

Test Report (SVHC)

No.: CANEC24022805501

Date: Oct 23, 2024

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Client Name: GUANGZHOU TIANXIN PHOTOELECTRIC CO.,LTD

Client Address: #15-1 JINGU ROAD SOUTH , XIUTANG , HUADONG TOWN , HUADU DISTRICT ,
GUANGZHOU

Sample Name: Ceramic-base LED Package

The above sample(s) and information were provided by the client.

SGS Job No.: GZP24-033548

Sample Receiving Date: Oct 16, 2024

Testing Period: Oct 16, 2024 ~ Oct 23, 2024

Test Requested: As requested by client, SVHC screening is performed according to:
(i) Two hundred and forty one (241) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on and before Jun 27, 2024 regarding Regulation (EC) No 1907/2006 concerning the REACH.
As requested by client, SVHC screening is performed according to:
(i) Six (6) substances in the Public Consultation List of potential Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA) on and before Aug 30, 2024 regarding Regulation (EC) No 1907/2006 concerning the REACH.
(ii) Two (2) potential Substances of Very High Concern (SVHC) in the Identification ongoing.
(iii) Six (6) potential Substances of Very High Concern (SVHC) in the Intention List published by European Chemicals Agency (ECHA) regarding Regulation (EC) No 1907/2006 concerning the REACH.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

Summary:

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



Dongyu Xie
Approved Signatory

scan to see the report



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| | |
|--|------|
| According to the ruling of the Court of Justice of the European Union on the definition of an article under REACH, and the specified scope and evaluation screening, the results of 241 SVHC in the Candidate List are 0.1% (w/w) in the articles of the submitted sample. | Pass |
| According to the ruling of the Court of Justice of the European Union on the definition of an article under REACH, and the specified scope and evaluation screening, the results of 14 Potential SVHC are 0.1% (w/w) in the articles of the submitted sample. | Pass |



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Remark :

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- (a) a substance posing human health or environmental hazards in an individual concentration of 1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or 0.2 % by volume for gaseous mixtures; or
- (b) a substance that is PBT, or vPvB in an individual concentration of 0.1 % by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or
- (c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of 0.1 % by weight for non-gaseous mixtures; or
- (d) a substance for which there are Europe-wide workplace exposure limits

3. If a SVHC is found over the reporting limit, client is suggested to identify the composite component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

Test Sample:

Testing Group:

| Test Result ID | Description | Test Part ID | SGS Sample ID |
|----------------|----------------------------|--------------|-------------------------|
| 001 | "Ceramic-base LED Package" | A1 | CAN24-0228055-0001.C001 |

Test Method:

With reference to SGS In-House method, analysis was performed by ICP-OES, UV-VIS, GC-MS, HPLC-DAD/MS and Colorimetric Method.

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Result of SVHC in the Candidate List

| Batch | Substance Name | CAS No. | 001 Concentration (%) | RL (%) |
|-------|----------------------------|---------|-----------------------|--------|
| - | All SVHC in Candidate list | - | ND | - |

Result of Potential SVHC

| Batch | Substance Name | CAS No. | 001 Concentration (%) | RL (%) |
|-------|--------------------|---------|-----------------------|--------|
| / | All Potential SVHC | - | ND | - |

Notes:

- (1) The table above only shows detected SVHC, and SVHC that below RL are not reported. Please refer to Appendix for the full list of tested SVHC.
- (2) RL = Reporting Limit (Test data will be shown if it RL. RL is not regulatory limit.)
ND = Not detected (lower than RL), ND is denoted on the SVHC substance.
- (3) * The result is based on the calculation of selected element(s) under the worst-case scenario, and the evaluation of substance usage and material properties.
** The test result is based on the calculation of selected marker(s) and to the worst-case scenario.
Calculated concentration of boric compounds are based on water extractive boron detected by ICP-OES.
Calculated concentration of Barium diboron tetraoxide is based on water extractive boron and barium detected by ICP-OES.
RL = 0.005% is evaluated for element (i.e. cobalt, arsenic, lead, chromium, chromium (VI), aluminum, zirconium, boron, strontium, zinc, antimony, titanium, barium and cadmium respectively), except molybdenum RL=0.0005%, boron RL=0.0025% (only for Lead bis(tetrafluoroborate), fluorine RL=0.050%.
- (4) § The substance is proposed for the identification as SVHC only where it contains Michler's ketone (CAS Number: 90-94-8) or Michler's base (CAS Number: 101-61-1) 0.1% (w/w).
- (5) Composite test has been performed in equal proportion for the components/material per client requested. And the result is calculated using the minimum sample weight.
- (6) In consideration of the analysis requirement and the limit of sample volume, the screening test for the article is based on components / material enough to test.
- (7) / = Potential SVHC

The location of performance of the laboratory activities: A. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong; B. Room 101, Building 3, No.1501, Kaichuang Avenue, Huangpu District, Guangzhou, Guangdong

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019.

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Appendix

Full list of tested SVHC:

| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|----------------|----------|--------|
| I | 1 | | 101-77-9 | 0.050 |

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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|--|------------------------|--------|
| III | 36 | Trichloroethylene | 79-01-6 | 0.050 |
| IV | 37 | 2-Ethoxyethanol | 110-80-5 | 0.050 |
| IV | 38 | 2-Methoxyethanol | 109-86-4 | 0.050 |
| IV | 39 | Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid* | - | 0.005 |
| IV | 40 | Chromium trioxide* | 1333-82-0 | 0.005 |
| IV | 41 | Cobalt(II) carbonate* | 513-79-1 | 0.005 |
| IV | 42 | Cobalt(II) diacetate* | 71-48-7 | 0.005 |
| IV | 43 | Cobalt(II) dinitrate* | 10141-05-6 | 0.005 |
| IV | 44 | Cobalt(II) sulphate* | 10124-43-3 | 0.005 |
| V | 45 | 1,2,3-trichloropropane | 96-18-4 | 0.050 |
| V | 46 | 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich | 71888-89-6 | 0.050 |
| V | 47 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters | 68515-42-4 | 0.050 |
| V | 48 | 1-methyl-2-pyrrolidone | 872-50-4 | 0.050 |
| V | 49 | 2-ethoxyethyl acetate | 111-15-9 | 0.050 |
| V | 50 | Hydrazine | 302-01-2 /7803-57-8 | 0.050 |
| V | 51 | strontium chromate* | 7789-06-2 | 0.005 |
| VI | 52 | 1,2-Dichloroethane | 107-06-2 | 0.050 |
| VI | 53 | 2,2'-dichloro-4,4'-methylenedianiline | 101-14-4 | 0.050 |
| VI | 54 | 2-Methoxyaniline; o-Anisidine | 90-04-0 | 0.050 |
| VI | 55 | 4-(1,1,3,3-tetramethylbutyl)phenol | 140-66-9 | 0.050 |
| VI | 56 | Aluminosilicate Refractory Ceramic Fibres* | - | 0.005 |
| VI | 57 | Arsenic acid* | 7778-39-4 | 0.005 |
| VI | 58 | Bis(2-methoxyethyl) ether | 111-96-6 | 0.050 |
| VI | 59 | Bis(2-methoxyethyl) phthalate | 117-82-8 | 0.050 |
| VI | 60 | Calcium arsenate* | 7778-44-1 | 0.005 |
| VI | 61 | Dichromium tris(chromate)* | 24613-89-6 | 0.005 |
| VI | 62 | Formaldehyde, oligomeric reaction products with aniline | 25214-70-4 | 0.050 |
| VI | 63 | Lead diazide, Lead azide* | 13424-46-9 | 0.005 |
| VI | 64 | Lead dipicrate* | 6477-64-1 | 0.005 |
| VI | 65 | Lead styphnate* | 15245-44-0 | 0.005 |
| VI | 66 | N,N-dimethylacetamide | 127-19-5 | 0.050 |
| VI | 67 | Pentazinc chromate octahydroxide* | 49663-84-5 | 0.005 |
| VI | 68 | Phenolphthalein | 77-09-8 | 0.050 |
| VI | 69 | Potassium hydroxyoctaoxodizincatedichromate* | 11103-86-9 | 0.005 |
| VI | 70 | Trilead diarsenate* | 3687-31-8 | 0.005 |
| VI | 71 | Zirconia Aluminosilicate Refractory Ceramic Fibres* | - | 0.005 |
| VII | 72 | [4-[[4-anilino-1-naphthyl]]4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)§ | 2580-56-5 | 0.050 |

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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|------------------------------|----------|--------|
| VIII | 102 | Dibutyltin dichloride (DBTC) | 683-18-1 | 0.050 |
| VIII | 103 | Diethyl sulphate | 64-67-5 | 0.050 |
| VIII | 104 | Diisopentylphthalate | 605-50-5 | 0.050 |
| VIII | 105 | | | |

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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|---|------------|--------|
| IX | 144 | Pentadecafluorooctanoic acid (PFOA) | 335-67-1 | 0.050 |
| X | 145 | Cadmium sulphide* | 1306-23-6 | 0.005 |
| X | 146 | Dihexyl phthalate | 84-75-3 | 0.050 |
| X | 147 | Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) | 573-58-0 | 0.050 |
| X | 148 | Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) | 1937-37-7 | 0.050 |
| X | 149 | Imidazolidine-2-thione; (2-imidazoline-2-thiol) | 96-45-7 | 0.050 |
| X | 150 | Lead di(acetate)* | 301-04-2 | 0.005 |
| X | 151 | Trixylyl phosphate | 25155-23-1 | 0.050 |
| XI | 152 | 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | 68515-50-4 | 0.050 |
| XI | 153 | Cadmium chloride* | 10108-64-2 | 0.005 |
| XI | 154 | Sodium perborate; perboric acid, sodium salt* | - | 0.005 |
| XI | 155 | Sodium peroxometaborate* | 7632-04-4 | 0.005 |
| XII | 156 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | 25973-55-1 | 0.050 |
| XII | 157 | 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | 3846-71-7 | 0.050 |
| XII | 158 | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) | 15571-58-1 | 0.050 |
| XII | 159 | Cadmium fluoride* | 7790-79-6 | 0.005 |

XII

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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|---|---------|--------|
| XIV | 167 | Nitrobenzene | 98-95-3 | 0.050 |
| XIV | 168 | Perfluorononan-1-oic-acid and its sodium and ammonium salts | - | 0.050 |
| XV | 169 | Benzo[def]chrysene (Benzo[a]pyrene) | 50-32-8 | 0.050 |
| XVI | 170 | 4,4'-isopropylidenediphenol (bisphenol A) | 80-05-7 | 0.050 |
| XVI | | | | |

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| Batch | No. | Substance Name | CAS No. | RL (%) |
|-------|-----|--|-------------|--------|
| XXI | 200 | 4-tert-butylphenol (PTBP) | 98-54-4 | 0.050 |
| XXI | 201 | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) | - | 0.050 |
| XXII | 202 | 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone | 119313-12-1 | 0.050 |
| XXII | 203 | 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one | 71868-10-5 | 0.050 |
| XXII | 204 | Diisohexyl phthalate | 71850-09-4 | 0.050 |
| XXII | 205 | Perfluorobutane sulfonic acid (PFBS) and its salts | - | 0.050 |
| XXIII | 206 | 1-vinylimidazole | 1072-63-5 | 0.050 |
| XXIII | 207 | 2-methylimidazole | 693-98-1 | 0.050 |
| XXIII | 208 | Butyl 4-hydroxybenzoate | 94-26-8 | 0.050 |
| XXIII | 209 | Dibutylbis(pentane-2,4-dionato-O,O')tin** | 22673-19-4 | 0.050 |
| XXIV | 210 | bis(2-(2-methoxyethoxy)ethyl) ether | 143-24-8 | 0.050 |
| XXIV | 211 | Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety** | - | 0.050 |
| XXV | 212 | 1,4-Dioxane | 123-91-1 | 0.050 |
| XXV | 213 | 2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA) | - | 0.050 |
| XXV | 214 | 2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers | - | 0.050 |
| XXV | 215 | 4,4'-(1-methylpropylidene)bisphenol; (bisphenol B) | 77-40-7 | 0.050 |
| XXV | 216 | Glutaral | 111-30-8 | 0.050 |
| XXV | 217 | Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17] | - | 0.050 |
| XXV | 218 | Orthoboric acid, sodium salt* | 13840-56-7 | 0.005 |
| XXV | 219 | Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) | - | 0.050 |
| XXVI | 220 | (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) | - | 0.050 |
| XXVI | 221 | 6,6'-di-tert-butyl-2,2'-methylene-di-p-cresol (DBMC) | 119-47-1 | 0.050 |

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| Batch | No. | Substance Name | CAS No. | RL (%) |
|--------|-----|--|-------------|--------|
| XXVI | 222 | S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate | 255881-94-8 | 0.050 |
| XXVI | 223 | Tris(2-methoxyethoxy)vinylsilane | 1067-53-4 | 0.050 |
| XXVII | 224 | N-(hydroxymethyl)acrylamide | 924-42-5 | 0.050 |
| XXVIII | 225 | 1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene] | 37853-59-1 | 0.050 |
| XXVIII | 226 | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol | 79-94-7 | 0.050 |
| XXVIII | 227 | 4,4'-sulphonyldiphenol | 80-09-1 | 0.050 |
| XXVIII | 228 | Barium diboron tetraoxide* | 13701-59-2 | 0.005 |
| XXVIII | 229 | Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof | - | 0.050 |
| XXVIII | 230 | Isobutyl 4-hydroxybenzoate | 4247-02-3 | 0.050 |
| XXVIII | 231 | Melamine | 108-78-1 | 0.050 |
| XXVIII | 232 | 2,3,3,3,4,4,4,4-octafluorooctanoic acid and its salts | - | 0.050 |
| XXVIII | 233 | reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine* | - | 0.050 |
| XXIX | 234 | Bis(4-chlorophenyl) sulphone | | |



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