Test Report

Applicant: [redacted] CO.,LTD

Address: [redacted]

The following sample(s) was (were) submitted and identified by client as:

Sample Description	:	Crystal water bottle
Model No.	:	CHSP-SSSC550
Country of Destination	:	EU, Germany
Use Mode	:	Repeated use
Manufacturer	:	[redacted] CO.,LTD
Supplier	:	[redacted] CO.,LTD
Sample Received Date	:	Dec. 29, 2018
Testing Period	:	From Dec. 29, 2018 to Jan. 4, 2019
Test Request	:	Please refer to next page(s).
Test Result(s)	:	Please refer to next page(s).

Signed for and on behalf of Shen Zhen UONE Test Co., LTD.

Prepared by	Checked by	Approved by
Anna		
Anna Li	Nora Deng	Pascal Shi
Engineer	Supervisor	Technical Director

SHENZHEN UONE TEST CO.,LTD TESTING SERVICE

Summary of Test Results:

	TEST REQUEST	CONCLUSION
(1)	German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments & BfR recommendation. Regulation AP(2004)4 & 93/11/EEC - for silicone rubber materials	
	Sensory test	PASS
	Overall Migration	
	- 10% Ethanol	PASS
	Volatile organic matter (VOM)	PASS
(2)	German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments & BfR recommendation. Regulation (EC) No 10/2011 - for plastic materials	
	Overall Migration	
	- 10% Ethanol	PASS
	Specific migration of heavy metal	PASS
	Migration of primary aromatic amines	PASS
	Total Chromium(Cr), Vanadium(V), Zirconium(Zr)	PASS
(3)	German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments & BfR recommendation. Regulation CM/Res(2013)9 - for metal materials	
	Specific migration of heavy metal	PASS
(4)	German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 & 31 with amendments & BfR recommendation. Regulation 84/500/EEC & 2005/31/EC - for Glass materials	
	Leachable Lead and Cadmium	PASS

Test Material(s) List

Material No.	Description (Location)
1	Silvery metal (cover,304)
2	Black plastic (inside cover,pp)
3	White silicone rubber (gasket,cover/bottom)
4	Transparent glass (cup)
5	Pink glass (crystal stone)
6	White glass (crystal stone)
7	Black glass (crystal stone)
8	Yellow glass (crystal stone)
9	Brown glass (crystal stone)
10	Purple glass (crystal stone)
11	Dark green glass (crystal stone)

Test result(s):

(1) For silicone rubber materials

(1.1) Sensory test

Test Method: With reference to DIN10955:2004.

Test Items	Limit	Test Result
		3
Sensorial examination odour (Point scale)	2.5	1
Sensorial examination taste (Point scale)	2.5	1
Conclusion		PASS

Notes: 1. Scale evaluation:

0: No perceptible odour/taste

1: Odour/taste just perceptible (still difficult to define)

2: Moderate odour/taste

3: Moderately strong odour/taste

4: Strong odour/taste.

(1.2) Overall Migration

Test Method: EN 1186-1:2002 & EN 1186-3:2002

Simulant Used	Unit	Limit	RL	Test Result	Conclusion
				3	
Overall Migration - 10% Ethanol (reflux temperature, 5h)	%	0.5	0.1	N.D.	PASS

Note: 1. % = Weight percentage.
2. N.D. = Not Detected (< RL).
3. RL = Reporting Limit.

(1.3) Volatile organic matter (VOM)

Test Method: With reference to 61st Mitteilung über die Untersuchung von Kunststoffen, Bundesgesundheitsbl 46 (2003)362

Material No.	RL (%)	Limit (%)	Test Result (%)	Conclusion
3	0.01	0.50	0.04	PASS

Note: 1. % = Weight percentage.
2. N.D. = Not Detected (< RL).
3. RL = Reporting Limit

Remark: The test results of Material No. 3 is copied from the test report No. U026011812062319-2, dated Jan. 18, 2019.

(2) For plastic materials

(2.1) Overall Migration

Test Method: EN 1186-1:2002 & EN 1186-3:2002

Simulant Used	Unit	Limit	RL	Test Result	Conclusion
				2	
Overall Migration - 10% Ethanol (70℃, 2h)	mg/dm^2	10	1	N.D.	PASS

Note: 1. mg/dm^2 = milligram per square decimeter
2. N.D. = Not Detected (< RL).
3. RL = Reporting Limit.

(2.2) Specific migration of heavy metal

Test Method: EN 13130-1: 2004. The heavy metals content was determined by Inductively Coupled Plasma Mass Spectrometer.

Test Condition: 3% acetic acid, 70℃, 2h

Test Item	Unit	Limit	RL	Test Result
				2
Aluminum (Al)	mg/kg	1	0.05	N.D.
Manganese (Mn)	mg/kg	0.6	0.05	N.D.
Iron (Fe)	mg/kg	48	0.05	N.D.
Cobalt (Co)	mg/kg	0.05	0.01	N.D.
Copper (Cu)	mg/kg	5	0.05	N.D.
Zinc (Zn)	mg/kg	5	0.1	N.D.
Barium (Ba)	mg/kg	1	0.05	N.D.
Nickel (Ni)	mg/kg	0.02	0.01*	N.D.
Lithium (Li)	mg/kg	0.6	0.02	N.D.
Conclusion				PASS

Note: 1. mg/kg = milligram per kilogram.
2. N.D. = Not Detected (< RL).
3. RL = Reporting Limit.
4. *This limit will come into force on May 19, 2019.

(2.3) Migration of primary aromatic amines

Test Method: With reference to Official Collection of Testing Methods (Amtliche Sammlung von Untersuchungsverfahren nach § 64 LFGB, L. No. 00.00-6. See 62. Mitteilung zur Untersuchung von Kunststoffen

Test Condition: 3% acetic acid, 70℃, 2h

Material No.	RL (mg/kg)	Limit (mg/kg)	Test Result (mg/kg)	Conclusion
2	0.01	0.01	N.D.	PASS

Note: 1. μg/L = Micrograms per liter.
2. N.D. = Not Detected (< RL).
3. RL = Reporting Limit

(2.4) Total Chromium(Cr), Vanadium(V), Zirconium(Zr)

Test Method: With reference to US EPA 3052: 1996 & US EPA 6010C: 2007, was analyzed by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES).

Test Item	Unit	Limit	RL	Test Result
				2
Chromium(Cr)	mg/kg	10	2	N.D.
Vanadium(V)	mg/kg	20	2	N.D.
Zirconium(Zr)	mg/kg	100	2	N.D.
Conclusion				PASS

Note: 1. mg/kg = milligram per kilogram.
2. N.D. = Not Detected (< RL).
3. RL = Reporting Limit.

(3) For metal materials

Specific migration of heavy metal

Test Method: with reference to CM/Res (2013)9 on Metals and alloys used in food contact materials and article, was analyzed by Atomic Absorption Spectroscopy (AAS) or Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES).

Test Condition: Artificial tap water, (70℃, 2h)×3 times; Soaking area: 110cm^2, Soaking volume: 200mL

Test Item	RL (mg/kg)	Limit (mg/kg)		Result (mg/kg)		Conclusion
				1		
		Migration of 1st+2nd	Migration of 3rd	Migration of 1st+2nd	Migration of 3rd	
Aluminum (Al)	0.2	35.0	5.0	N.D.	N.D.	PASS
Antimony (Sb)	0.02	0.28	0.04	N.D.	N.D.	PASS
Chromium (Cr)	0.1	1.75	0.25	0.81	N.D.	PASS
Cobalt (Co)	0.01	0.14	0.02	N.D.	N.D.	PASS
Copper (Cu)	0.2	28.0	4.0	N.D.	N.D.	PASS
Ferrum (Fe)	0.5	280.0	40.0	3.77	N.D.	PASS
Manganese (Mn)	0.2	12.6	1.8	3.52	0.25	PASS
Molybdenum (Mo)	0.02	0.84	0.12	N.D.	N.D.	PASS
Nickle (Ni)	0.02	0.98	0.14	0.22	N.D.	PASS
Silver (Ag)	0.02	0.56	0.08	N.D.	N.D.	PASS
Tin (Sn)	1.0	700.0	100	N.D.	N.D.	PASS
Vanadium (V)	0.005	0.07	0.01	N.D.	N.D.	PASS
Zinc (Zn)	1.0	35.0	5.0	N.D.	N.D.	PASS
Arsenic (As)	0.001	0.014	0.002	N.D.	N.D.	PASS
Barium (Ba)	0.2	8.4	1.2	N.D.	N.D.	PASS
Beryllium (Be)	0.005	0.07	0.01	N.D.	N.D.	PASS
Cadmium (Cd)	0.002	0.035	0.005	N.D.	N.D.	PASS
Lead (Pb)	0.002	0.070	0.010	0.012	N.D.	PASS
Lithium (Li)	0.01	0.336	0.048	N.D.	N.D.	PASS
Mercury (Hg)	0.002	0.021	0.003	N.D.	N.D.	PASS
Thallium (Tl)	0.0001	0.0007	0.0001	N.D.	N.D.	PASS
Magnesium (Mg)	1.0	--	--	N.D.	N.D.	PASS
Titanium (Ti)	1.0	--	--	N.D.	N.D.	PASS

Note:
1. mg/kg = milligram per kilogram (ppm).
2. N.D. = Not Detected (< RL).
3. RL = Report Limit.

Remark: The test results of Material No. 1 are copied from the test report No. U026011812062319-2, dated Jan. 18, 2019.

(4) For Glass materials

Leachable Lead and Cadmium

Test Method: with reference to 84/500/EEC & 2005/31/EC, analyzed by ICP-OES.

Test Condition: 3% acetic acid, 22℃, 24h

Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					4
Lead (Pb)	3.6	228	0.8	0.1	N.D.
Cadmium (Cd)	3.6	228	0.07	0.01	N.D.
Conclusion					PASS

Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					5
Lead (Pb)	0.80	95	0.8	0.1	N.D.
Cadmium (Cd)	0.80	95	0.07	0.01	N.D.
Conclusion					PASS

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Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					6
Lead (Pb)	0.80	95	0.8	0.1	N.D.
Cadmium (Cd)	0.80	95	0.07	0.01	N.D.
Conclusion					PASS

Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					7
Lead (Pb)	0.80	95	0.8	0.1	N.D.
Cadmium (Cd)	0.80	95	0.07	0.01	N.D.
Conclusion					PASS

Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					8
Lead (Pb)	0.80	95	0.8	0.1	N.D.
Cadmium (Cd)	0.80	95	0.07	0.01	N.D.
Conclusion					PASS

Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					9
Lead (Pb)	0.80	95	0.8	0.1	N.D.
Cadmium (Cd)	0.80	95	0.07	0.01	N.D.
Conclusion					PASS

Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					10
Lead (Pb)	0.80	95	0.8	0.1	N.D.
Cadmium (Cd)	0.80	95	0.07	0.01	N.D.
Conclusion					PASS

Test Item(s)	Surface area (dm^2)	Depth (ml)	Limit (mg/dm^2)	RL (mg/dm^2)	Result (mg/dm^2)
					11
Lead (Pb)	0.80	95	0.8	0.1	N.D.
Cadmium (Cd)	0.80	95	0.07	0.01	N.D.
Conclusion					PASS

Note:
1. mg/dm^2 = milligram per square decimetre.
2. N.D. = Not Detected (< RL).
3. RL = Reporting Limit.

Remark: The test results of Material No. 4- No.11 are copied from the test report No. U026011812062319-2, dated Jan. 18, 2019.

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Photo(s) of Sample:

End of Report