Procedure:	Iron At Maximum Sole-Plate Temperature Of 150℃
Professional Textile Care Procedure:	Do Not Dry Clean
Number Of Cycles:	25

2 Glove Design And Construction - General (BS EN ISO 21420:2020 / ISO 21420:2020, 4.1)

SAMPLE (A)			
Requirement	**Yes**	**No**	**N/A**
The Protector Shall Be Designed And Manufactured So That In The Foreseeable Conditions Of Use, The User Can Perform The Activity As Normally As Possible With An Appropriate Protection. This Document Along With The Appropriate Specific Standards Shall Be Used To Verify This Adequation.	√		
If Required In The Relevant Specific Standard (For Example ISO 16073:2011, 5.7.3), The Glove Shall Be Designed To Minimize The Donning And Doffing Time.	√		
For Reusable Multilayer Protector, The Gloves Shall Be Able To Doffed Without Separation Of The Layers Of The Fingers. When The Protector Construction Includes Seams, The Material And Strength Of The Seams Shall Be Such That The Overall Performance Of The Protector Is Not Significantly Decreased As Required In The Relevant Specific Standards.	√		

3 Glove Length (BS EN ISO 21420:2020 / ISO 21420:2020, 6.1)

(A)
Specimen 1 Glove Length: 275 mm
Specimen 2 Glove Length: 280 mm
Specimen 3 Glove Length: 281 mm

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Tests Conducted (As Requested By The Applicant)

4 Contact Heat (EN 407:2020, 6.3 & EN ISO 12127-1:2015)

(A)

Before Washing

Test Area:	Palm Of The Glove	
Contact Temperature		Threshold Time
350℃	Specimen 1	36 seconds
	Specimen 2	42 seconds
	Specimen 3	45 seconds

Observation (*): Innermost Layers Of The Glove Showed No Sign Of Melting And Holing.

Contact Temperature		Threshold Time
500℃	Specimen 1	12 seconds
	Specimen 2	14 seconds
	Specimen 3	12 seconds

Observation (*): Innermost Layers Of The Glove Showed Sign Of Melting And Holing.

After Washing

Test Area:	Palm Of The Glove	
Contact Temperature		Threshold Time
350℃	Specimen 1	43 seconds
	Specimen 2	37 seconds
	Specimen 3	42 seconds

Observation (*): Innermost Layers Of The Glove Showed No Sign Of Melting And Holing.

Contact Temperature		Threshold Time
500℃	Specimen 1	14 seconds
	Specimen 2	16 seconds
	Specimen 3	15 seconds

Observation (*): Innermost Layers Of The Glove Showed Sign Of Melting And Holing.

Performance Level (*1 & *2): 2

Remark: * = Innermost Layers Of The Glove Shall Show No Sign Of Melting And Holing.
*1 = The Performance Level Based On The Lowest Of The Single Value.
*2 = For Contact Heat Performance Levels Of 3 Or 4, The Limited Flame Spread Test Shall Be Performed. The Product Shall Reach At Least Level 3 In The Limited Flame Spread Test, Otherwise The Maximum Contact Heat Performance That Shall Be Reported Is Level 2.

Performance Level	Contact Temperature Tc (℃)	Threshold Time t_t (s)
1	100	≥ 15
2	250	≥ 15
3	350	≥ 15
4	500	≥ 15

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5 Tear Resistance (EN 407:2020, 6.8)

Before Washing		Requirement	Pass/Fail
Test Area:	Outer Layer Of Glove Palm		
(A) Specimen 1:	31 N	⩾ 10 N	Pass
(B) Specimen 2:	31 N	⩾ 10 N	Pass
(B) Specimen 3:	37 N	⩾ 10 N	Pass
(B) Specimen 4:	34 N	⩾ 10 N	Pass

After Washing		Requirement	Pass/Fail
Test Area:	Outer Layer Of Glove Palm		
(A) Specimen 1:	33 N	⩾ 10 N	Pass
(A) Specimen 2:	28 N	⩾ 10 N	Pass
(A) Specimen 3:	23 N	⩾ 10 N	Pass
(A) Specimen 4:	26 N	⩾ 10 N	Pass

6 pH Value

AS Per BS EN ISO 21420:2020, 4.2, With Reference To BS EN ISO 3071:2020 For Textile, Potassium Chloride (KCI) Solution Extracted, pH Value Was Measured By pH Meter.

Tested Components	Results	Requirement
(1)	7.1	*
(2)	6.9	*
(3)	7.0	*
(4)	7.0	*
(5)	7.0	*
(6)	7.1	*
(7)	8.2	*
(8)	6.8	*

Temperature Of The Extracting Solution: 23.9℃
pH Of The Extracting Solution: 5.89

Remark: * = The pH Value Shall Be Greater Than 3.5 And Less Than 9.5

Tested Components: Please See Component List In The Last Section Of This Report

Conclusion:

Standard	Result
BS EN ISO 21420:2020 For pH Value	Pass

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7 Azo Colourants Content

With Reference To Test Method: Textile Method (ISO 14362-1:2017)

Amines Content Was Determined By Gas Chromatography-Mass Spectrometry (GC-MS)

	Forbidden Amine	CAS No.	Results (mg/kg)			
			Method T			
			(2)	(3)	(4)	(5)
1.	4-Aminodiphenyl	92-67-1	<5	<5	<5	<5
2.	Benzidine	92-87-5	<5	<5	<5	<5
3.	4-Chloro-o-toluidine	95-69-2	<5	<5	<5	<5
4.	2-Naphthylamine	91-59-8	<5	<5	<5	<5
5.	o-Aminoazotoluene	97-56-3	<5	<5	<5	<5
6.	2-Amino-4-nitrotoluene	99-55-8	<5	<5	<5	<5
7.	p-Chloroaniline	106-47-8	<5	<5	<5	<5
8.	2,4-Diaminoanisole	615-05-4	<5	<5	<5	<5
9.	4,4'-Diaminodiphenylmethane	101-77-9	<5	<5	<5	<5
10.	3,3'-Dichlorobenzidine	91-94-1	<5	<5	<5	<5
11.	3,3'-Dimethoxybenzidine	119-90-4	<5	<5	<5	<5
12.	3,3'-Dimethylbenzidine	119-93-7	<5	<5	<5	<5
13.	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	<5	<5	<5	<5
14.	p-Cresidine	120-71-8	<5	<5	<5	<5
15.	4,4'-Methylene-bis(2-chloroaniline)	101-14-4	<5	<5	<5	<5
16.	4,4'-Oxydianiline	101-80-4	<5	<5	<5	<5
17.	4,4'-Thiodianiline	139-65-1	<5	<5	<5	<5
18.	o-Toluidine	95-53-4	<5	<5	<5	<5
19.	2,4-Toluylenediamine	95-80-7	<5	<5	<5	<5
20.	2,4,5-Trimethylaniline	137-17-7	<5	<5	<5	<5
21.	o-Anisidine	90-04-0	<5	<5	<5	<5
22.	4-Aminoazobenzene	60-09-3	<5	<5	<5	<5

Remark: Requirement = 30 mg/kg
Reporting Limit = 5 mg/kg
Method T: Direct Buffer Extraction As Per ISO 14362-1:2017 Section 10.2

Tested Components: Please See Component List In The Last Section Of This Report

Conclusion:

Standard	Result
BS EN ISO 21420:2020 Protective Gloves - General Requirements And Test Methods - Azo Colourants Content	Pass

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8 Polycyclic Aromatic Hydrocarbons (PAH) Content:

As Per ISO 16190:2021, By Solvent Extraction And Determined By Gas Chromatography - Mass Spectrometry (GC/MS)

No.	Tested Compound	CAS No.	Results (mg/kg)	Requirement (mg/kg)
1.	Benzo[a]pyrene (BaP)	50-32-8	ND	1.0
2.	Benzo[e]pyrene (BeP)	192-97-2	ND	1.0
3.	Benzo[a]anthracene (BaA)	56-55-3	ND	1.0
4.	Chrysene (CHR)	218-01-9	ND	1.0
5.	Benzo[b]fluoranthene (BbFA)	205-99-2	ND	1.0
6.	Benzo[j]fluoranthene (BjFA)	205-82-3	ND	1.0
7.	Benzo[k]fluoranthene (BkFA)	207-08-9	ND	1.0
8.	Dibenzo[a,h]anthracene (DBAhA)	53-70-3	ND	1.0

Remark: ND = Not Detected
Detection Limit = 0.5 mg/kg

Tested Component: Black Rubber Foam (Palm Of Glove)

Conclusion:

Standard	Result
BS EN ISO 21420:2020 Protective Gloves - General Requirements And Test Methods - Polycyclic Aromatic Hydrocarbons (PAH) Content	Pass

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Component List:
(1) Black Rubber Foam (Palm Of Glove, Sample A/B/C/D/E).
(2) Red Cotton (Back, Cuff & Binding Of Glove, Sample A).
(3) Green Cotton (Back, Cuff & Binding Of Glove, Sample B).
(4) Blue Cotton (Back, Cuff & Binding Of Glove, Sample C).
(5) Black Cotton (Back, Cuff & Binding Of Glove, Sample D).
(6) White Cotton (Back, Cuff & Binding Of Glove, Sample E).
(7) White Non-Woven Fabric (Lining Of Glove, Sample A/B/C/D/E).
(8) White Filling (Interlayer Padding Of Glove, Sample A/B/C/D/E).

/ andygtliu

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End Of Report

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Remark:
1. As Requested by the Applicant, For Details Refer to Attached Page (S).
2. All the tested item are tested under the standard condition.
3. The report is valid with commission test only for the test samples in the case of delivering samples by clients.

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