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Report No. A2200017795101015

Applicant SHENZHEN RUNLITE TECHNOLOGY CO.,LTD

Address BUILDING A15, TANTOU THE 4TH INDUSTRIAL ESTATE, SONGGANG TOWN, BAOAN

DISTRICT, SHENZHEN, CHINA

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

COB LED-Ceramic Sample Name

Part No. 1515

Client Reference 2017、1512、1919、1313、2424、2828、3838、2222、2024、1616、1818

Information

Sample Received Date Jan. 17, 2020

Testing Period Jan. 17, 2020 to Jan. 21, 2020

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent

> Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).

Test Method Please refer to the following page(s).

Test Result(s) Please refer to the following page(s).

sting International Group Co.,Ltd.

Reviewed by

Date

Jan. 21, 2020

Hill Zheng

Technical Manager

No. R262621381

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China



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Test Method

| Test Item(s) | Test Method | Measured Equipment(s) |
|--|--|--------------------------|
| Lead(Pb) | IEC 62321-5:2013 | ICP-OES |
| Cadmium(Cd) | IEC 62321-5:2013 | ICP-OES |
| Mercury(Hg) | IEC 62321-4:2013+AMD1:2017 CSV | ICP-OES |
| Hexavalent Chromium(Cr(VI)) | IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013 | UV-Vis/ICP-OES |
| Polybrominated Biphenyls(PBBs) | IEC 62321-6:2015 | GC-MS |
| Polybrominated Diphenyl Ethers (PBDEs) | IEC 62321-6:2015 | GC-MS |
| Phthalates (DBP, BBP, DEHP, DIBP) | IEC 62321-8:2017 | GC-MS |

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Report No. A2200017795101015 **Test Result(s)**

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| Tested Item(s) | Result | MDL |
|--|--------|---------|
| Lead(Pb) | N.D. | 2 mg/kg |
| Cadmium(Cd) | N.D. | 2 mg/kg |
| Mercury(Hg) | N.D. | 2 mg/kg |
| Hexavalent Chromium(Cr(VI)) | N.D. | 8 mg/kg |
| Tested Item(s) | Result | MDL |
| Polybrominated Biphenyls(PBBs) | | |
| Monobromobiphenyl | N.D. | 5 mg/kg |
| Dibromobiphenyl | N.D. | 5 mg/kg |
| Tribromobiphenyl | N.D. | 5 mg/kg |
| Tetrabromobiphenyl | N.D. | 5 mg/kg |
| Pentabromobiphenyl | N.D. | 5 mg/kg |
| Hexabromobiphenyl | N.D. | 5 mg/kg |
| Heptabromobiphenyl | N.D. | 5 mg/kg |
| Octabromobiphenyl | N.D. | 5 mg/kg |
| Nonabromobiphenyl | N.D. | 5 mg/kg |
| Decabromobiphenyl | N.D. | 5 mg/kg |
| Tested Item(s) | Result | MDL |
| Polybrominated Diphenyl Ethers (PBDEs) | | |
| Monobromodiphenyl ether | N.D. | 5 mg/kg |
| Dibromodiphenyl ether | N.D. | 5 mg/kg |
| Tribromodiphenyl ether | N.D. | 5 mg/kg |
| Tetrabromodiphenyl ether | N.D. | 5 mg/kg |
| Pentabromodiphenyl ether | N.D. | 5 mg/kg |
| Hexabromodiphenyl ether | N.D. | 5 mg/kg |
| Heptabromodiphenyl ether | N.D. | 5 mg/kg |
| Octabromodiphenyl ether | N.D. | 5 mg/kg |
| Nonabromodiphenyl ether | N.D. | 5 mg/kg |
| Decabromodiphenyl ether | N.D. | 5 mg/kg |



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Test Result(s)

| Tested Item(s) | Result | MDL | | |
|--|--------|----------|--|--|
| Phthalates (DBP, BBP, DEHP, DIBP) | | | | |
| Dibutyl phthalate(DBP) CAS#:84-74-2 | N.D. | 50 mg/kg | | |
| Butyl benzyl phthalate(BBP) CAS#:85-68-7 | N.D. | 50 mg/kg | | |
| Di-(2-ethylhexyl) phthalate(DEHP) CAS#:117-81-7 | N.D. | 50 mg/kg | | |
| Diisobutyl phthalate(DIBP) CAS#:84-69-5 | N.D. | 50 mg/kg | | |

Sample/Part Description

COB LED(Tested as a whole)

Remark

- -The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.
- -The sample(s) was tested as a whole, because it's impossible to disassemble or separate it by current equipment and technology. The result(s) shown on this report may be different from the content of any homogeneous material.
- -MDL = Method Detection Limit
- -N.D. = Not Detected (<MDL)
- -mg/kg = ppm = parts per million

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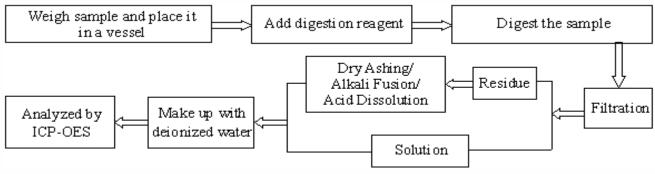


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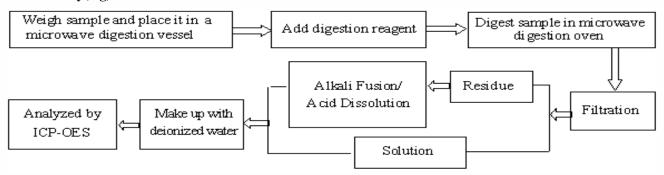
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Test Process

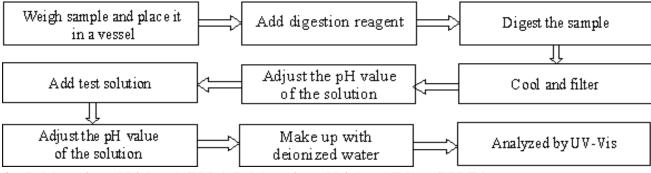
1. Lead(Pb), Cadmium(Cd), Chromium(Cr)



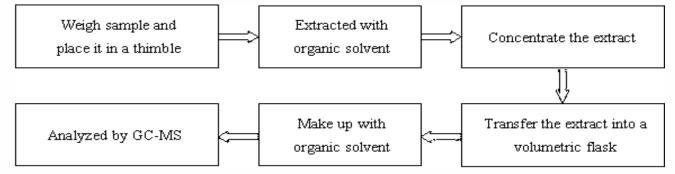
2. Mercury(Hg)



3. Hexavalent Chromium(Cr(VI))



4. Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers (PBDEs)



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5. Phthalates (DBP, BBP, DEHP, DIBP)

Weigh sample and place it in a thimble

Extracted with organic solvent

Concentrate the extract

Make up with organic solvent

Volumetric flask





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Photo(s) of the sample(s)



*** End of report ***

Statement:

- 1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
- 2. The sample(s) and sample information was/were provided by the client who should be responsible for the authenticity which CTI hasn't verified;
- 3. The result(s) shown in this report refer(s) only to the sample(s) tested;
- 4. Without written approval of CTI, this report can't be reproduced except in full;
- 5. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.