

Applicant:

**Contact information:** 

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

Sample Description : Transparent Plastic Mask

Sample Received Date : Aug. 4, 2020

Testing Period : From Aug. 4, 2020 to Aug. 10, 2020

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

Marcia Deng

Checked by

,

UONE A

Approved by

Nora Deng

Levent Liang



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Summary of test results:

TEST REQUEST

ROHS Directive 2011/65/EU and its subsequent amendments & Directive (EU) 2015/863

To determine Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)),

(1) Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs) content by screening test and chemical test

(2) To determine Phthalates (DBP, BBP, DEHP, DIBP) content by chemical test

PASS



#### **Test Material List**

Material No.	Description (Location)	Photo(s) of tested materials		
1012 1 1012	White plastic	1 2 3 4		
2	Transparent plastic	0 45		
3	Translucent soft plastic(gasket)	T = 7 } 8		
4	White fabric(string)	9		

### Test Result(s):

(1) Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)

<u>Test Method:</u> IEC62321-3-1: 2013, IEC62321-4: 2013+A1:2017, IEC62321-5: 2013, IEC62321-6: 2015, IEC 62321-7-1:2015, IEC 62321-7-2: 2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

130	110	EDXRF Result (1)			110.	Chemical Result (2)	D 1 (2)	20, 120,
No.	Pb	Cd	Hg	Cr	Br	(mg/kg)	Remark <sup>(3)</sup>	Conclusion
11D	BL	BL	BL	BL	BL	10, 40, 10	101	PASS
2	BL	BL	BL	BL	BL	4 4.	U = U	PASS
3	BL	BL	BL	BL	BL	10 HD 10 10	AL IOHI	PASS
4	BL	BL	BL	BL	BL	- 0		PASS

#### Remark:

- (1) ①Results are obtained by EDXRF for primary screening, and further wet chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).
  - ②OL = Over Limit, BL = Below Limit, X = Inconclusive, NA = Not Applicable.
  - ③The EDXRF screening test for RoHS elements The reading may be different to the actual content in the sample be of non-uniformity composition.

Element	Polymer	Metal	Composite Materials
Cd	BL ≤(70-3σ)< X <(130+3σ)≤ OL	BL ≤(70-3σ)< X <(130+3σ)≤ OL	LOD < X <(150+3σ)≤ OL
Pb	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(500-3σ)< X

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10,	OL O	OL	<(1500+3σ)≤ OL
Gr.	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(500-3σ)< X
Hg	OL	OL	<(1500+3σ)≤ OL
Br	BL ≤ (300-3σ)< X	NA	BL ≤ (250-3σ)< X
Cr	BL ≤ (700-3σ)< X	BL ≤ (700-3σ)< X	BL ≤ (500-3σ)< X

#### Units and limits in EU RoHS Directive 2011/65/EU:

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit	1000	100	1000	1000	1000	1000

- (2) ① mg/kg = ppm = 0.0001%, N.D. = Not Detected (Less than RL).
  - ②Unit and RL (Report limit) in wet chemical test.

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RL	2	2	2	2	5	5

3According to IEC 62321-7-1:2015, result on Cr(VI) for metal sample is shown as Positive/Negative.

Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating.

Storage condition and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

- According to IEC 62321-3-1:2013, this column represents the results of wet chem test.
- (3) This column represents the exempted decoration of material or other related testing sample's information

### (2) Phthalates (DBP, BBP, DEHP, DIBP) content

Test Method: IEC 62321-8: 2017, analyzed by gas chromatographic- mass spectrometer (GC-MS).

Substances	DBP	ВВР	DEHP	DIBP	110 110
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	all a
Limit (mg/kg)	1000	1000	1000	1000	Conclusion
RL (mg/kg)	30	30	30	30	.b
Material No.	1041 104	Result	(mg/kg)	OHP 10HP	1011 10
1	N.D.	N.D.	N.D.	N.D.	PASS
2	N.D.	N.D.	N.D.	N.D.	PASS
3	N.D.	N.D.	N.D.	N.D.	PASS

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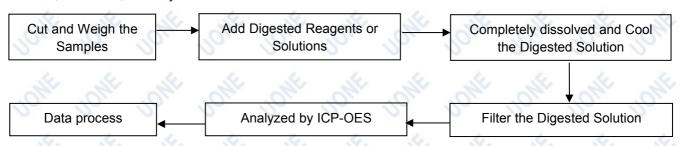
Substances	DBP	BBP	DEHP	DIBP	120 120
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	St. St.
Limit (mg/kg)	1000	1000	1000	1000	Conclusion
RL (mg/kg)	30	30	30	30	4. 4.
Material No.	104, 104,	Result (	(mg/kg)	10 <sub>16</sub> , 10 <sub>16</sub> ,	10/41 10/41
4	N.D.	N.D.	N.D.	N.D.	PASS

Note:

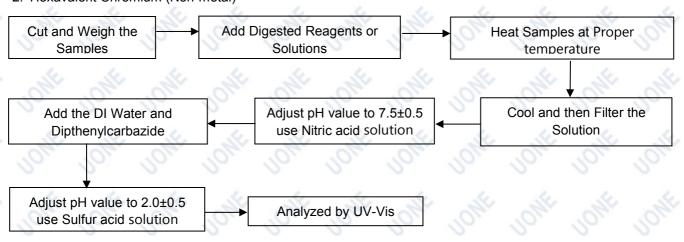
- 1. mg/kg = milligram per kilogram (ppm).
- 2. RL = report limit.
- 3. N.D.=not detected(less than RL).

#### **Test Process Flow**

### 1. Lead, Cadmium, Mercury



### 2. Hexavalent Chromium (Non-metal)



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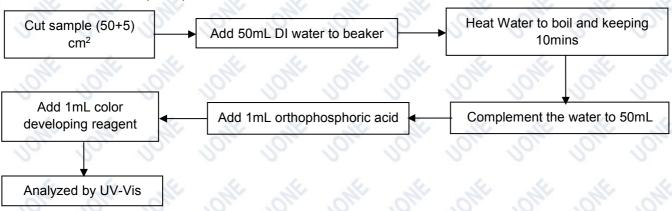
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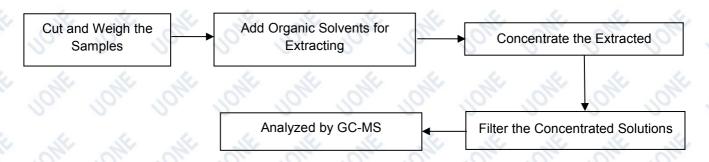
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#### **Test Process Flow (Continued):**

Hexavalent Chromium (Metal)



### 3. PBBs & PBDEs, Phthalates





### Photo(s) of Sample:



\*\*\*End of Report\*\*

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