TEST REPORT

No. [redacted] Date: 08.19, 2025 Page: 1 / 14

Applicant	:	[redacted]
Address	:	[redacted]

Below information submitted by the applicant:

Product Name	:	Silicone water bottle
Model	:	EDSG-5009
Model may cover	:	/
Reference info.	:	/
Manufacturer info.	:	/
Supplier info.	:	/
Buyer info.	:	/
Country of Destination	:	/
Country of Origin	:	China

Sample Received	:	08.07, 2025
Test Period	:	08.07, 2025 - 08.13, 2025
Test Requirement	:	Refer to next pages
Test Method	:	Refer to next pages
Test Result	:	Refer to next pages
Test Conclusion	:	Refer to next pages

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TUV Thuringen (Shanghai) Co., Ltd. TESTED

Signed for and on behalf of
Jordan Wang, General Manager
BU Chemical Compliance
TUV THURINGEN (SHANGHAI) CO., LTD.
Location: Shanghai

TUV THURINGEN (SHANGHAI) CO., LTD.

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RESULT SUMMARY

Food contact materials in accordance with General Requirement (Article 3) in EU Regulation No. 1935/2004, German Food, Articles of Daily Use and Feed Code of September 1 2005 (LFGB) Section 30 and 31, BfR recommendation, Commission Regulation (EU) No 10/2011 and its subsequent amendment Regulation EU No.321/2011, No.1282/2011, No.1183/2012, No.202/2014, No.865/2014, No. 2015/174, No.2016/1416, No.2017/752, No.2018/79, No.2019/37, No.2020/1245, No.2023/1442, No.2023/1627, No.2024/3190 on plastic materials and articles intended to come into contact with foodstuffs, AfPS GS 2019:01, selected test items as below:

	Test Items	Verdict
1.	Sensory odor and taste test	PASS
2.	Overall migration test; specific migration of primary aromatic amines; soluble heavy metals; total lead and cadmium content; peroxide value; specific migration of bisphenol A (BPA); specific migration of softeners and phthalates; catalyst residue content for PP plastics	PASS
3.	Overall migration, specific migration of primary aromatic amine; soluble heavy metal; Volatile organic substances, Residual catalyst, Remaining peroxides and organotin compounds, specific migration of organotin (as Tin) for silicone materials	PASS
4.	Bisphenol A content for all polymer materials	PASS
5.	PAHs content in acc. to AfPS GS 2019:01	PASS

TESTS CARRIED BY:

LAB ID: TTSLCM005; ADD.: 2/F., BUILDING D-1, NO.128, SHENFU ROAD, MINHANG DISTRICT, SHANGHAI, CHINA

SAMPLE DESCRIPTION

Sample description : 1#. Black PP Lid

2#. Orange, yellow, purple, blue and black silicone materials, mixed test

TEST RESULTS

1. Food contact material safety requirements

1.1. Sensorial examination odor and taste test

Test Method: sensory test with reference to DIN 10955:2024

Test Items	Test Results	Permissible Limit
	Whole product	
Test Media	Distilled water	---
Temperature, ℃	70.0	---
Contact Time, hour	2.0	---
Sensorial examination odor	0.5	2.5, max
Sensorial examination taste	0.5	2.5, max
Comment(s)	PASS	---

Scale evaluation:

0: No perceptible odor
1: Odor just perceptible (still difficult to define)
2: Moderate odor
3: Moderately strong odor
4: Strong odor

1.2. Special requirements for polymer materials

1.2.1. Overall migration test

Test method:

EN 1186-1:2002 guide to the selection of conditions and test methods for overall migration

EN 1186-3:2022 Materials and articles in contact with foodstuffs - Plastics - Part 3: Test methods for overall migration in evaporable simulants

Ratio of surface area/volume = 6dm^2/1L

Test Parameter	Units	MDL	Test Results		Permissible Limit
			1#	2#	
Test Media			3% acetic acid		---
Temperature, ℃			70.0	70.0	---
Contact Time, hour			2.0	2.0	---
1st, Overall migration test	mg/dm²	3.0	3.3	3.9	---
2nd, Overall migration test	mg/dm²	3.0	n.d.	n.d.	---
3rd, Overall migration test	mg/dm²	3.0	n.d.	n.d.	10, max
Comment(s)	---	---	PASS	PASS	---

Test Parameter	Units	MDL	Test Results		Permissible Limit
			1#	2#	
Test Media			20% Ethanol		---
Temperature, ℃			70.0	70.0	---
Contact Time, hour			2.0	2.0	---
1st, Overall migration test	mg/dm²	3.0	n.d.	n.d.	---
2nd, Overall migration test	mg/dm²	3.0	n.d.	n.d.	---
3rd, Overall migration test	mg/dm²	3.0	n.d.	n.d.	10, max
Comment(s)	---	---	PASS	PASS	---

1.2.2. specific migration of heavy metal

Test Method: with reference to EN 13130-1:2004, followed by analysis using ICP-OES, ICP-MS, IC, UV-Vis

Test Parameter	Units	MDL	Test Results			Permissible Limit
			1#, 1st	1#, 2nd	1#, 3rd	
Test Media			3% acetic acid			---
Temperature, ℃			70.0	70.0	70.0	---
Contact Time, hour			2.0	2.0	2.0	---
Soluble Aluminum, Al	mg/kg	0.1	n.d.	n.d.	n.d.	≤1.0
Soluble Ammonium, NH_4	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Antimony, Sb	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.04
Soluble Arsenic, As	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Barium, Ba	mg/kg	0.25	n.d.	n.d.	n.d.	≤1.0
Soluble Cadmium, Cd	mg/kg	0.002	n.d.	n.d.	n.d.	ND (LOD 0.002)
Soluble Calcium, Ca	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Chromium, Cr	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Cobalt, Co	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.05
Soluble Copper, Cu	mg/kg	0.25	n.d.	n.d.	n.d.	≤5.0
Soluble Iron, Fe	mg/kg	5.0	n.d.	n.d.	n.d.	≤48

Test Parameter	Units	MDL	Test Results			Permissible Limit
			1#, 1st	1#, 2nd	1#, 3rd	
Soluble Lead, Pb	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Lithium, Li	mg/kg	0.1	n.d.	n.d.	n.d.	≤0.6
Soluble Magnesium, Mg	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Manganese, Mn	mg/kg	0.1	n.d.	n.d.	n.d.	≤0.6
Soluble Mercury, Hg	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Nickel, Ni	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.02
Soluble Potassium, K	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Sodium, Na	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Zinc, Zn	mg/kg	0.5	n.d.	n.d.	n.d.	≤5.0
Soluble Europium, Eu	mg/kg	0.025	n.d.	n.d.	n.d.	Sum of Eu, Gd, La, Tb, ≤0.05
Soluble Gadolinium, Gd	mg/kg	0.025	n.d.	n.d.	n.d.	
Soluble Lanthanum, La	mg/kg	0.025	n.d.	n.d.	n.d.	
Soluble Terbium, Tb	mg/kg	0.025	n.d.	n.d.	n.d.	
Comment(s)	---	---	PASS	PASS	PASS	---

Test Parameter	Units	MDL	Test Results			Permissible Limit
			2#, 1st	2#, 2nd	2#, 3rd	
Test Media			3% acetic acid			---
Temperature, ℃			70.0	70.0	70.0	---
Contact Time, hour			2.0	2.0	2.0	---
Soluble Aluminum, Al	mg/kg	0.1	n.d.	n.d.	n.d.	≤1.0
Soluble Ammonium, NH_4	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Antimony, Sb	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.04
Soluble Arsenic, As	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Barium, Ba	mg/kg	0.25	n.d.	n.d.	n.d.	≤1.0
Soluble Cadmium, Cd	mg/kg	0.002	n.d.	n.d.	n.d.	ND (LOD 0.002)
Soluble Calcium, Ca	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Chromium, Cr	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Cobalt, Co	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.05
Soluble Copper, Cu	mg/kg	0.25	n.d.	n.d.	n.d.	≤5.0
Soluble Iron, Fe	mg/kg	5.0	n.d.	n.d.	n.d.	≤48
Soluble Lead, Pb	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Lithium, Li	mg/kg	0.1	n.d.	n.d.	n.d.	≤0.6
Soluble Magnesium, Mg	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Manganese, Mn	mg/kg	0.1	n.d.	n.d.	n.d.	≤0.6

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Test Parameter	Units	MDL	Test Results			Permissible Limit
			2#, 1st	2#, 2nd	2#, 3rd	
Soluble Mercury, Hg	mg/kg	0.01	n.d.	n.d.	n.d.	ND
Soluble Nickel, Ni	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.02
Soluble Potassium, K	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Sodium, Na	mg/kg	0.1	n.d.	n.d.	n.d.	---
Soluble Zinc, Zn	mg/kg	0.5	n.d.	n.d.	n.d.	≤5.0
Soluble Europium, Eu	mg/kg	0.025	n.d.	n.d.	n.d.	Sum of Eu, Gd, La, Tb, ≤0.05
Soluble Gadolinium, Gd	mg/kg	0.025	n.d.	n.d.	n.d.	
Soluble Lanthanum, La	mg/kg	0.025	n.d.	n.d.	n.d.	
Soluble Terbium, Tb	mg/kg	0.025	n.d.	n.d.	n.d.	
Comment(s)	---	---	PASS	PASS	PASS	---

1.2.3. Specific migration test of primary aromatic amine

Test method: Sample preparation with reference to EN 13130-1:2004, followed by analysis with reference to DIN 55610:1986, via LCMSMS

Test Parameter	Units	MDL	Test Results			Permissible Limit
			1#, 1st	1#, 2nd	1#, 3rd	
Test Media			3% acetic acid			---
Temperature, ℃			70.0	70.0	70.0	---
Contact Time, hour			2.0	2.0	2.0	---
Specific migration of 4-aminobiphenyl / 4-biphenylamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of o-anisidine / 2-methoxyaniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of Benzidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-Chloro-aniline / p-chloroaniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-Chloro-o-toluidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-Diaminodiphenylether / 4,4'-oxydianiline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-Methylenedianiline / 4,4'-diamino-diphenylmethane	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4-Methylenedi-o-toluidine /3,3'-dimethyl-4,4'-diaminodiphenylmethane	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2-Methoxy-5-methylaniline / p-cresidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-Methoxy-mphenylenediamine/ 2,4-diaminoanisole	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002

Test Parameter	Units	MDL	Test Results			Permissible Limit
			1#, 1st	1#, 2nd	1#, 3rd	
Specific migration of o-Toluidine / 2-aminotoluene	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,4-Toluenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 3,3-Dimethylbenzidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,4,5-Trimethylaniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of m-Phenylenediamine / 1,3-Phenylenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2-naphthylamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of o-aminoazotoluene/ 4-amino-2',3-dimethylazobenzene/ 4-otolylazo-o-toluidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 5-nitro-o-toluidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 3,3'-dichlorobenzidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 3,3'-dimethoxybenzidine / odianisidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-methylene-bis-(2-chloroaniline) / 2,2'-dichloro-4,4'-methylene-dianiline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-thiodianiline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-amino azobenzene	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of Aniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,4-dimethylaniline/2,4-xylidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,6-dimethylaniline/ 2,6-xylidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of m-phenylenediamine/ 1,3-phenylenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of p-phenylenediamine/ 1,4-phenylenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,6-toluenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 1,5-diaminenaphthalene	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of primary aromatic amine	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.01
Comment(s)	---	---	PASS	PASS	PASS	---

Test Parameter	Units	MDL	Test Results			Permissible Limit
			2#, 1st	2#, 2nd	2#, 3rd	
Test Media			3% acetic acid			---
Temperature, ℃			70.0	70.0	70.0	---
Contact Time, hour			2.0	2.0	2.0	---
Specific migration of 4-aminobiphenyl / 4-biphenylamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of o-anisidine / 2-methoxyaniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of Benzidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-Chloro-aniline / p-chloroaniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-Chloro-o-toluidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-Diaminodiphenylether / 4,4'-oxydianiline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-Methylenedianiline / 4,4'-diamino-diphenylmethane	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4-Methylenedi-o-toluidine /3,3'-dimethyl-4,4'-diaminodiphenylmethane	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2-Methoxy-5-methylaniline / p-cresidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-Methoxy-mphenylenediamine/ 2,4-diaminoanisole	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of o-Toluidine / 2-aminotoluene	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,4-Toluenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 3,3-Dimethylbenzidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,4,5-Trimethylaniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of m-Phenylenediamine / 1,3-Phenylenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2-naphthylamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of o-aminoazotoluene/ 4-amino-2',3-dimethylazobenzene/ 4-otolylazo-o-toluidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 5-nitro-o-toluidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 3,3'-dichlorobenzidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002

Test Parameter	Units	MDL	Test Results			Permissible Limit
			2#, 1st	2#, 2nd	2#, 3rd	
Specific migration of 3,3'-dimethoxybenzidine / odianisidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-methylene-bis-(2-chloroaniline) / 2,2'-dichloro-4,4'-methylene-dianiline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4,4'-thiodianiline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 4-amino azobenzene	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of Aniline	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,4-dimethylaniline/2,4-xylidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,6-dimethylaniline/ 2,6-xylidine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of m-phenylenediamine/ 1,3-phenylenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of p-phenylenediamine/ 1,4-phenylenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 2,6-toluenediamine	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of 1,5-diaminenaphthalene	mg/kg	0.002	n.d.	n.d.	n.d.	≤0.002
Specific migration of primary aromatic amine	mg/kg	0.01	n.d.	n.d.	n.d.	≤0.01
Comment(s)	---	---	PASS	PASS	PASS	---

1.2.4. Specific Migration of Bisphenol A

Test Method: sample preparation with reference to EN 13130-1:2004 and CEN/TS 13130-13:2005, followed by analysis using UPLC-MS-MS.

Test Parameter	Units	MDL	Test Results			Permissible Limit
			1#, 1st	1#, 2nd	1#, 3rd	
Test Media			3% acetic acid			---
Temperature, ℃			70.0	70.0	70.0	---
Contact Time, hour			2.0	2.0	2.0	---
Specific migration of Bisphenol A	μg/kg	1.0	n.d.	n.d.	n.d.	Not detected
Comment(s)	---	---	PASS	PASS	PASS	---

1.2.5. Specific migration of softeners and phthalates

Test Method: Sample preparation with reference to EN 13130-1:2004, followed by analysis with GC/MS

Test Parameter	Units	MDL	Test Results			Permissible Limit
			1#, 1st	1#, 2nd	1#, 3rd	
Test Media			3% acetic acid			---

Test Parameter	Units	MDL	Test Results			Permissible Limit
			1#, 1st	1#, 2nd	1#, 3rd	
Temperature, ℃			70.0	70.0	70.0	---
Contact Time, hour			2.0	2.0	2.0	---
Specific migration of phthalic acid, bis (2-ethylhexyl) ester ('DEHP')	mg/kg	0.05	n.d.	n.d.	n.d.	≤0.6
Specific migration of phthalic acid, dibutyl ester ('DBP')	mg/kg	0.05	n.d.	n.d.	n.d.	≤0.12
Specific migration of phthalic acid, benzyl butyl ester ('BBP')	mg/kg	0.05	n.d.	n.d.	n.d.	≤6
Specific migration of phthalic acid, diesters with primary, saturated C_8-C_{10} branched alcohols, more than 60% C_9 ('DINP')	mg/kg	0.05	n.d.	n.d.	n.d.	Not detected
Specific migration of DIDP	mg/kg	0.05	n.d.	n.d.	n.d.	≤9
Specific migration of DEHT	mg/kg	0.05	n.d.	n.d.	n.d.	≤60
Specific migration of DEHA	mg/kg	0.05	n.d.	n.d.	n.d.	≤18
Specific migration of other phthalates and softeners	mg/kg	0.05	n.d.	n.d.	n.d.	≤0.05
Comment(s)	---	---	PASS	PASS	PASS	---
Comment(s)	---	---	PASS	PASS	PASS	---

1.2.6. Total Lead and Cadmium Content

Test Method: with reference to EN 1122, analysis was performed by ICP-OES/ AAS.

Test Parameter	Units	MDL	Test Results	Permissible Limit
			1#	
Total Lead Content	mg/kg	2	n.d.	40, max
Total Cadmium Content	mg/kg	2	n.d.	20, max

1.2.7. Peroxide Value

Test Method: with reference to European Pharacopeia 5.0, Ph.Eur. Method 2.5.5

Test Parameter	Units	MDL	Test Results	Permissible Limit
			1#	
Peroxide value	---	---	Neg.	Negative

1.2.8. Additional requirements for PP materials

1.2.8.1. Catalyst residue, Chromium, Vanadium, Zirconium and Hafnium Content

Test Method: with reference to EN 1122, analysis was performed by ICP-OES/ AAS

Test Parameter	Units	MDL	Test Results	Permissible Limit
			1#	
Total Chromium Content	mg/kg	2	n.d.	≤10
Total Vanadium Content	mg/kg	5	n.d.	≤20

Test Parameter	Units	MDL	Test Results	Permissible Limit
			1#	
Total Zirconium Content	mg/kg	10	n.d.	≤100
Total Hafnium Content	mg/kg	10	n.d.	≤100

1.2.9. Special requirements for Silicone materials

1.2.9.1. Organotin content (Monobutyltin, MBT; Dibutyltin, DBT; Tributyltin, TBT; Tetrabutyltin, TTBT; Monooctyltin, MOT; Dioctyltin, DOT; Tricyclohexyltin, TcyT)

Test Method: Solvent extraction followed by analysis using Gas Chromatography Spectrometer.

Test Parameter	Units	MDL	Test Results	Permissible Limit
			2#	
Monobutyltin, MBT	mg/kg	0.10	n.d.	1.0, max
Dibutyltin, DBT	mg/kg	0.01	n.d.	0.05, max
Tributyltin, TBT	mg/kg	0.01	n.d.	0.05, max
Tetrabutyltin, TeBT	mg/kg	0.01	n.d.	Sum of MBT, DBT, TBT, TTBT, MOT, DOT, TcyT: 2.5, max
Monooctyltin, MOT	mg/kg	0.01	n.d.	
Dioctyltin, DOT	mg/kg	0.01	n.d.	
Tricyclohexyltin, TcyT	mg/kg	0.01	n.d.	
Methyltin, MeT	mg/kg	0.01	n.d.	
Tripropytin, TPT	mg/kg	0.01	n.d.	
Dimethyltin, DMT	mg/kg	0.10	n.d.	

1.2.9.2. Peroxide value

Test Method: with reference to European Pharmacopoeia, 2005 Appendix XF, Peroxide Value method A

Test Parameter	Units	MDL	Test Results	Permissible Limit
			2#	
Peroxide value	---	---	Neg.	Negative

1.2.9.3. Volatile organic matter (VOM)

Test Method: with reference to https://www.bfr.bund.de/cm/343/bestimmung-von-fluechtigen-verbindungen-in-bedarfsgegenstaenden-aus-silikon.pdf; articles that do not withstand thermal testing according to the above method shall be tested according to the temperature/time conditions specified in Table 3 in Annex V of Regulation (EU) No 10/2011. Sample conditioning is to be carried out according to the method specified in the 61st Communication of Bundesgesundheitsblatt 46 (2003) 362. This ap-plies to composite materials or articles with plastic or textiles such as conveyor belts, coated textiles or two-component injection molded parts for seals.

Test Condition: 4hours at 200℃

Test Parameter	Units	MDL	Test Results	Permissible Limit
			2#	
Volatile organic matter	%	0.01	0.42	0.5, max

1.2.9.4. Remaining Catalyst residue

Test Method: acidic digestion, analyzed was performed by ICP-OES

Test Parameter	Units	MDL	Test Results	Permissible Limit
			2#	
Total Lead content	mg/kg	2.0	n.d.	40, max
Total Cadmium content	mg/kg	2.0	n.d.	20, max
Total Platinum content	mg/kg	2.0	n.d.	50, max
Comment(s)			PASS	---

1.2.9.5. Specific migration of organotin (as Tin)

Test method: with reference to EN 1313-1, analyzed by ICP-OES, ICP-MS

Test Parameter	Units	MDL	Test Results	Permissible Limit
			2#	
Test Media			3% acetic acid	---
Temperature, ℃			70.0	---
Contact Time, hour			2.0	---
Specific migration of organotin (as Tin)	mg/kg	0.01	n.d.	≤0.1
Comment(s)	---	---	PASS	---

1.3. Bisphenol A content

Test Method: with reference to CEN/TS 13130-13-2005, solvent extracted, followed analyzed by GC/MS and LC/MS/MS

Test Parameter	Units	MDL	Test Results		Permissible Limit
			1#	2#	
Bisphenol A content BPA, CAS No.80-05-7	μg/kg	1.0	n.d.	n.d.	Not detected

1.4. PAHs content

Test Method: With reference to AfPS GS 2019:01, Analysis was performed by GC-MS.

Test Parameter	Units	MDL	Test Results		Permissible Limit
			1#	2#	
Naphthalene	mg/kg	0.2	n.d.	n.d.	Refer to form
Phenanthrene	mg/kg	0.2	n.d.	n.d.	Refer to form
Anthracene	mg/kg	0.2	n.d.	n.d.	Refer to form
Fluoranthene	mg/kg	0.2	n.d.	n.d.	Refer to form
Pyrene	mg/kg	0.2	n.d.	n.d.	Refer to form
Benzo[a]anthracene	mg/kg	0.2	n.d.	n.d.	Refer to form
Chrysene	mg/kg	0.2	n.d.	n.d.	Refer to form
Benzo[b]fluoranthene	mg/kg	0.2	n.d.	n.d.	Refer to form
Benzo[k]fluoranthene	mg/kg	0.2	n.d.	n.d.	Refer to form
Benzo[a]pyrene	mg/kg	0.2	n.d.	n.d.	Refer to form
Indeno[1,2,3-cd]pyrene	mg/kg	0.2	n.d.	n.d.	Refer to form
Dibenzo[a,h]anthracene	mg/kg	0.2	n.d.	n.d.	Refer to form

Test Parameter	Units	MDL	Test Results		Permissible Limit
			1#	2#	
Benzo[g,h,i]perylene	mg/kg	0.2	n.d.	n.d.	Refer to form
Benzo[j[fluoranthene	mg/kg	0.2	n.d.	n.d.	Refer to form
Benzo[e]pyrene	mg/kg	0.2	n.d.	n.d.	Refer to form
Sum of 15 PAHs	mg/kg	---	n.d.	n.d.	Refer to form
Comment(s)	---	---	Cat.1 PASS	Cat.1 PASS	Refer to form

LIMITS FOR PAH IN PRODUCTS according to AfPS Document GS 2019:01

Parameter	Materials, that are intended to be put into the mouth or materials in toys with intended and prolonged skin-contact (longer than 30s)	Materials, not covered by category 1, with foreseeable skin-contact of > 30 s (prolonged skin-contact) or short-term repetitive contact with the human skin		Materials, not covered by category 1 or 2, with foreseeable skin-contact of up to 30 s (short-term skin contact)	
		Toys according to Toy Directive 2009/48/EU	Other products according to Product Safety Act	Toys according to Toy Directive 2009/48/EU	Other products according to Product Safety Act
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]fluoroanthene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[j]fluoranthene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[k]fluoroanthene	<0.2	<0.2	<0.5	<0.5	<1
Benzo[g,h,i]perylene	<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
Indeno[1,2,3-cd]pyrene	<0.2	<0.2	<0.5	<0.5	<1
Phenanthrene, Pyrene, Anthracene, Fluoranthene	Sum<1	Sum<5	Sum<10	Sum<20	Sum<50
Naphthalene	<1	<2	<2	<10	<10
Sum 15 PAHs	<1	<5	<10	<20	<50

Note:

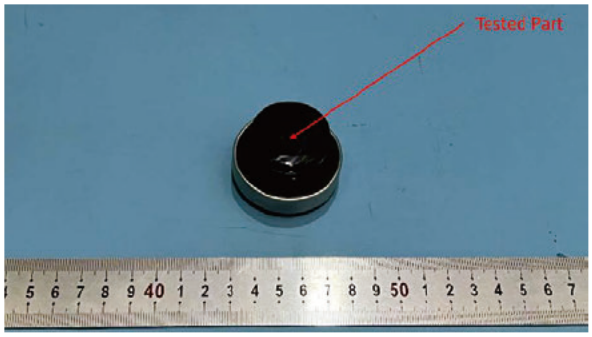
1. The products in category 2 and category 3 are divided into two groups with respective limits: toys according to directive 2009/48/EC and all other products according to ProdSG.
2. Add the requirement of repeated short term skin contact material in category 2

Note,

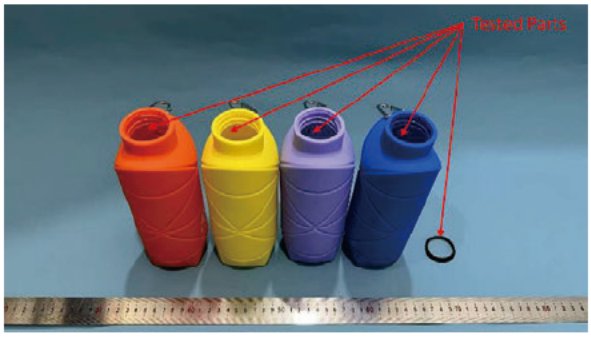
%, percentage; mg, milligrams; g, grams; kg, kilograms
mg/kg = milligrams per kilograms; mg/L = milligrams per litre
0.1% = 1000mg/kg = 1000mg/L
< = less than; > = greater than
MDL = method detection limit
n.d. = not detected, < MDL
n.a. = not applicable
n.r. = not required
EX = abbr. of Exempted

***** To be continued *****

SAMPLE IMAGE



1#



2#

Tested sample

Tested sample

Tested sample

Tested sample

Group sample

********** END OF REPORT **********