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**Client:** **SHANGHAI KEYING TRADING CO.,LTD (UP GROUP)**

740 North of Zhong Shan Road, Shanghai, 200070, China

Tel.: 021-63174205

Contact person: Mr. Simon Huang

**Test Item(s):** Ink

**Identification/ Model No(s):** SolkJET-T1704K ; Model: Printing ink; Material: Solution; Color: Black

**Sample receiving date:** 2019-05-13

**Test period:** 2019-05-15 to 2019-05-20

<b>Test Specification:</b>	<b>Test result:</b>
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Legal requirement:

Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU and its amendments

- |  |      |
|--|------|
| 1. Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE) | PASS |
| 2. Phthalates ( DEHP, DBP, BBP, DiBP)  | PASS |

**For and on behalf of**  
**TÜV Rheinland Vietnam Co., Ltd.**



Ms. Hoa Thi Xuan Dieu/

Project Manager

Date

Name/Position

*Test result is drawn according to the kind and extent of tests performed.*

*This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.*

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**Material List:**

Material No.	Material	Color	Location
M001	Ink	Black	Ink

**1. Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE)**

Test method: - Total Cadmium, Lead, Mercury:

Totally digested then determination by ICP-OES, follow IEC 62321-4:2013 and IEC 62321-5:2013

- Chromium (VI):

Non-metal: Alkaline digestion, determination by UV-Vis spectrophotometry  
Metal: spot test and followed by boiling water test, follow IEC 62321-7-1:2015

- PBBs, PBDEs:

Extraction with organic solvent, determination by GC-MS, follow IEC 62321-6:2015

**Test result:**

Test parameter	Unit	RL	Material No.	M001
			Requirement	Result
Cadmium (Cd)	mg/kg	2	< 100	n.d.
Lead (Pb)	mg/kg	2	< 1000	n.d.
Mercury (Hg)	mg/kg	2	< 1000	n.d.
Chromium VI (Cr VI) for metal protective coating	µg/cm <sup>2</sup>	0.02	< 0.1	N.A.
Chromium VI (Cr VI)	mg/kg	3	< 1000	440
Total Polybrominated biphenyls (PBBs) (*)	mg/kg	5	< 1000	n.d.
Total Polybrominated biphenyl ethers (PBDEs) (*)	mg/kg	5	< 1000	n.d.
Conclusion				Pass

**Abbreviation:** mg/kg = milligram per kilogram

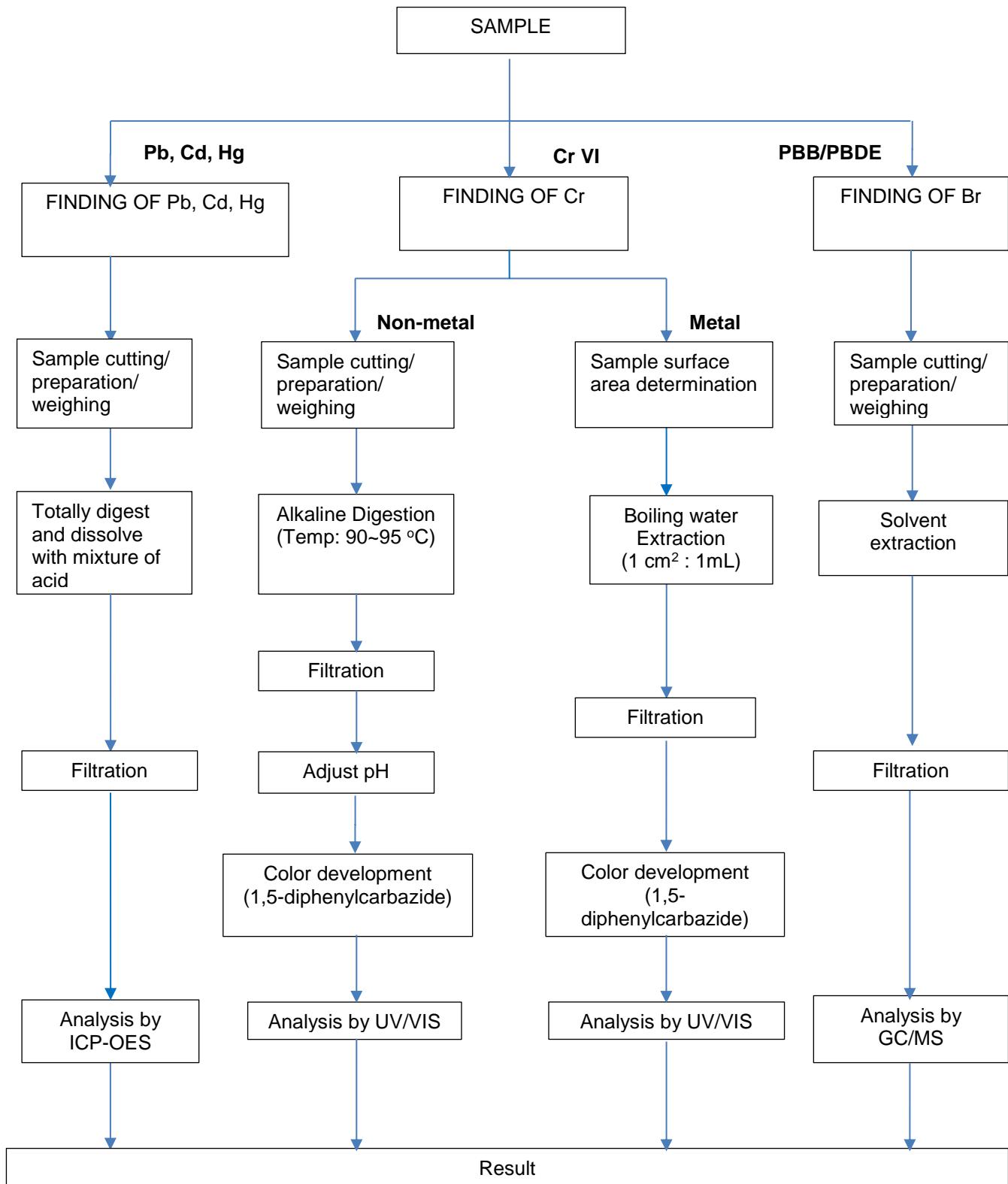
RL = Reporting Limit

n.d.= Not Detected (&lt;RL)

µg/cm<sup>2</sup> = microgram per square centimeter

N.A.: Not Applicable

**Remark:** According to IEC 62321-7-1:2015, result of Cr VI for metal sample is shown as Pass/Fail/Inconclusive.Pass = Absence of Cr VI coating, Cr VI concentration is below the 0,10 µg/cm<sup>2</sup>Fail = Presence of Cr VI coating, Cr VI concentration is above 0.13 µg/cm<sup>2</sup>Inconclusive = Cr VI concentration is between 0.10~0.13 µg/cm<sup>2</sup>. Further test with extra samples is recommended

**Flow chart for RoHS**

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(\*)

List of PBBs	List of PBDEs
Bromobiphenyl (MonoBB)	Bromodiphenyl ether (MonoBDE)
Dibromobiphenyl (DiBB)	Dibromodiphenyl ether (DiBDE)
Tribromobiphenyl (TriBB)	Tribromodiphenyl ether (TriBDE)
Tetrabromobiphenyl (TetraBB)	Tetrabromodiphenyl ether (TetraBDE)
Pentabromobiphenyl (PentaBB)	Pentabromodiphenyl ether (PentaBDE)
Hexabromobiphenyl (HexaBB)	Hexabromodiphenyl ether (HexaBDE)
Hexabromobiphenyl (HeptaBB)	Heptabromodiphenyl ether (HeptaBDE)
Octabromobiphenyl (Tech)(OctaBB)	Octabromodiphenyl ether (OctaBDE)
Nonabromobiphenyl (NonaBB)	Nonabromodiphenyl ether (NonaBDE)
Decabromobiphenyl (DecaBB)	Decabromodiphenyl ether (DecaBDE)

## 2. Phthalates (DEHP, DBP, BBP, DiBP)

Test method: Extraction with organic solvent, determination by GC-MS  
 With reference to IEC 62321-8 (111/321/CD)

### Test result:

Test parameter	Unit	RL	Material No.	M001
			Requirement	Result
Diethylhexylphthalate (DEHP)	mg/kg	50	< 1000	n.d.
Dibutylphthalate (DBP)	mg/kg	50	< 1000	n.d.
Benzylbutylphthalate (BBP)	mg/kg	50	< 1000	n.d.
Diisobutylphthalate (DiBP)	mg/kg	50	< 1000	n.d.
Conclusion				Pass

**Abbreviation:** n.d. = not detected (< Reporting Limit)

RL = Reporting Limit

mg/kg = milligram per kilogram

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**Sample photo:**



Lab ID.: A000921002-001

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