



TEST REPORT

Report No. : WTF25F12323748C
Job No. : FSW2512040238CJ
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 : 116209
Sample Name : Promotional reflective items
Sample Model : MK2020, MK2022, MK2024, MK2026, MK2028, ML4002, ML4102, ML4201
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 : 2025-12-04
Testing Period : 2025-12-04 to 2025-12-10
Date of Issue : 2025-12-10
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



WTF25F12323748C

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Waltek Testing Group (Foshan) Co., Ltd.
<http://www.waltek.com.cn>



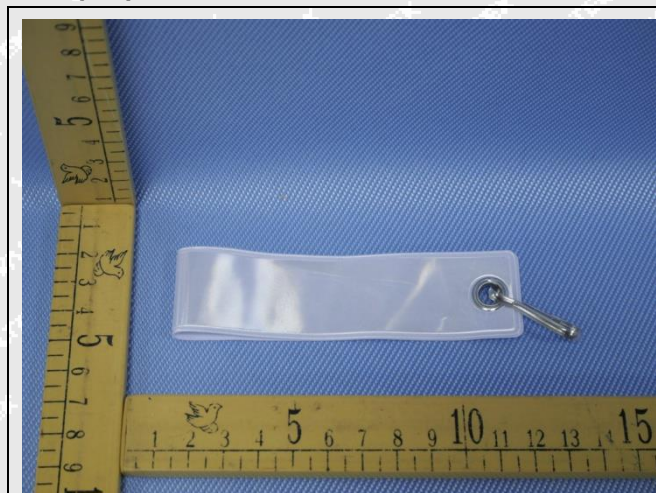
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Summary

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	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
5	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
6	As requested by the applicant, to test Colour Fastness to Rubbing in the submitted sample.	Pass

Sample photo:



MK2020



MK2020



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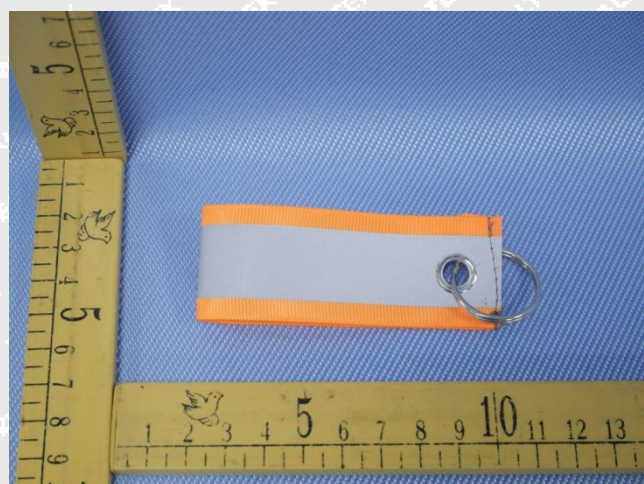
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MK2022



MK2022



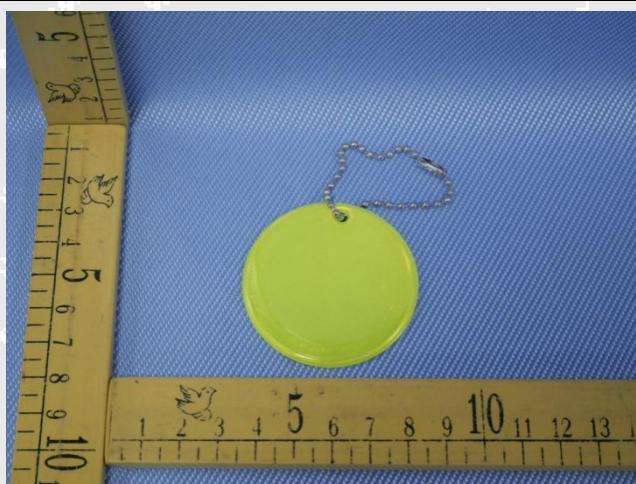
MK2022



MK2022



MK2024

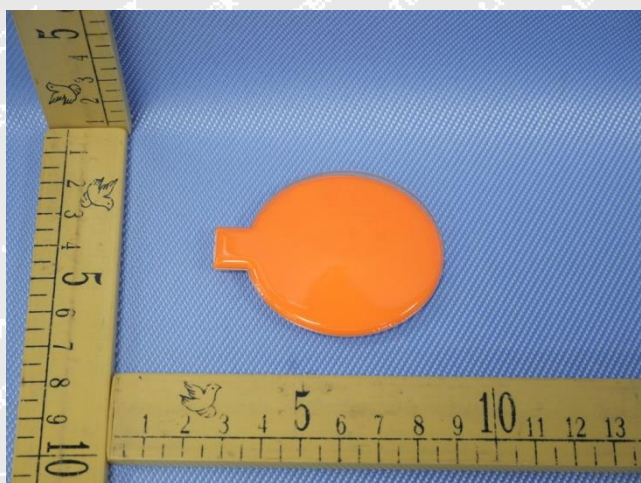


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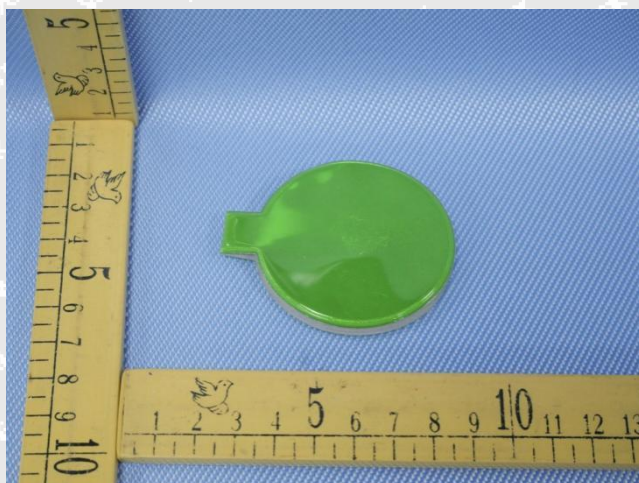


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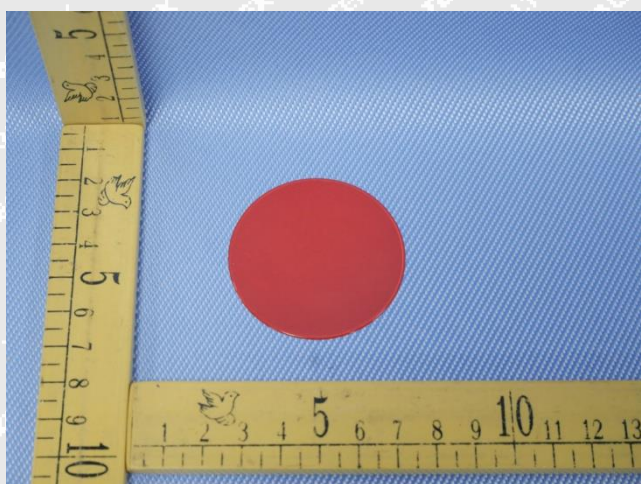
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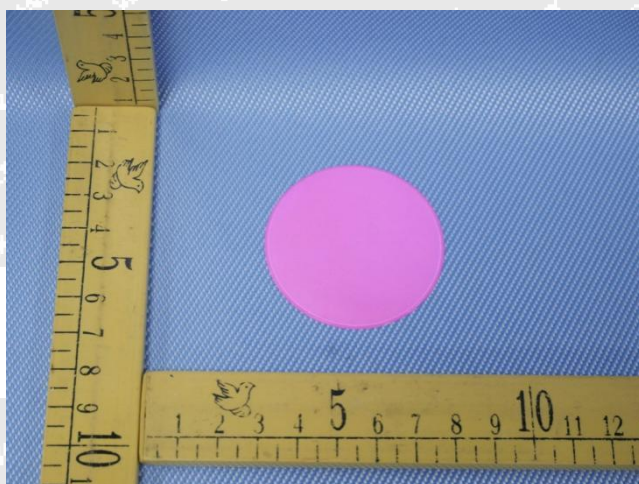
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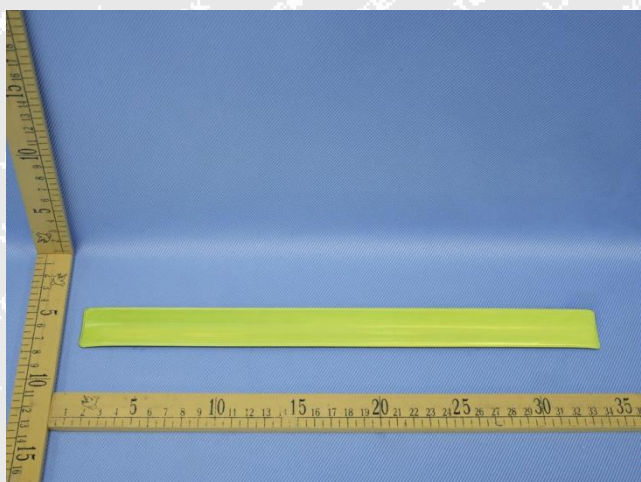
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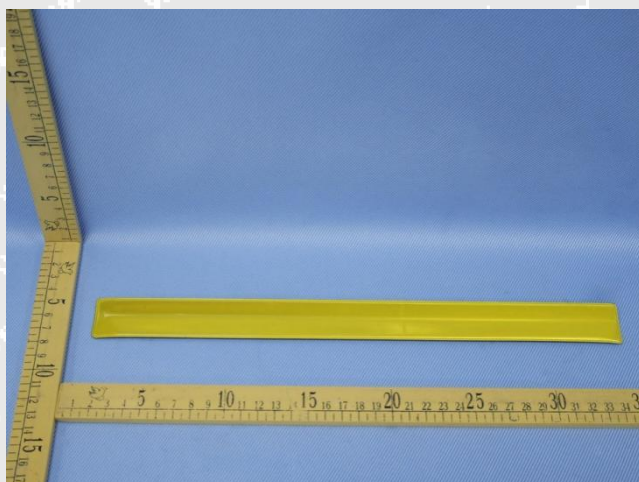
MK2028



MK2028



ML4002

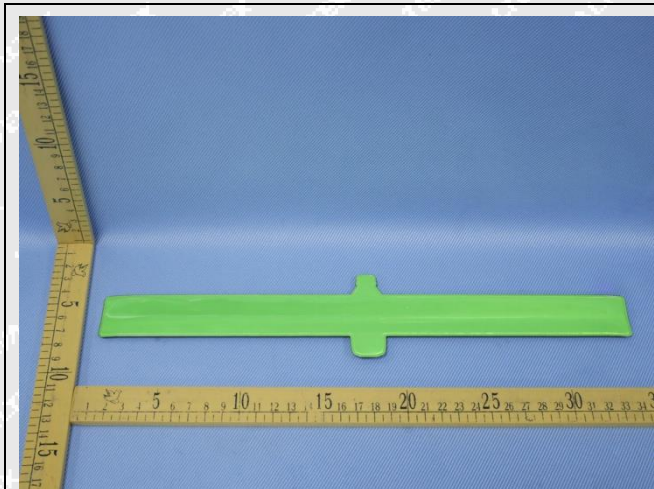


ML4002

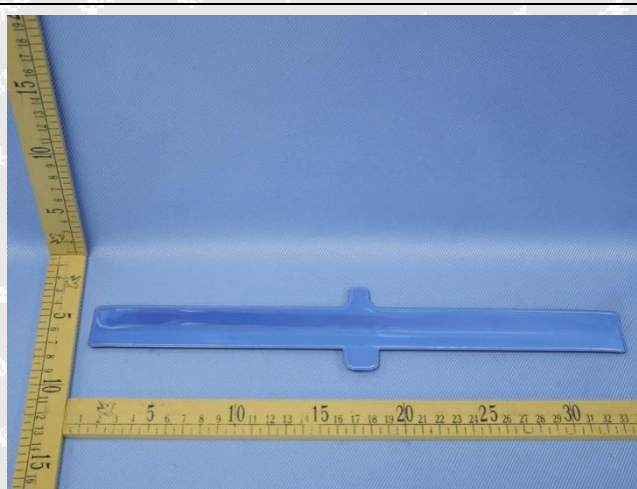


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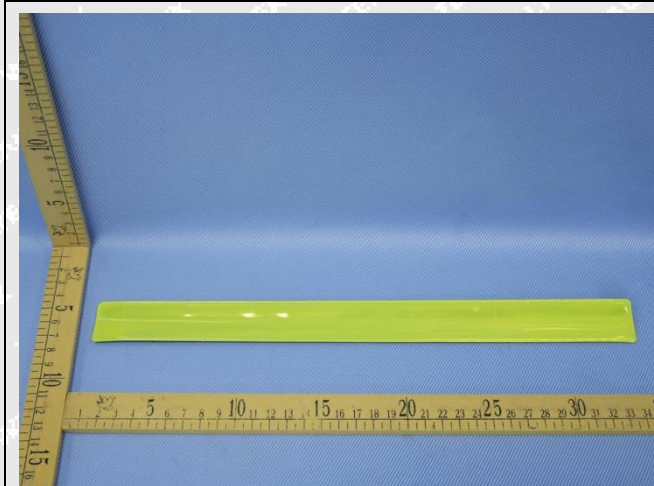
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ML4102



ML4102



ML4201



ML4201



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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 +No.9	
Lead(Pb)	2	ND	ND	ND*	500
Conclusion	--	Pass	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)			Limit (mg/kg)
		No.5+No.17	No.6	No.7	
Lead(Pb)	2	ND*	ND	ND	500
Conclusion	--	Pass	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)			Limit (mg/kg)
		No.8	No.10+No.11 +No.15	No.16+No.18 +No.19	
Lead(Pb)	2	ND	ND*	ND*	500
Conclusion	--	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) "*" = 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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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.3+No.4+No.9	No.10+No.11+No.15
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	Pass

Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.12+No.13+No.14	No.16+No.18+No.19
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	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) “*” = 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) Phthalates

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

Test Items	LOQ (%)	Results (%)		Limit (%)
		No.3+No.4 +No.9	No.10+No.11 +No.15	
Benzyl butyl phthalate (BBP)	0.005	ND*	ND*	sum of four phthalates < 0.1
Di (2-ethyl hexyl)- phthalate (DEHP)	0.005	ND*	ND*	
Dibutyl phthalate (DBP)	0.005	ND*	ND*	
Diisobutyl phthalate (DIBP)	0.005	ND*	ND*	
Diisodecyl phthalate (DIDP)	0.01	ND*	ND*	sum of three phthalates < 0.1
Diisononyl phthalate (DINP)	0.01	ND*	ND*	
Di-n-octyl phthalate (DNOP)	0.005	ND*	ND*	
Conclusion	--	Pass	Pass	--

Test Items	LOQ (%)	Results (%)		Limit (%)
		No.12+No.13 +No.14	No.16+No.18 +No.19	
Benzyl butyl phthalate (BBP)	0.005	ND*	ND*	sum of four phthalates < 0.1
Di (2-ethyl hexyl)- phthalate (DEHP)	0.005	0.015*	0.011*	
Dibutyl phthalate (DBP)	0.005	ND*	ND*	
Diisobutyl phthalate (DIBP)	0.005	ND*	ND*	
Diisodecyl phthalate (DIDP)	0.01	ND*	ND*	sum of three phthalates < 0.1
Diisononyl phthalate (DINP)	0.01	ND*	ND*	
Di-n-octyl phthalate (DNOP)	0.005	ND*	ND*	
Conclusion	--	Pass	Pass	--



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Note:

- (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) "*" = 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.

4) 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.3+No.4+No.9		
Benzo(a)anthracene (BaA)	mg/kg	ND*	0.2	1.0
Chrysene (CHR)	mg/kg	ND*	0.2	1.0
Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	0.2	1.0
Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	0.2	1.0
Benzo(a)pyrene (BaP)	mg/kg	ND*	0.2	1.0
Dibenzo[a,h]anthracene (DBaHA)	mg/kg	ND*	0.2	1.0
Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	0.2	1.0
Benzo[e]Pyrene (BeP)	mg/kg	ND*	0.2	1.0
Conclusion	--	Pass	--	--



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Test Items	Unit	Results	LOQ	Limit
		No.10+No.11+No.15		
Benzo(a)anthracene (BaA)	mg/kg	ND*	0.2	1.0
Chrysene (CHR)	mg/kg	ND*	0.2	1.0
Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	0.2	1.0
Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	0.2	1.0
Benzo(a)pyrene (BaP)	mg/kg	ND*	0.2	1.0
Dibenzo[a,h]anthracene (DBAhA)	mg/kg	ND*	0.2	1.0
Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	0.2	1.0
Benzo[e]Pyrene (BeP)	mg/kg	ND*	0.2	1.0
Conclusion	--	Pass	--	--

Test Items	Unit	Results	LOQ	Limit
		No.16+No.18+No.19		
Benzo(a)anthracene (BaA)	mg/kg	ND*	0.2	1.0
Chrysene (CHR)	mg/kg	ND*	0.2	1.0
Benzo[b]fluoranthene (BbFA)	mg/kg	ND*	0.2	1.0
Benzo[k]fluoranthene (BkFA)	mg/kg	ND*	0.2	1.0
Benzo(a)pyrene (BaP)	mg/kg	ND*	0.2	1.0
Dibenzo[a,h]anthracene (DBAhA)	mg/kg	ND*	0.2	1.0
Benzo[j]fluoranthene (BjFA)	mg/kg	ND*	0.2	1.0
Benzo[e]Pyrene (BeP)	mg/kg	ND*	0.2	1.0
Conclusion	--	Pass	--	--



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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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5) 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.5+No.17	No.11
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



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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.

6) Colour Fastness to Rubbing

Colour Fastness to Rubbing					
(ISO 105-X12: 2016; Size of rubbing finger: 16mm diameter.)					
		No.5	No.11	No.17	Client's Limit
Length	Dry staining	4-5	4-5	4-5	2-3
	Wet staining	4-5	4-5	4-5	2-3
Width	Dry staining	--	--	--	2-3
	Wet staining	--	--	--	2-3
Conclusion		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.

Description for Specimen:

Specimen ID	Specimen No.	Specimen Description
FSW2512040238CJ. 1	1	Silvery metal hook
FSW2512040238CJ. 2	2	Silvery metal buckle
FSW2512040238CJ. 3	3	White soft plastic sheet
FSW2512040238CJ. 4	4	Dark blue soft plastic sheet
FSW2512040238CJ. 5	5	Black-silvery webbing
FSW2512040238CJ. 6	6	Silvery metal ring

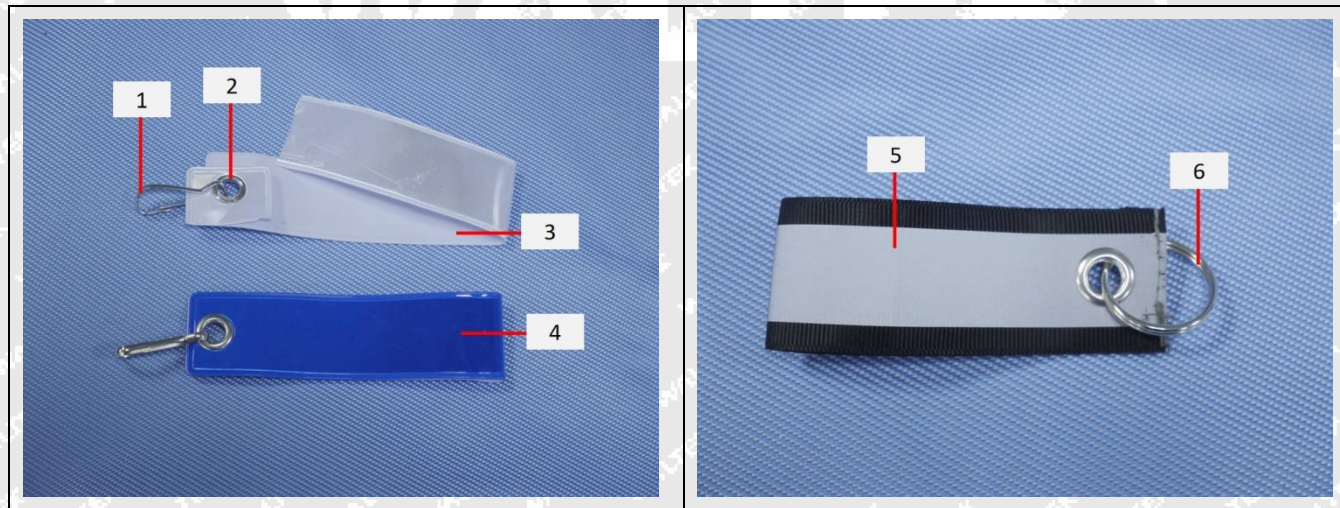


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Specimen ID	Specimen No.	Specimen Description
FSW2512040238CJ. 7	7	Silvery metal part
FSW2512040238CJ. 8	8	Silvery metal buckle
FSW2512040238CJ. 9	9	Yellow-green soft plastic sheet
FSW2512040238CJ. 10	10	Orange soft plastic sheet
FSW2512040238CJ. 11	11	Grey fabric sheet with plastic backing
FSW2512040238CJ. 12	12	White foam with white plastic sheet
FSW2512040238CJ. 13	13	Semi-transparent dry glue
FSW2512040238CJ. 14	14	White soft plastic sheet
FSW2512040238CJ. 15	15	Red soft plastic sheet
FSW2512040238CJ. 16	16	White soft plastic sheet with glue
FSW2512040238CJ. 17	17	Black fluff with black fabric sheet
FSW2512040238CJ. 18	18	Yellow soft plastic sheet
FSW2512040238CJ. 19	19	Green soft plastic sheet

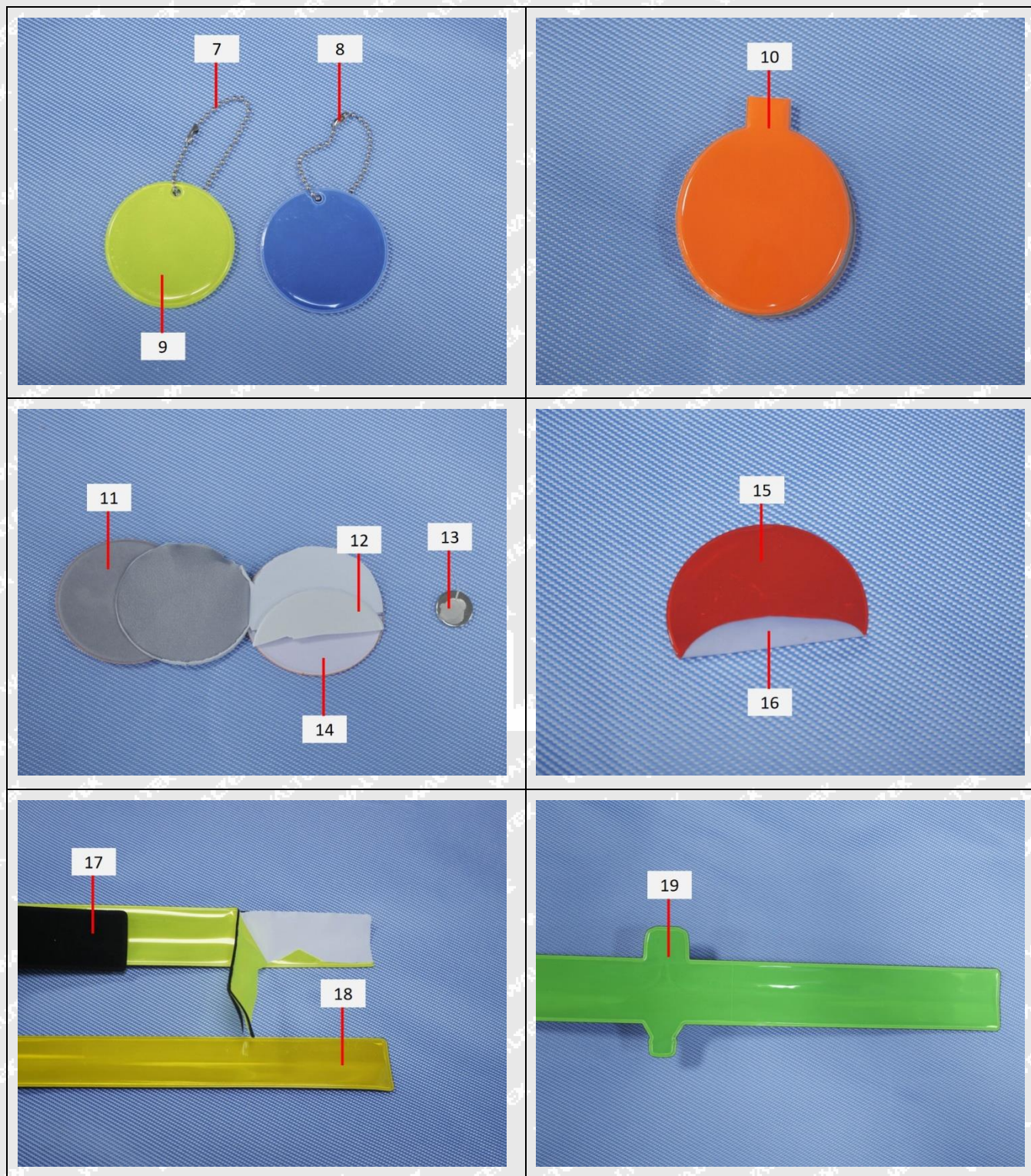
Photograph of parts tested:





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Remarks:

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

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