

Test Report No. SHAEC1607803901 Date: 25 Apr 2016 Page 1 of 7

SUNGENIUS COATINGS CO.,LTD.

NO.501 Jinhui Road Huishan District Wuxi City Jiangsu Province PRC.

The following sample(s) was/were submitted and identified on behalf of the clients as: PU color paste

SGS Job No.:

SP16-013509 - SUZ

Model No.:

PUR-103203Y302404506701

Main Substance:

PU RESIN, PIGMENT, AGENT

Date of Sample Received:

20 Apr 2016

Testing Period:

20 Apr 2016 - 25 Apr 2016

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).

Conclusion:

Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) do not exceed the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Marry Ma

Approved Signatory



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Test Results:

Test Part Description:

Specimen No. SGS Sample ID Description SHA16-078039.001 Black liquid SN₁

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: (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 - (2) With reference to IEC 62321-5:2013, determination of Lead by AAS.
 - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
 - (5) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.

| Test Item(s) | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|------------------------------|--------------|-------------|------------|------------|
| 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 | 2 | 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 |
| | | | | |



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|--------------------------|---------------------|-------------|-------------------|------------|-------------|
| Test Item(s) | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> | |
| Dibromodiphenyl ether | - | mg/kg | 5 | ND | |
| Tribromodiphenyl ether | - | mg/kg | 5 | ND | |
| Tetrabromodiphenyl ether | - | mg/kg | 5 | ND | |
| 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 | |

Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (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.

Phthalates

Test Method: With reference to EN 14372:2004, analysis was performed by GC-MS.

| <u>Test Item(s)</u> Dibutyl Phthalate (DBP) | <u>CAS NO.</u> 84-74-2 | <u>Unit</u> % | MDL 0.003 | <u>001</u> ND |
|--|---------------------------|------------------|--------------|------------------|
| Benzylbutyl Phthalate (BBP) | 85-68-7 | % | 0.003 | ND |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | 117-81-7 | % | 0.003 | ND |
| Diisononyl Phthalate (DINP) | 28553-12-0 | % | 0.01 | ND |
| | /68515-48-0 | | | |



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|--|----------------------------|------------------|-------------------|------------------|-------------|
| <u>Test Item(s)</u> Di-n-octyl Phthalate (DNOP) | <u>CAS NO.</u> 117-84-0 | <u>Unit</u> % | MDL 0.003 | <u>001</u> ND | |
| Diisodecyl Phthalate (DIDP) | 26761-40-0 /68515-49-1 | % | 0.01 | ND | |

Notes:

- (1) DBP,BBP,DEHP Reference information: Entry 51 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC):
 - i) Shall not be used as substances or in mixtures, in concentrations greater than 0,1 % by weight of the plasticised material, in toys and childcare articles.
 - ii) Toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.

Please refer to Regulation (EC) No 552/2009 to get more detail information DINP, DNOP, DIDP Reference information: Entry 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC).

- i) Shall not be used as substances or in mixtures, in concentrations greater than 0.1 % by weight of the plasticised material, in toys and childcare articles which can be placed in the mouth by children.
- ii) Such toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.
 Please refer to Regulation (EC) No 552/2009 to get more detail information

Remark: Result shown is of the total weight of wet sample.



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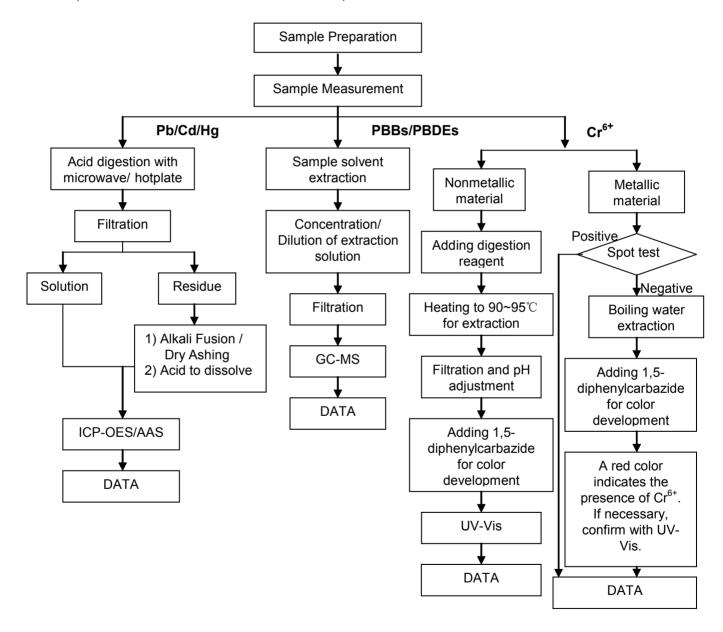
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RoHS Testing Flow Chart

- 1) Name of the person who made testing: David Lee/Gary Xu/Shimin Zhang/Sunny Qin
- 2) Name of the person in charge of testing: Jan Shi/Luna Xu/Jessy Huang/Stone Chen
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded)





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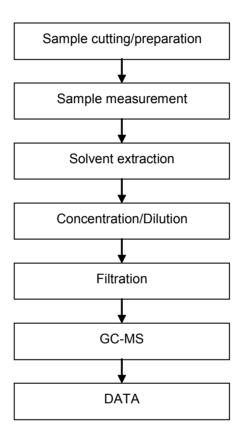
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Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Sherlock Gao
- 2) Name of the person in charge of testing: Jessy Huang





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Sample photo:



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