



Test Report **No.: 70.431.24.30489.01**
Date: 2024-03-08

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
Testing Center

Prepared by:

Rainie Dai

Authorized by:

Neko Ding

Rainie Dai
Reporting Representative

Neko Ding
Director

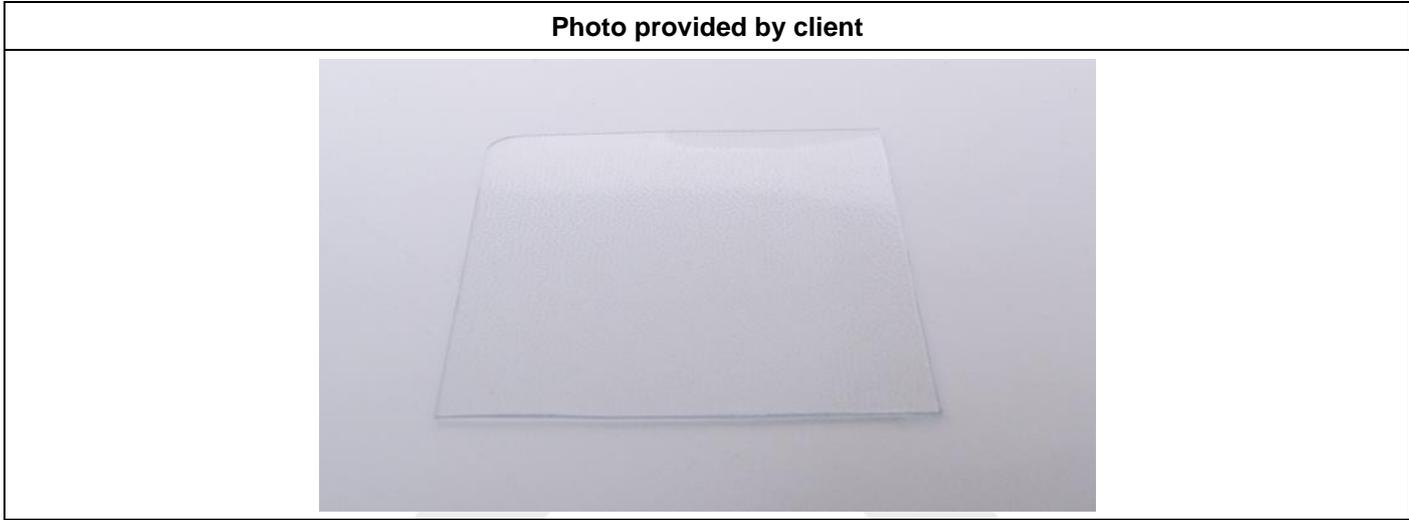
Note:

- (1) The TÜV SÜD Certification and Testing (China) Co., Ltd. "General Terms & Conditions" applied.
Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
For further details, please see "Testing and certification regulation", chapter A-3.4
For full version, please visit: EN : <https://www.tuvsud.cn/zh-cn/resource/terms-and-conditions---en> ; SCN: <https://www.tuvsud.cn/zh-cn/terms-and-conditions> ; TCN: <https://www.tuvsud.com/zh-tw/terms-and-conditions>
- (2) The results relate only to the Items tested.
- (3) The test report shall not be reproduced except in full without the written approval of the laboratory
- (4) **Disclaimer Measurement Uncertainty:**
Unless otherwise agreed upon, Pass or Fail verdicts are given based on the measured values without any considerations of measurement uncertainties.
Please note, every test method has a measurement uncertainty which has been evaluated by the laboratory according to ISO/IEC 17025 requirements.
By taking measurement uncertainties into account it might happen that measured values can neither be assessed as Pass nor as Fail.



Test Report **No.:** 70.431.24.30489.01
Date: 2024-03-08

Description of Tested Subject:



Sample	Description
001	Transparent soft plastic





Test Report No.: 70.431.24.30489.01
Date: 2024-03-08

Test Result(s):

1. EU-Regulation (EU) No 10/2011 and its amendments -Specific Migration of Total Primary Aromatic Amine

- With reference to EN 13130-1:2004, followed by UV-Vis.
- Test condition: 3% Acetic acid, 70°C for 2 hours
- Sample 001 Migration ratio: 100mL/0.6dm²

Test Item(s)	Result(s) [mg/kg]			Method Detection Limit [mg/kg]	Maximum Permissible Limit [mg/kg]	Conclusion
	001 1 st migration	001 2 nd migration	001 3 rd migration			
Total Primary Aromatic Amine	ND	ND	ND	0.01	ND	Pass

Note: 1. Test condition and simulant were specified by client.

2. EU-Regulation (EU) No 10/2011 and its amendments -Specific Migration of Primary Aromatic Amine (29)

- With reference to EN 13130-1:2004, followed by LC-MS-MS
- Test condition: 3% Acetic acid, 70°C for 2 hours
- Sample 001 Migration ratio: 100mL/0.6dm²

No.	Prohibited Amines	CAS No.	MDL [mg/kg]	Limit [mg/kg]	Result(s) [mg/kg]		
					001 1 st migration	001 2 nd migration	001 3 rd migration
1	4-Aminobiphenyl	92-67-1	0.002	0.002	ND	ND	ND
2	4,4'-Benzidine	92-87-5	0.002	0.002	ND	ND	ND
3	4-Chloro-2-methylaniline	95-69-2	0.002	0.002	ND	ND	ND
4	2-Naphthylamine	91-59-8	0.002	0.002	ND	ND	ND
5	o-Aminoazotoluene	97-56-3	0.002	0.002	ND	ND	ND
6	5-Nitro-o-tolidine	99-55-8	0.002	0.002	ND	ND	ND
7	4-Chloroaniline	106-47-8	0.002	0.002	ND	ND	ND
8	4-Methoxy-1,3-phenylenediamine	615-05-4	0.002	0.002	ND	ND	ND
9	Bis-(4-aminophenyl) methane	101-77-9	0.002	0.002	ND	ND	ND
10	3,3'-Dichlorobenzidine	91-94-1	0.002	0.002	ND	ND	ND
11	3,3'-Dimethoxybenzidine	119-90-4	0.002	0.002	ND	ND	ND
12	o-Tolidine	119-93-7	0.002	0.002	ND	ND	ND
13	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	0.002	0.002	ND	ND	ND
14	2-Methoxy-5-methylaniline	120-71-8	0.002	0.002	ND	ND	ND
15	4,4'-Methylene bis(o-chloroaniline)	101-14-4	0.002	0.002	ND	ND	ND
16	4,4'-Oxydianiline	101-80-4	0.002	0.002	ND	ND	ND
17	4,4'-Thiodianiline	139-65-1	0.002	0.002	ND	ND	ND
18	o-Tolidine	95-53-4	0.002	0.002	ND	ND	ND
19	2,4-Diaminotoluene	95-80-7	0.002	0.002	ND	ND	ND
20	2,4,5-Trimethylaniline	137-17-7	0.002	0.002	ND	ND	ND
21	o-Anisidine	90-04-0	0.002	0.002	ND	ND	ND
22	4-Amino-azobenzene	60-09-3	0.002	0.002	ND	ND	ND



Test Report No.: 70.431.24.30489.01
Date: 2024-03-08

23	1,3-Phenylenediamine	108-45-2	0.002	0.002	ND	ND	ND
24	2,4-Dimethylaniline	95-68-1	0.002	0.01	ND	ND	ND
25	2,6-Dimethylaniline	87-62-7	0.002	0.01	ND	ND	ND
26	Aniline	62-53-3	0.002	0.01	ND	ND	ND
27	1,4-Phenylenediamine	106-50-3	0.002	0.01	ND	ND	ND
28	2,6-Diaminotoluene	823-40-5	0.002	0.01	ND	ND	ND
29	1,5-Diaminonaphthalene	2243-62-1	0.002	0.01	ND	ND	ND
Conclusion					Pass	Pass	Pass

Note: 1. Test condition and simulant were specified by client.

3. Germany-German Food & Feed Acts LFGB Section 30 and BfR Recommendation-Specific Migration of vinylidene chloride

- With reference to EN 13130-1:2004, followed by HS-GCMS.
- Test condition: 3% Acetic acid, 70°C for 2 hours
- Sample 001 Migration ratio: 100mL/0.6dm²

Test Item(s)	Result(s) [mg/kg]	Maximum Permissible Limit [mg/kg]	Conclusion
	001		
Specific Migration of vinylidene chloride	<0.01	0.01	Pass

Note: 1. Test condition and simulant were specified by client

4. Germany-German Food & Feed Acts LFGB Section 30 and BfR Recommendation-Peroxide Value

- With reference to Bundesgesundheitsbl. 40 (1997), 412

Test Item(s)	Result(s)	Maximum Permissible Limit	Conclusion
	001		
Peroxide Value	Absent	Absent	Pass

5. Germany-German Food & Feed Acts LFGB Section 31 and BfR Recommendation -Overall Migration

- With reference to EN1186-1:2002 for selection of test methods;
EN1186-3:2022 aqueous food simulants by total immersion method;
- Sample 001 Migration ratio: 233mL/2.33dm²

Simulant(s) Used	Test Condition	Maximum Permissible Limit [mg/dm ²]	Overall Migration Result(s) [mg/dm ²]			Conclusion
			001 1 st migration	001 2 nd migration	001 3 rd migration	
3% Acetic acid	70°C for 2 hours	10	<3.0	<3.0	<3.0	Pass

- Note:
1. mg/dm² denotes milligram per square decimeter foodstuff
 2. < denotes less than
 3. Test condition and simulant were specified by client



Test Report

No.: 70.431.24.30489.01

Date: 2024-03-08

6. Germany-German Food & Feed Acts LFGB Section 31 and BfR Recommendation -Specific Migration of Heavy Metals

- With reference to EN 13130-1:2004&ISO 17294-2:2016, followed by ICP-MS.
- Test condition: 3% Acetic acid, 70°C for 2 hours
- Sample 001 Migration ratio: 388mL/2.33dm²

Test Item(s)	MDL [mg/kg]	Limit [mg/kg]	Result(s) [mg/kg]			Conclusion
			001 1 st migration	001 2 nd migration	001 3 rd migration	
Iron (Fe)	1	48	ND	ND	ND	Pass
Zinc (Zn)	1	5	ND	ND	ND	Pass
Copper (Cu)	0.5	5	ND	ND	ND	Pass
Manganese (Mn)	0.05	0.6	ND	ND	ND	Pass
Cobalt (Co)	0.05	0.05	ND	ND	ND	Pass
Barium (Ba)	0.1	1	ND	ND	ND	Pass
Lithium (Li)	0.1	0.6	ND	ND	ND	Pass
Aluminium (Al)	0.1	1	ND	ND	ND	Pass
Nicke (Ni)	0.01	0.02	ND	ND	ND	Pass
Antimony (Sb)	0.01	0.04	ND	ND	ND	Pass
Arsenic (As)	0.01	0.01	ND	ND	ND	Pass
Cadmium (Cd)	0.002	0.002	ND	ND	ND	Pass
Chromium (Cr)	0.01	0.01	ND	ND	ND	Pass
Lead (Pb)	0.01	0.01	ND	ND	ND	Pass
Mercury (Hg)	0.01	0.01	ND	ND	ND	Pass
Europium (Eu)	0.01	Sum 0.05	ND	ND	ND	Pass
Gadolinium (Gd)			ND	ND	ND	Pass
Lanthanum (La)			ND	ND	ND	Pass
Terbium (Tb)			ND	ND	ND	Pass

- Note:
1. mg/kg denotes milligram per kilogram foodstuff
 2. ND denotes not detected
 3. Test condition and simulant were specified by client



Test Report **No.: 70.431.24.30489.01**
Date: 2024-03-08

7. Germany-German Food & Feed Acts LFGB Section 31 and BfR Recommendation-Sensory Test

- Test with reference to DIN 10955:2023.
- Test condition: Distilled water, 70°C for 2 hours
- Volume of stimulant:233mL

Sample(s)	Testing Parameter	Grading result(s)	Recommended level	Conclusion
001	Appearance	0.5	<3	Pass
	Transfer of taste	0.5	<3	Pass
	Transfer of smell	0.5	<3	Pass

Note: Available grading are listed as follow:

- Grading 0: No perceptible appearance/taste/smell deviation
- 1: Just perceptible appearance/taste/smell deviation
- 2: Weak appearance/taste/smell deviation
- 3: Clear appearance/taste/smell deviation
- 4: Strong appearance/taste/smell deviation

