

## Test Report

No. SHAMPLP1904106201

Date: 13 Mar 2019

Page 1 of 8

AEM Components (Suzhou)Co.,Ltd

461 Zhongnan Street, Suzhou Industrial Park, Jiangsu, P.R.C

The following sample(s) was/were submitted and identified on behalf of the clients as : SOLIDMATRIX CHIP FUSES

SGS Job No. : SHIN1903013199PC - SH  
Client Ref. Information : FA/SB/HI/HA/FF/CP/HB/CB/CF/TH/VH/QF1206F/QF0603F/QF1206H/QF0603H/QF1206C/HC/QF1206G/QF0603G  
Date of Sample Received : 08 Mar 2019  
Testing Period : 08 Mar 2019 - 12 Mar 2019  
Test Requested : Selected test(s) as requested by client.  
Test Method : Please refer to next page(s).  
Test Results : Please refer to next page(s).

Signed for and on behalf of  
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Jenny Yao

Jenny Yao  
Approved Signatory



SHAMPLP1904106201



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Test Results :

Test Part Description :

| Specimen No. | SGS Sample ID    | Description                       |
|--------------|------------------|-----------------------------------|
| SN1          | SHA19-041062.001 | Silver metal with white/red solid |

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013, IEC62321-7-2:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

| Test Item(s)                 | Limit | Unit  | MDL | 001 |
|------------------------------|-------|-------|-----|-----|
| Cadmium (Cd)                 | 100   | mg/kg | 2   | ND  |
| Lead (Pb)                    | 1000  | mg/kg | 2   | ND  |
| Mercury (Hg)                 | 1000  | mg/kg | 2   | ND  |
| Hexavalent Chromium (Cr(VI)) | 1000  | mg/kg | 8   | ND  |
| Sum of PBBs                  | 1000  | mg/kg | -   | ND  |
| Monobromobiphenyl            | -     | mg/kg | 5   | ND  |
| Dibromobiphenyl              | -     | mg/kg | 5   | ND  |
| Tribromobiphenyl             | -     | mg/kg | 5   | ND  |
| Tetrabromobiphenyl           | -     | mg/kg | 5   | ND  |
| Pentabromobiphenyl           | -     | mg/kg | 5   | ND  |
| Hexabromobiphenyl            | -     | mg/kg | 5   | ND  |
| Heptabromobiphenyl           | -     | mg/kg | 5   | ND  |
| Octabromobiphenyl            | -     | mg/kg | 5   | ND  |
| Nonabromobiphenyl            | -     | mg/kg | 5   | ND  |
| Decabromobiphenyl            | -     | mg/kg | 5   | ND  |
| Sum of PBDEs                 | 1000  | mg/kg | -   | ND  |
| Monobromodiphenyl ether      | -     | mg/kg | 5   | ND  |
| Dibromodiphenyl ether        | -     | mg/kg | 5   | ND  |
| Tribromodiphenyl ether       | -     | mg/kg | 5   | ND  |
| Tetrabromodiphenyl ether     | -     | mg/kg | 5   | ND  |



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| <u>Test Item(s)</u>               | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|-----------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether          | -            | mg/kg       | 5          | ND         |
| Hexabromodiphenyl ether           | -            | mg/kg       | 5          | ND         |
| Heptabromodiphenyl ether          | -            | mg/kg       | 5          | ND         |
| Octabromodiphenyl ether           | -            | mg/kg       | 5          | ND         |
| Nonabromodiphenyl ether           | -            | mg/kg       | 5          | ND         |
| Decabromodiphenyl ether           | -            | mg/kg       | 5          | ND         |
| Di-butyl Phthalate (DBP)          | 1000         | mg/kg       | 50         | ND         |
| Benzyl Butyl Phthalate (BBP)      | 1000         | mg/kg       | 50         | ND         |
| Di-2-Ethyl Hexyl Phthalate (DEHP) | 1000         | mg/kg       | 50         | ND         |
| Diisobutyl Phthalates (DIBP)      | 1000         | mg/kg       | 50         | ND         |

**Notes :**

- (1)The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to EN 62321 series  
[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
- (2)On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the Rohs Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
- (3)The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
- (4)The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
- (5)The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.

**Halogen**

Test Method : With reference to EN 14582: 2016 , analysis was performed by IC.

| <u>Test Item(s)</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|---------------------|-------------|------------|------------|
| Fluorine (F)        | mg/kg       | 50         | ND         |
| Chlorine (Cl)       | mg/kg       | 50         | ND         |
| Bromine (Br)        | mg/kg       | 50         | ND         |



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| <u>Test Item(s)</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|---------------------|-------------|------------|------------|
| Iodine (I)          | mg/kg       | 50         | ND         |



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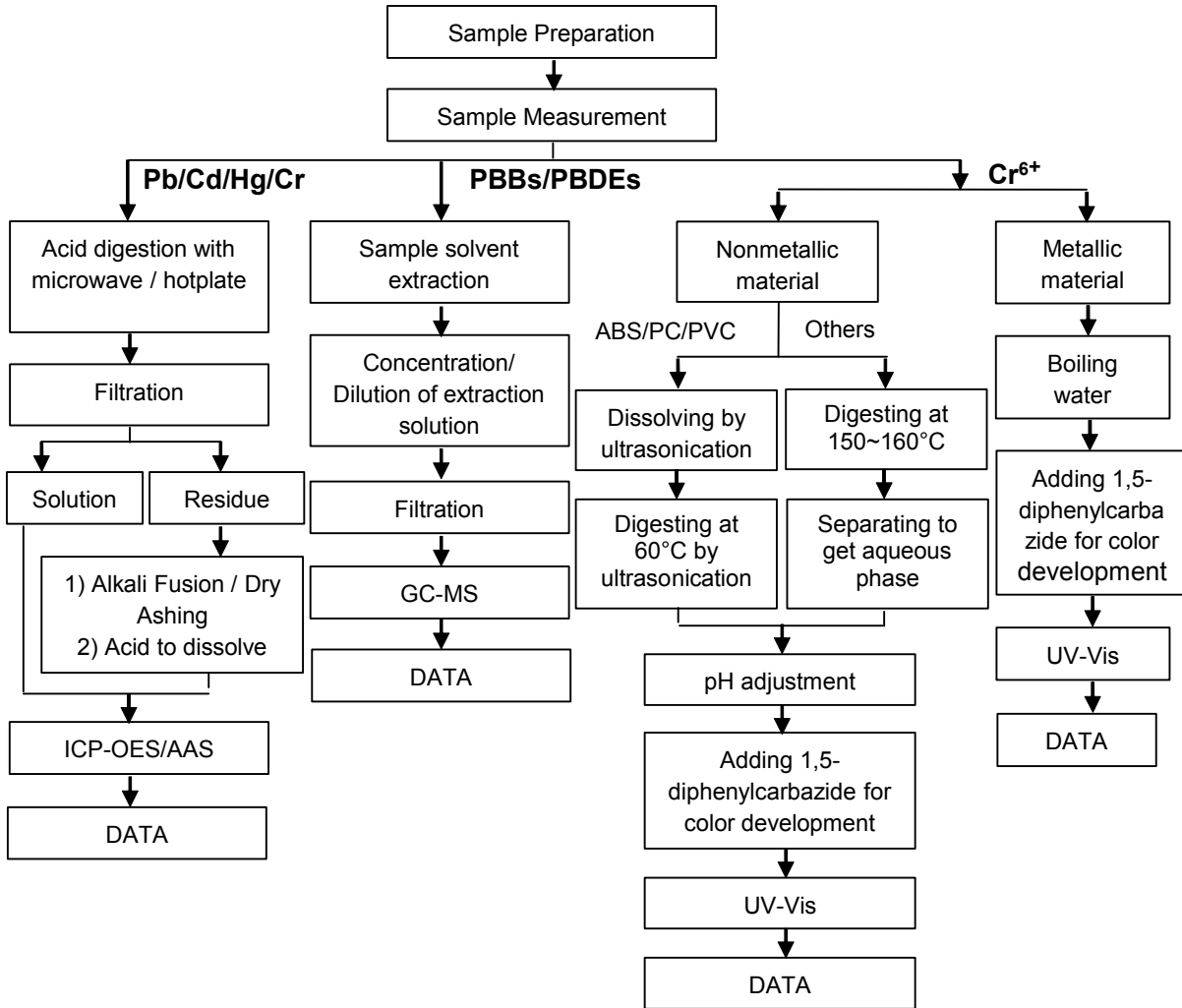
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Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded)



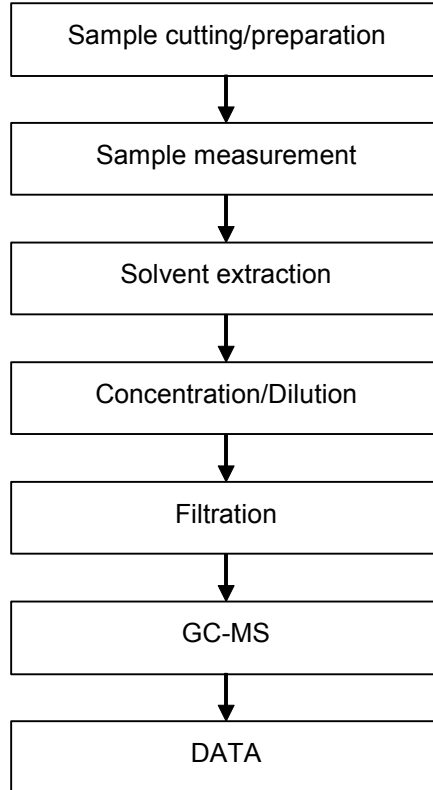
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### Phthalates Testing Flow Chart

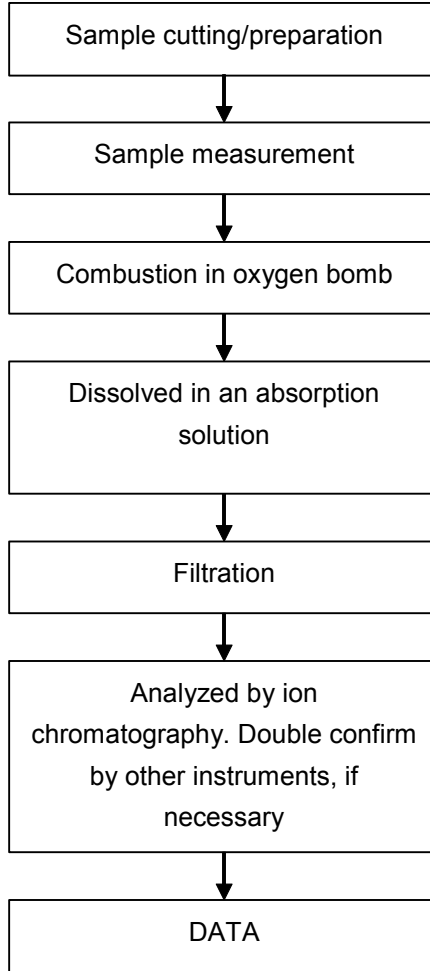


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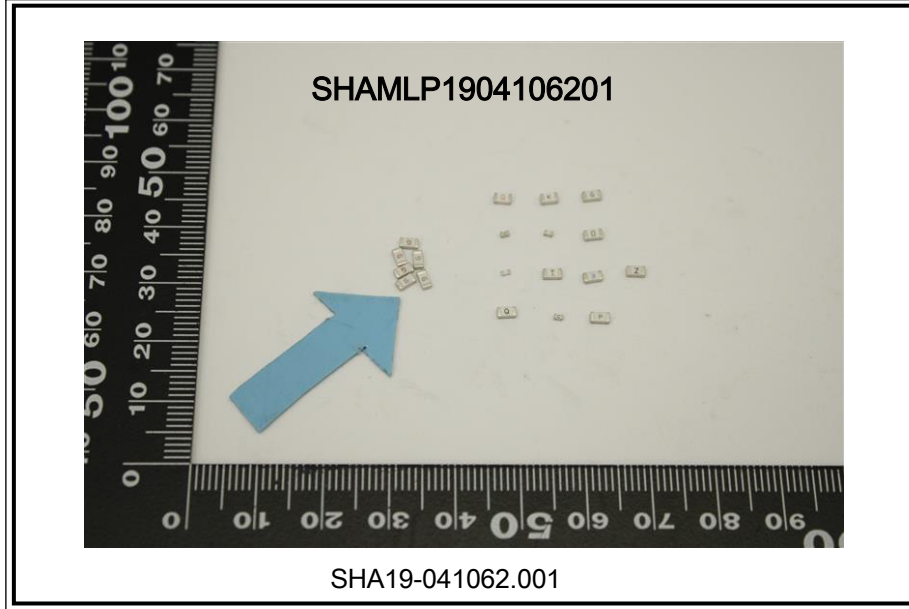
Halogen Testing (oxygen bomb) Flow Chart



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