

Test Report

Report No. : AGC05443231224-001

- **SAMPLE NAME** : Lanyard in RPET
- MODEL NAME : MO6100
- APPLICANT : MID OCEAN BRANDS B.V
- **STANDARD(S)** : Please refer to the following page(s).
- **DATE OF ISSUE** : Dec. 28, 2023

Attestation of Global Complaince (Shenzhen) Std & Tech Co., Ltd.







MID OCEAN BRANDS B.V :

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Report on the submitted sample(s) said to be:

Sample Name	:	Lanyard in RPET
Model	:	MO6100
Vendor code	:	115628
Country of Origin	:	CHINA
Country of Destination	:	EUROPE
Sample Received Date	:	Dec. 20, 2023
Testing Period	:	Dec. 20, 2023 to Dec. 28, 2023
Test Requested	:	Selected test(s) as requested by client.

Test Requested:

Conclusion

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63 - Lead(Pb) Content	Pass
Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23 -Cadmium(Cd) Content	Pass
Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52 - Phthalates Content	Pass
Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50 - Polycyclic-aromatic Hydrocarbons (PAHs) Content	Pass
Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 43 - Aromatic Amines Azodyes (AZO) Content	Pass
Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 27 - Nickel Release	Pass
- Colour fastness to rubbing	Pass

Approved by : Jessie ling

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Technical Director



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Report Version	Issued Date	Valid Version	Notes
/	Dec. 28, 2023	Valid	Initial release



The photo of the sample



The photo of AGC05443231224-001 is for use only with the original report.

Test Point Description

Test point	Test point description
1-1	Grey webbing
1-2	Black plastic buckle
1-3	Metal D-buckle
1-4	Metal buckle



Note: N.D.=Not Detected (less than method detection limit), MDL = Method Detection Limit, 1mg/kg=0.0001%

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63

- Lead(Pb) Content

Test Methods and Equipment: IEC 62321-5:2013; ICP-OES

Test Item(s)	Unit Limit		MDI	Test Result(s)	
Test Item(s)	Unit	Liiiiit	MDL	1-1	1-2
Lead(Pb)	mg/kg	500	10	N.D.	43
Co	Conformity	Conformity			

Test Item(s)	Unit Limit	MDI	Test Result(s)		
Test Item(s)	t Item(s) Unit Limit		MDL	1-3	1-4
Lead(Pb)	mg/kg	500	10	15	21
Co	Conformity	Conformity			

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23

-Cadmium(Cd) Content

Test Methods and Equipment: IEC 62321-5:2013; ICP-OES

Test Item(s)	Unit	Limit	MDL	Test Result(s)		
Test ttem(s)				1-2		
Cadmium(Cd)	mg/kg	100	10	N.D.		
Co	Conclusion					

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52

- Phthalates Content

Test Methods and Equipment: IEC 62321-8:2017; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s) 1-2
Diisobutyl phthalate (DIBP) CAS:84-69-5	%	0.1	0.005	N.D.
Dibutyl phthalate (DBP) CAS:84-74-2	%	0.1	0.005	0.007
Butylbenzyl phthalate (BBP) CAS:85-68-7	%	0.1	0.005	N.D.
Di-(2-ethylhexyl) Phthalate (DEHP) CAS:117-81-7	%	0.1	0.005	0.019
Di-n-octyl phthalate (DNOP) CAS:117-84-0	%	/	0.005	N.D.
Di-isononyl phthalate (DINP) CAS:28553-12-0, 68515-48-0	%	/	0.005	0.020
Di-isodecyl phthalate(DIDP) CAS:26761-40-0, 68515-49-1	%	/	0.005	N.D.



Test Item(s)	Unit	Limit	MDL	Test Result(s) 1-2
Sum of DIBP +DBP+BBP+DEHP	%	0.1	/	0.026
Sum of DNOP+DINP+DIDP	%	0.1	/	0.020
Со	Conformity			

Limit requirements of Phthalates

Toys and childcare articles	Each of DEHP, DBP, BBP, DIBP is less than 0.1% or the sum of DEHP+DBP+BBP+DIBP is less than 0.1%
Toys and childcare articles which can be placed in the mouth by children	The sum of DINP+DIDP+DNOP is less than 0.1%

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50

- Polycyclic-aromatic Hydrocarbons (PAHs) Content

Test Methods and Equipment: Afps GS 2019:01 PAK; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s) 1-2
Benzo[a]pyrene(BaP)	mg/kg	1	0.1	N.D.
Benzo[e]pyrene(BeP)	mg/kg	1	0.1	N.D.
Benzo[a]anthracene(BaA)	mg/kg	1	0.1	N.D.
Benzo[b]fluoranthene(BbF)	mg/kg	1	0.1	N.D.
Benzo[j]fluoranthene(BjFA)	mg/kg	1	0.1	N.D.
Benzo[k]fluoranthene(BkF)	mg/kg	1	0.1	N.D.
Chrysene(CHR)	mg/kg	1	0.1	N.D.
Dibenzo[a,h]anthracene(DBA)	mg/kg	1	0.1	N.D.
Co	onclusion			Conformity

Limit requirements of Polycyclic-aromatic Hydrocarbons (PAHs) (Unit: mg/kg)

Items	CAS No.	Extender oils or used for the production of tyres or parts of tyres	Any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity	Toys, including activity toys, and childcare articles, any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity
Benzo[a]pyrene(BaP)	50-32-8	≤ 1	≤ 1	≤ 0.5
Benzo[e]pyrene(BeP)	192-97-2	/	≤ 1	≤ 0.5
Benzo[a]anthracene(BaA)	56-55-3	/	≤ 1	≤ 0.5



Items	CAS No.	Extender oils or used for the production of tyres or parts of tyres	Any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity	Toys, including activity toys, and childcare articles, any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity
Benzo[b]fluoranthene(BbF)	205-99-2	/	≤ 1	≤ 0.5
Benzo[j]fluoranthene(BjFA)	205-82-3	/	≤ 1	≤ 0.5
Benzo[k]fluoranthene(BkF)	207-08-9	/	≤ 1	≤ 0.5
Chrysene(CHR)	218-01-9	/	≤ 1	≤ 0.5
Dibenzo[a,h]anthracene(DBA)	53-70-3	/	≤ 1	≤ 0.5
Sum of BaP+ BeP+ BaA+ BbF+ BjFA+ BkF+ CHR+ DBA	/	≤ 10	/	/

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 43

- Aromatic Amines Azodyes (AZO) Content

Test Methods and Equipment: EN ISO 14362-1:2017; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s) 1-1
4-Aminobiphenyl CAS:92-67-1	mg/kg	30	5	N.D.
Benzidine CAS:92-87-5	mg/kg	30	5	N.D.
4-Chloro-o-toluidine CAS:95-69-2	mg/kg	30	5	N.D.
2-Naphthylamine CAS:91-59-8	mg/kg	30	5	N.D.
o-Aminoazotoluene CAS:97-56-3	mg/kg	30	5	N.D.
5-Nitro-o-toluidine CAS:99-55-8	mg/kg	30	5	N.D.
p-Chloroaniline CAS:106-47-8	mg/kg	30	5	N.D.
4-Methoxy-m-phenylenediamine CAS:615-05-4	mg/kg	30	5	N.D.
4,4'-Diaminodiphenylmethane CAS:101-77-9	mg/kg	30	5	N.D.
3,3'-Dichlorobenzidine CAS:91-94-1	mg/kg	30	5	N.D.
3,3'-Dimethoxybenzidine CAS:119-90-4	mg/kg	30	5	N.D.
3,3'-Dimethybenzidine CAS:119-93-7	mg/kg	30	5	N.D.



Test Item(s)	Unit	Limit	MDL	Test Result(s) 1-1
4,4'-Methylenedi-o-toluidine CAS:838-88-0	mg/kg	30	5	N.D.
p-Cresidine CAS:120-71-8	mg/kg	30	5	N.D.
4,4'-Methylenebis[2-chloroaniline] CAS:101-14-4	mg/kg	30	5	N.D.
4,4'-Oxydianiline CAS:101-80-4	mg/kg	30	5	N.D.
4,4'-Thiodianiline CAS:139-65-1	mg/kg	30	5	N.D.
2-Aminotoluene CAS:95-53-4	mg/kg	30	5	N.D.
2,4-Toluylendiamine CAS:95-80-7	mg/kg	30	5	N.D.
2,4,5-Trimethylaniline CAS:137-17-7	mg/kg	30	5	N.D.
o-Anisidine CAS:90-04-0	mg/kg	30	5	N.D.
4-Aminoazobenzene CAS:60-09-3	mg/kg	30	5	N.D.
Со	Conformity			

Note: 4-aminoazobenzene: The EN ISO 14362-1:2017 or ISO 17234-1:2020 methods will enable further cleavage of 4aminoazobenzene to aniline and / or 1,4-phenylenediamine. If aniline and / or 1,4-phenylenediamine are detected, 4aminoazobenzene shall be further determined by EN ISO 14362-3:2017 or ISO 17234-2:2011.

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 27

- Nickel Release

Test Methods and Equipment: EN 12472:2020 & EN 1811:2023; ICP-OES

Test Point(s)	Parallel Sample	Unit	Limit	MDL	Test Result(s) Nickel Release	Conclusion
	А	$\mu g \cdot cm^{-2} \cdot week^{-1}$	0.5	0.05	N.D.	
1-3	В	$\mu g \cdot cm^{-2} \cdot week^{-1}$	0.5	0.05	N.D.	Conformity
	С	$\mu g \cdot cm^{-2} \cdot week^{-1}$	0.5	0.05	N.D.	
	А	$\mu g \cdot cm^{-2} \cdot week^{-1}$	0.5	0.05	N.D.	
1-4	В	$\mu g \cdot cm^{-2} \cdot week^{-1}$	0.5	0.05	N.D.	Conformity
	С	$\mu g \cdot cm^{-2} \cdot week^{-1}$	0.5	0.05	N.D.	

Limit requirements of Nickel Release

Nickel Release					
Type of sample	Pass	Fail			
Article with Nickel release limit of 0.5µg/cm ² /week (Non-body piercing)	$<0.88\mu g \cdot cm^{-2} \cdot week^{-1}$	$\geq 0.88 \mu g \cdot cm^{-2} \cdot week^{-1}$			
Article with Nickel release limit of 0.2µg/cm ² /week (Body piercing)	$<0.35\mu g \cdot cm^{-2} \cdot week^{-1}$	$\geq 0.35 \mu g \cdot cm^{-2} \cdot week^{-1}$			



- Colour fastness to rubbing

Test Method: ISO 105-X12:2016

Rubbing finger: Cylinder

The time of conditioning as well as the atmospheric conditions during testing: 21.0 °C, 65 %R.H., 4 hrs **The percentage of soak of wet rubbing cloth:** 95%~100%

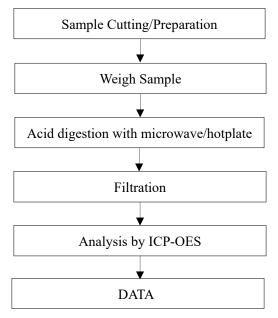
The long direction of the specimen: Endwise/ Crossrange

	Test I		
Test point	Colour fastness to	Conclusion	
	Dry rubbing	Wet rubbing	
1-1	4-5	4-5	Conformity
Limit (Client's Requirement)	≥2-3	≥2-3	/

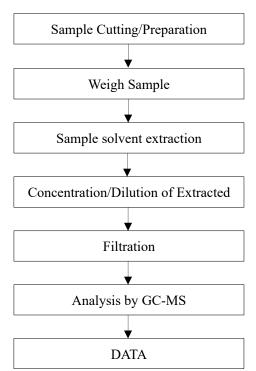
Note:

Colour Fastness Grade: Grade 5 = No Colour Change (Best Grade) Grade 1 = Colour Change Seriously (Bad Grade) 9 grades in gray sample card: 5, 4-5, 4, 3-4, 3, 2-3, 2, 1-2, 1.



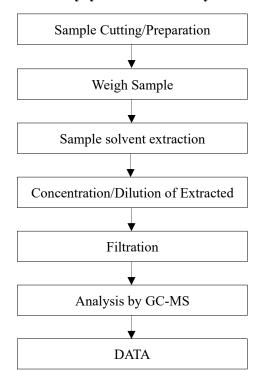






Test Flow Chart of Phthalates

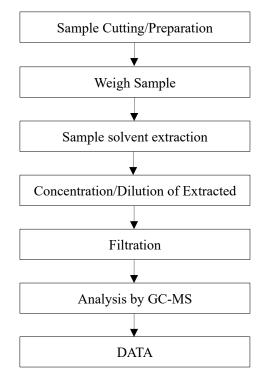




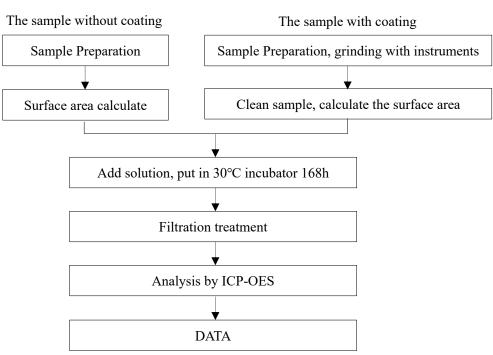
Test Flow Chart of Polycyclic-aromatic Hydrocarbons (PAHs)



Test Flow Chart of AZO







Test Flow Chart of Nickel Release



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8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

*** End of Report ***