

Test Report

Report No.: GNB190621233EN

Date: Jul. 22, 2019

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The following information was/were submitted and identified by/on behalf of the client:

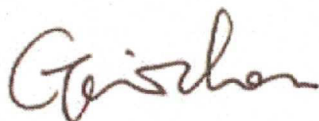
Applicant :
Address :
Sample Name : Aluminum water bottle
Sample Model : HA0017,HA0258
Sample Receive Date : Jun. 21, 2019
Sample Resubmission Date : Jul. 02, 2019
Sample Testing Period : Jun. 21, 2019 - Jul. 02, 2019 & Jul. 02, 2019 - Jul. 09, 2019

Test Result Summary:

As requested by the applicant, for details refer to attached page(s).

TEST ITEM(S)	TEST REQUESTED	CONCLUSION(S)
Sensorial examination odour and taste test	German Food and Feed Acts LFGB Section 30 and 31 with amendments	PASS
Extractable Components	German Food and Feed Acts LFGB Section 30 and 31 with amendments and BFR recommendation	PASS
Overall Migration	German Food and Feed Acts LFGB Section 30 and 31 with amendments and BFR recommendation and Commission Regulation (EU) No.10/2011 with amendments	PASS
18 kinds of PAHs	German Food and Feed Acts LFGB Section 30 and 31 with amendments and BFR recommendation	PASS

Authorized signature:



Lab Manager: Gavin Zhou



Jul. 22, 2019

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Test Result(s):

Test Sample Description:

Sample No.	Client Claimed Material	Sample Description
<u>1</u>	/	Aluminum water bottle
<u>1-1</u>	Silicone	White silicone seal ring
<u>1-2</u>	PP	Black plastic lid
<u>1-3</u>	Teflon coating	Transparent teflon coating (bottle inner)

1. Sensorial examination odour and taste test

Test Method: DIN 10955: 2004

Test Item	Maximum permissible limit(Grade)	Result(s) (Grade)
		<u>1</u>
Sensorial examination odour	2.5	1
Sensorial examination taste	2.5	1
Conclusion(s)		PASS

Note: Scale evaluation:

- 0 = No perceptible odour;
- 1 = Odour just perceptible (still difficult to define);
- 2 = Moderate odour;
- 3 = Moderately strong odour;
- 4 = Strong odour.

2. Extractable Components

Test Method: With reference to 61st Communication on testing of plastics in Bundesgesundheitsbl 46 (2003) 362.

Simulant used	Test condition	Maximum permissible limit (%)	Result(s) (%)	Conclusion(s)
			<u>1-1</u>	
Distilled water	5 hours by reflux	0.5	< 0.05	PASS

- Note:
1. 0.1% = 1000mg/kg, milligram per kilogram sample;
 2. "<" = less than.

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3. Overall Migration

Test Method: With reference to Commission Regulation (EU) No.10/2011 of 14 January 2011 Annex III and Annex V for selection of conditions and EN1186-1:2002 for selection of test methods;
 EN1186-3:2002 aqueous food simulants by total immersion method;
 EN1186-9:2002 aqueous food simulants by article filling method.

<u>Simulant used</u>	<u>Test condition</u>	<u>Maximum permissible limit (mg/dm²)</u>	<u>Result(s) (mg/dm²)</u>
			1-2
10% Ethanol (V/V) Aqueous Solution	2 hours at 70°C	10	< 3.0
<u>Conclusion(s)</u>			PASS

<u>Simulant used</u>	<u>Test condition</u>	<u>Maximum permissible limit (mg/dm²)</u>	<u>Result(s) (mg/dm²)</u>
			1-3
Distilled water	2 hours at 70°C	10	< 3.0
<u>Conclusion(s)</u>			PASS

- Note:**
1. mg/dm² = milligram per square decimeter of sample;
 2. "<" = less than;
 3. The test data is obtained from the 3rd extractive result by considering the articles intended for repeated use.

4. Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method: AfPS-GS-2014: 01

<u>Item No.</u>	<u>Test Item</u>	<u>CAS No.</u>	<u>Unit</u>	<u>MDL</u>	<u>Limit</u>	<u>Result(s)</u>	
						1-1	1-2
1	Benzo(a)Pyrene	50-32-8	mg/kg	0.2	< 0.2	N.D.	N.D.
2	Benzo(e)Pyrene	192-97-2	mg/kg	0.2	< 0.2	N.D.	N.D.
3	Benzo(a)Anthracene	56-55-3	mg/kg	0.2	< 0.2	N.D.	N.D.
4	Benzo(b)Fluoranthene	205-99-2	mg/kg	0.2	< 0.2	N.D.	N.D.
5	Benzo(j)Fluoranthene	205-82-3	mg/kg	0.2	< 0.2	N.D.	N.D.
6	Benzo(k)Fluoranthene	207-08-9	mg/kg	0.2	< 0.2	N.D.	N.D.
7	Chrysene	218-01-9	mg/kg	0.2	< 0.2	N.D.	N.D.
8	Dibenzo(a,h)Anthracene	53-70-3	mg/kg	0.2	< 0.2	N.D.	N.D.
9	Benzo(g,h,i)Perylene	191-24-2	mg/kg	0.2	< 0.2	N.D.	N.D.
10	Indeno(1,2,3-cd)Pyrene	193-39-5	mg/kg	0.2	< 0.2	N.D.	N.D.
11	Acenaphthylene	208-96-8	mg/kg	0.2	--	N.D.	N.D.

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Item No.	Test Item	CAS No.	Unit	MDL	Limit	Result(s)	
						1-1	1-2
12	Acenaphthene	83-32-9	mg/kg	0.2	--	N.D.	N.D.
13	Anthracene	120-12-7	mg/kg	0.2	--	N.D.	N.D.
14	Fluorene	86-73-7	mg/kg	0.2	--	N.D.	N.D.
15	Fluoranthene	206-44-0	mg/kg	0.2	--	N.D.	N.D.
16	Phenanthrene	85-01-8	mg/kg	0.2	--	N.D.	N.D.
17	Pyrene	129-00-0	mg/kg	0.2	--	N.D.	0.3
18	Naphthalene	91-20-3	mg/kg	0.2	< 1	N.D.	0.3
Sum of Acenaphthylene, Acenaphthene, Anthracene, Fluorene, Fluoranthene, Phenanthrene, Pyrene		--	mg/kg	--	< 1	N.D.	0.3
Sum of 18 PAHs		--	mg/kg	--	< 1	N.D.	0.6
Conclusion(s)						PASS	PASS

Limits for PAHs in Products

Product Safety Commission (AFPS)

Examination and Assessment of Polycyclic Aromatic Hydrocarbons (PAHs) in the Recognition of the GS mark 4 August 2014.

Parameter	Category 1	Category 2		Category 3	
Polycyclic Aromatic Hydrocarbons (PAHs)	Materials intended to be placed in the mouth or toys with intended prolonged skin contact (> 30 seconds) (mg/kg)	Materials not falling under Category 1, with foreseeable skin contact longer than 30 seconds (long term) or frequent short-term skin contact)		Materials not falling under Category 1 or 2, with foreseeable skin contact less than 30 seconds (short-term skin contact)	
		Toys by Directive 2009/48/EC (mg/kg)	Other Products by ProdSG (mg/kg)	Toys by Directive 2009/48/EC (mg/kg)	Other Products by ProdSG (mg/kg)
Benzo(a)Pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(e)Pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(a)Anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(b)Fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(j)Fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo(k)Fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo(a,h)Anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1

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		Toys by Directive 2009/48/EC (mg/kg)	Other Products by ProdSG (mg/kg)	Toys by Directive 2009/48/EC (mg/kg)	Other Products by ProdSG (mg/kg)
Benzo(g,h,i)Perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno(1,2,3-cd)Pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Acenaphthylene	<1 (sum)	<5 (sum)	< 10 (sum)	< 20 (sum)	< 50 (sum)
Acenaphthene					
Anthracene					
Fluorene					
Fluoranthene					
Phenanthrene					
Pyrene					
Naphthalene	< 1	< 2		< 10	
Sum of 18 PAHs	< 1	< 5	< 10	< 20	< 50

Note: 1. MDL = Method Detection Limit;
2. N.D. = Not Detected (Below MDL).

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Sample Photo(s):



GIG authenticate the photo(s) on original report only

End of Report

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