

## TEST REPORT

Applicant: FLASHBAY ELECTRONICS  
BUILDING2, JIXUN INDUSTRIAL PARK,  
XINJIAO,DONG'AO VILLAGE, SHATIAN TOWN,  
HUIYANG DISTRICT, HUIZHOU CITY,  
GUANGDONG PROVINCE, P.R.CHINA

Number: HKGH02989797

Date: Apr 18, 2023

Sample and Information provided by customer :

Item Name : **Water bottles**

Item No. : **Flexi/FXI**

Quantity : **14 pieces**

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For and on behalf of :  
Intertek Testing Services HK Ltd.



Cindy I.K. Chan  
Vice President



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**Conclusion :**

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

<u>Requirement</u>	<u>Result</u>
(1) Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959), under the Japan Food Sanitation Law (Law No. 233, 1947) - Coloring Matters	Pass
(2) Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959) and (Notification No. 595 of Ministry of Health, Labour and Welfare, amendment on 28/12/2012) under the Japan Food Sanitation Law (Law No. 233, 1947) - Synthetic Resin - Polystyrene	Pass
(3) Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959), under the Japan Food Sanitation Law (Law No. 233, 1947) - Synthetic Resin - Polypropylene	Pass
(4) Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959) and (Notification No. 595 of Ministry of Health, Labour and Welfare, amendment on 28/12/2012) under the Japan Food Sanitation Law (Law No. 233, 1947) - Rubber	Pass

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**Decision Rule(s):**

When a statement of conformity to a specification or standard is provided on test report, the decision rule shall be applied. For details, please refer to Intertek's "Decision Rule Document" and is available on Intertek's website. <https://intertekhk.grd.by/decision-rule-doc..>

If decision rule already inlined in the requested specification or standard, Intertek's "Decision Rule Document" is not applicable and indication of "∞" was shown as above table.

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# TEST REPORT

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## (1) Chemical Properties on Coloring Matters

Test method: Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959), under the Japan Food Sanitation Law (Law No. 233, 1947).

Component no.	Component description	Location	Material type provided by client
(A)	Black plastic	ABS	Container
(B)	Black soft plastic	Silicone	Container
(C)	Light grey soft plastic	Silicone	Container
(D)	White soft plastic	Silicone	Container
(E)	Translucent soft plastic	Silicone	Gasket
(F)	Black plastic	PP homopolymer	Lid

Requirement : No running of coloring matters was observed in the leaching solution

Leaching solution	Leaching condition	Result	
		(A)	(F)
n-Heptane	At 25°C for 1 hour	NR	NR
20% Ethanol	At 60°C for 30 minutes	NR	NR
Water	At 60°C for 30 minutes	NR	NR
4% Acetic acid	At 60°C for 30 minutes	NR	NR

Leaching solution	Leaching condition	Result			
		(B)	(C)	(D)	(E)
20% Ethanol	At 60°C for 30 minutes	NR	NR	NR	NR
Water	At 60°C for 30 minutes	NR	NR	NR	NR
4% Acetic acid	At 60°C for 30 minutes	NR	NR	NR	NR

Remark :

NR = No Running of coloring matters was observed

Date sample received : Mar 29, 2023

Testing period : Mar 29, 2023 to Apr 17, 2023



## TEST REPORT

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(2) Chemical Properties for Synthetic Resin - Polystyrene

Test method: Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959) and (Notification No. 595 of Ministry of Health, Labour and Welfare, amendment on 28/12/2012) under the Japan Food Sanitation Law (Law No. 233, 1947).

Component no.	Component description	Location	Material type provided by client
(A)	Black plastic	ABS	Container

Intended use of product: Temperature ≤ 100°C

Material type		Polystyrene (PS)		
Parameter		Result	Limit	Conclusion
		(A)		
i) General requirement				
Elution test				
• Consumption of potassium permanganate		< 4 µg/ml	10 µg/ml	Pass
• Heavy metal (as lead)		< 1 µg/ml	1 µg/ml	Pass
Material test				
• Total cadmium (Cd)		< 5 µg/g	100 µg/g	Pass
• Total lead (Pb)		< 5 µg/g	100 µg/g	Pass
ii) Individual requirement				
Material test				
• Volatile substances (sum of styrene, toluene, ethylbenzene, isopropylbenzene and n-propyl-benzene)		< 1.0 mg/g	5 mg/g	Pass
Elution test				
• Evaporation residue	Leaching condition			
n-Heptane	At 25°C for 1 hour	< 10 µg/ml	240 µg/ml	Pass
20% Ethanol	At 60°C for 30 minutes	< 10 µg/ml	30 µg/ml	Pass
Water	At 60°C for 30 minutes	< 10 µg/ml	30 µg/ml	Pass
4% Acetic acid	At 60°C for 30 minutes	< 10 µg/ml	30 µg/ml	Pass

Remark : µg/ml = microgram per millilitre  
µg/g = microgram per gram  
mg/g = milligram per gram

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(3) Chemical Properties for Synthetic Resin - Polypropylene

Test method: Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959), under the Japan Food Sanitation Law (Law No. 233,1947).

Component no.	Component description	Location	Material type provided by client
(F)	Black plastic	PP homopolymer	Lid

Intended use of product: Temperature ≤ 100°C

Material type		Polypropylene (PP)		
Parameter		Result	Limit	Conclusion
		(F)		
i) General requirement				
Elution test				
• Consumption of potassium permanganate		< 4 µg/ml	10 µg/ml	Pass
• Heavy metal (as lead)		< 1 µg/ml	1 µg/ml	Pass
Material test				
• Total cadmium (Cd)		< 5 µg/g	100 µg/g	Pass
• Total lead (Pb)		< 5 µg/g	100 µg/g	Pass
ii) Individual requirement				
Elution test				
• Evaporation residue	Leaching condition			
n-Heptane	At 25°C for 1 hour	13 µg/ml	150 µg/ml	Pass
20% Ethanol	At 60°C for 30 minutes	< 10 µg/ml	30 µg/ml	Pass
Water	At 60°C for 30 minutes	< 10 µg/ml	30 µg/ml	Pass
4% Acetic acid	At 60°C for 30 minutes	< 10 µg/ml	30 µg/ml	Pass

Remark : µg/ml = microgram per millilitre  
µg/g = microgram per gram

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(4) Chemical Properties for Synthetic Resin - Rubber

Test method: Specifications and Standards and Testing Methods of "Foodstuffs", "Implements", "Containers and Packaging", "Toys" and "Detergents", Section III - Apparatus and Containers and Packages, (Notification No. 370 of Ministry of Health, Labour and Welfare, 1959) and (Notification No. 595 of Ministry of Health, Labour and Welfare, amendment on 28/12/2012) under the Japan Food Sanitation Law (Law No. 233,1947).

Component no.	Component description	Location	Material type provided by client
(B)	Black soft plastic	Silicone	Container
(C)	Light grey soft plastic	Silicone	Container
(D)	White soft plastic	Silicone	Container
(E)	Translucent soft plastic	Silicone	Gasket

Intended use of product: Temperature  $\leq 100^{\circ}\text{C}$

Material type		Rubber			
Parameter		Result		Limit	Conclusion
		(B)	(C)		
i) Individual requirement					
Material test					
• Total cadmium (Cd)		< 5 µg/g	< 5 µg/g	100 µg/g	Pass
• Total lead (Pb)		< 5 µg/g	< 5 µg/g	100 µg/g	Pass
• Chlorine by Beilstein test		Negative	Negative	---	---
• 2-Mercaptoimidazoline		Not applicable	Not applicable	Negative	Not applicable
Elution test					
• Evaporation residue	Leaching condition				
20% Ethanol	At 60°C for 30 minutes	12 µg/ml	17 µg/ml	60 µg/ml	Pass
Water	At 60°C for 30 minutes	12 µg/ml	17 µg/ml	60 µg/ml	Pass
4% Acetic acid	At 60°C for 30 minutes	14 µg/ml	16 µg/ml	60 µg/ml	Pass
• Phenol	At 60°C for 30 minutes	< 0.5 µg/ml	< 0.5 µg/ml	5 µg/ml	Pass
• Formaldehyde	At 60°C for 30 minutes	Negative	Negative	Negative	Pass
• Zinc (Zn)	At 60°C for 30 minutes	< 1 µg/ml	< 1 µg/ml	15 µg/ml	Pass
• Heavy metal (as Lead)	At 60°C for 30 minutes	< 1 µg/ml	< 1 µg/ml	1 µg/ml	Pass



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Material type		Rubber			
Parameter		Result		Limit	Conclusion
		(D)	(E)		
<b>i) Individual requirement</b>					
Material test					
• Total cadmium (Cd)		< 5 µg/g	< 5 µg/g	100 µg/g	Pass
• Total lead (Pb)		< 5 µg/g	< 5 µg/g	100 µg/g	Pass
• Chlorine by Beilstein test		Negative	Negative	---	---
• 2-Mercaptoimidazoline		Not applicable	Not applicable	Negative	Not applicable
Elution test					
• Evaporation residue	Leaching condition				
20% Ethanol	At 60°C for 30 minutes	< 10 µg/ml	15 µg/ml	60 µg/ml	Pass
Water	At 60°C for 30 minutes	< 10 µg/ml	15 µg/ml	60 µg/ml	Pass
4% Acetic acid	At 60°C for 30 minutes	13 µg/ml	15 µg/ml	60 µg/ml	Pass
• Phenol	At 60°C for 30 minutes	< 0.5 µg/ml	< 0.5 µg/ml	5 µg/ml	Pass
• Formaldehyde	At 60°C for 30 minutes	Negative	Negative	Negative	Pass
• Zinc (Zn)	At 60°C for 30 minutes	< 1 µg/ml	< 1 µg/ml	15 µg/ml	Pass
• Heavy metal (as Lead)	At 60°C for 30 minutes	< 1 µg/ml	< 1 µg/ml	1 µg/ml	Pass

Remark : µg/g = microgram per gram  
µg/ml = microgram per millilitre

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End of report

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