



# TEST REPORT

**Report No.** ..... : WTF25F06167117C  
**Job No.** ..... : FSW2506261279CJ  
**Applicant** ..... : Mid Ocean Brands B.V.  
**Address** ..... : Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha  
Wan, Kowloon, Hong Kong.  
**Manufacturer** ..... : 114276  
**Sample Name** ..... : Solar hand crank radio torch  
**Sample Model** ..... : MO2746  
**Test Requested** ..... : Refer to next page (s)  
**Test Method** ..... : Refer to next page (s)  
**Test Conclusion** ..... : **Pass** (Please refer to next pages for details)  
**Date of Receipt Sample** ..... : 2025-06-26 & 2025-07-17  
**Testing Period** ..... : 2025-06-26 to 2025-07-22  
**Date of Issue** ..... : 2025-07-22  
**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*



WTF25F06167117C

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### Summary

Item No.	Test Requested	Test Conclusion
1	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).	Pass
2	Determination of specified Polycyclic Aromatic Hydrocarbons (PAHs) content in submitted sample in accordance with Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013.	Pass
3	As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.	Pass

### Sample photo:





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**Test Results:****1) 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.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-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*
--	<b>Conclusion</b>	--	--	<b>Pass</b>



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**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.
- "\*" = As per applicant's requirement, the testing was conducted based on mixed components by weight in equal ratio, results are calculated by the minimum weight of mixed components.

**2) Polycyclic Aromatic Hydrocarbons (PAHs)**

Test Method: With reference to AFPS GS 2019:01 PAK method, analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS).

Test Items	Unit	Results		LOQ	Limit
		No.1+No.2 +No.3	No.4+No.5 +No.12		
Benzo(a)anthracene (BaA)	mg/kg	ND*	ND*	0.2	1.0
Chrysene (CHR)	mg/kg	ND*	ND*	0.2	1.0
Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	ND*	0.2	1.0
Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	ND*	0.2	1.0
Benzo(a)pyrene (BaP)	mg/kg	ND*	ND*	0.2	1.0
Dibenzo[a,h]anthracene (DBA <sub>h</sub> A)	mg/kg	ND*	ND*	0.2	1.0
Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	ND*	0.2	1.0
Benzo[e]Pyrene (BeP)	mg/kg	ND*	ND*	0.2	1.0
Conclusion	--	Pass	Pass	--	--





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Test Items	Unit	Results		LOQ	Limit
		No.10+No.18	No.14+No.15 +No.132		
Benzo(a)anthracene (BaA)	mg/kg	ND*	ND*	0.2	1.0
Chrysene (CHR)	mg/kg	ND*	ND*	0.2	1.0
Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	ND*	0.2	1.0
Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	ND*	0.2	1.0
Benzo(a)pyrene (BaP)	mg/kg	ND*	ND*	0.2	1.0
Dibenzo[a,h]anthracene (DBAhA)	mg/kg	ND*	ND*	0.2	1.0
Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	ND*	0.2	1.0
Benzo[e]Pyrene (BeP)	mg/kg	ND*	ND*	0.2	1.0
Conclusion	--	Pass	Pass	--	--

**Note:**

- (1) ND = Not Detected or lower than limit of quantitation
- (2) mg/kg=milligram per kilogram=ppm
- (3) LOQ = Limit of quantitation
- (4) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Articles shall not be placed on the market for supply to the general public, if 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, under normal or reasonably foreseeable conditions of use, contain more than 1 mg/kg (0,0001 % by weight of this component) of any of the listed PAHs.
- (5) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Toys, including activity toys, and childcare articles, shall not be placed on the market, if 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, under normal or reasonably foreseeable conditions of use, contain more than 0,5 mg/kg (0,00005 % by weight of this component) of any of the listed PAHs.
- (6) "\*" = As per applicant's requirement, the testing was conducted based on mixed components by weight in equal ratio, results are calculated by the minimum weight of mixed components.



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**3) Colour Fastness to Rubbing**

Colour Fastness to Rubbing				
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)				
		No.7	No.8	Client's Limit
Length	Dry staining	4-5	4-5	2-3
	Wet staining	4-5	4-5	2-3
Width	Dry staining	--	--	2-3
	Wet staining	--	--	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.

**Description for Specimen:**

Specimen No.	Specimen Description
1	Black plastic shell
2	Transparent plastic sheet with black surface
3	Black plastic shell
4	Black plastic part
5	Black plastic shell
7	Black fabric wire
8	Black fabric wire
10	Black soft plastic button
12	Transparent plastic shell
14	Black plastic shell
15	Black plastic shell
18	Black soft plastic shell
132	Green plastic shell



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**Photograph of parts tested:**





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Remarks:

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

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