

# Test Report

Report No. SCL01J01570712

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**Applicant** DONG GUAN BRIGHT LED ELECTRONICS LTD  
**Address** NO.8,GAO LONG EAST RD ,GAOBU TOWN,DONG GUAN CTY,GUANG DONG PROVINCE,CHINA 523283

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

| No. | Sample Name(s)  |
|-----|-----------------|
| (1) | Chip series 樹脂  |
| (2) | Chip series PCB |

Sample Received Date Mar. 23, 2017

Testing Period Mar. 23, 2017 to Apr. 7, 2017

**Test Requested** As specified by client, to screen the 173 substances of very high concern(SVHC) under Regulation (EC) No 1907/2006 of REACH in the submitted sample(s).

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

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

**Summary** According to the analytical results, concentrations of 173 SVHC substances are all less than 0.1%(w/w) in the submitted sample(s).

Tested by

*Jing Guo*

Reviewed by

*Amosong*

Approved by

*Danny Liu*

Date

Apr. 7, 2017

Danny Liu  
Technical Manager

No. R169561330

Report Seal  
Centre Testing International Group Co.,Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

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## Test Result(s)

| Batch | No. | Substance Name(s)   | CAS No.                  | EC No.                  | Concentration (%) |      | Report Limit |
|-------|-----|---|--------------------------|-------------------------|-------------------|------|--------------|
|       |     |   |                          |                         | (1)               | (2)  |              |
| I     | 1   | Anthracene  | 120-12-7                 | 204-371-1               | N.D.              | N.D. | 0.005%       |
| I     | 2   | 4,4'- Diaminodiphenylmethane  | 101-77-9                 | 202-974-4               | N.D.              | N.D. | 0.005%       |
| I     | 3   | Dibutyl phthalate(DBP)  | 84-74-2                  | 201-557-4               | N.D.              | N.D. | 0.005%       |
| I     | 4   | Cobalt dichloride*  | 7646-79-9                | 231-589-4               | N.D.              | N.D. | 0.01%        |
| I     | 5   | Diarsenic pentaoxide*   | 1303-28-2                | 215-116-9               | N.D.              | N.D. | 0.01%        |
| I     | 6   | Diarsenic trioxide*   | 1327-53-3                | 215-481-4               | N.D.              | N.D. | 0.01%        |
| I     | 7   | Sodium dichromate*  | 7789-12-0,<br>10588-01-9 | 234-190-3               | N.D.              | N.D. | 0.01%        |
| I     | 8   | Musk xylene   | 81-15-2                  | 201-329-4               | N.D.              | N.D. | 0.005%       |
| I     | 9   | Bis(2-ethyl(hexyl)phthalate)(DEHP)  | 117-81-7                 | 204-211-0               | N.D.              | N.D. | 0.005%       |
| I     | 10  | Hexabromocyclododecane (HBCDD)  | 25637-99-4,<br>3194-55-6 | 247-148-4,<br>221-695-9 | N.D.              | N.D. | 0.005%       |
| I     | 11  | ShortChain Chlorinated Paraffins(SCCPs)                                     | 85535-84-8               | 287-476-5               | N.D.              | N.D. | 0.01%        |
| I     | 12  | Bis(tributyltin)oxide (TBTO)*   | 56-35-9                  | 200-268-0               | N.D.              | N.D. | 0.005%       |
| I     | 13  | Lead hydrogen arsenate*   | 7784-40-9                | 232-064-2               | N.D.              | N.D. | 0.01%        |
| I     | 14  | Benzyl butyl phthalate(BBP)   | 85-68-7                  | 201-622-7               | N.D.              | N.D. | 0.005%       |
| I     | 15  | Triethyl arsenate*  | 15606-95-8               | 427-700-2               | N.D.              | N.D. | 0.01%        |
| II    | 16  | <sup>①</sup> Anthracene oil   | 90640-80-5               | 292-602-7               | N.D.              | N.D. | 0.05%        |
| II    | 17  | <sup>①</sup> Anthracene oil, anthracene paste, distr.Lights ****            | 91995-17-4               | 295-278-5               | N.D.              | N.D. | 0.05%        |
| II    | 18  | <sup>①</sup> Anthracene oil, anthracene paste,anthracene fraction           | 91995-15-2               | 295-275-9               | N.D.              | N.D. | 0.05%        |
| II    | 19  | <sup>①</sup> Anthracene oil, anthracene-low                                 | 90640-82-7               | 292-604-8               | N.D.              | N.D. | 0.05%        |
| II    | 20  | <sup>①</sup> Anthracene oil, anthracene paste                               | 90640-81-6               | 292-603-2               | N.D.              | N.D. | 0.05%        |
| II    | 21  | <sup>①</sup> Coal tar pitch, high temperature                               | 65996-93-2               | 266-028-2               | N.D.              | N.D. | 0.05%        |
| II    | 22  | Acrylamide  | 79-06-1                  | 201-173-7               | N.D.              | N.D. | 0.01%        |
| II    | 23  | 2,4-Dinitrotoluene  | 121-14-2                 | 204-450-0               | N.D.              | N.D. | 0.01%        |
| II    | 24  | Diisobutyl phthalate (DIBP)   | 84-69-5                  | 201-553-2               | N.D.              | N.D. | 0.005%       |
| II    | 25  | <sup>②</sup> Lead chromate  | 7758-97-6                | 231-846-0               | N.D.              | N.D. | 0.05%        |
| II    | 26  | <sup>②</sup> Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*** | 12656-85-8               | 235-759-9               | N.D.              | N.D. | 0.05%        |
| II    | 27  | <sup>②</sup> Lead sulfochromate yellow (C.I. Pigment Yellow 34)***          | 1344-37-2                | 215-693-7               | N.D.              | N.D. | 0.05%        |

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| Batch | No. | Substance Name(s)  | CAS No.                              | EC No.                 | Concentration (%) |      | Report Limit |
|-------|-----|--|--------------------------------------|------------------------|-------------------|------|--------------|
|       |     |  |                                      |                        | (1)               | (2)  |              |
| II    | 28  | Tris(2-chloroethyl)phosphate (TCEP)  | 115-96-8                             | 204-118-5              | N.D.              | N.D. | 0.01%        |
| III   | 29  | Trichloroethylene  | 79-01-6                              | 201-167-4              | N.D.              | N.D. | 0.005%       |
| III   | 30  | <sup>®</sup> Boric acid  | 10043-55-3<br>11113-50-1             | 233-139-2<br>234-345-4 | N.D.              | N.D. | 0.01%        |
| III   | 31  | <sup>®</sup> Disodium tetraborate, anhydrous*****  | 1330-43-4<br>12179-04-3<br>1303-96-4 | 215-540-4              | N.D.              | N.D. | 0.01%        |
| III   | 32  | <sup>®</sup> Tetraboron disodium heptaoxide, hydrate*****  | 12267-73-1                           | 235-541-3              | N.D.              | N.D. | 0.01%        |
| III   | 33  | Sodium chromate*   | 7775-11-3                            | 231-889-5              | N.D.              | N.D. | 0.01%        |
| III   | 34  | Potassium chromate*  | 7789-00-6                            | 232-140-5              | N.D.              | N.D. | 0.01%        |
| III   | 35  | Ammonium dichromate*   | 7789-09-5                            | 232-143-1              | N.D.              | N.D. | 0.01%        |
| III   | 36  | Potassium dichromate*  | 7778-50-9                            | 231-906-6              | N.D.              | N.D. | 0.01%        |
| IV    | 37  | Cobalt(II) sulphate*   | 10124-43-3                           | 233-334-2              | N.D.              | N.D. | 0.01%        |
| IV    | 38  | Cobalt(II) dinitrate*  | 10141-05-6                           | 233-402-1              | N.D.              | N.D. | 0.01%        |
| IV    | 39  | Cobalt(II) carbonate*  | 513-79-1                             | 208-169-4              | N.D.              | N.D. | 0.01%        |
| IV    | 40  | Cobalt(II) diacetate*  | 71-48-7                              | 200-755-8              | N.D.              | N.D. | 0.01%        |
| IV    | 41  | 2-Methoxyethanol   | 109-86-4                             | 203-713-7              | N.D.              | N.D. | 0.005%       |
| IV    | 42  | 2-Ethoxyethanol  | 110-80-5                             | 203-804-1              | N.D.              | N.D. | 0.005%       |
| IV    | 43  | Chromium trioxide*   | 1337-82-0                            | 215-607-8              | N.D.              | N.D. | 0.01%        |
| IV    | 44  | <sup>①</sup> Acids generated from chromium trioxide and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid* | 7738-94-5<br>13530-68-2              | 231-801-5<br>236-881-5 | N.D.              | N.D. | 0.01%        |
| V     | 45  | 2-ethoxyethyl acetate  | 111-15-9                             | 203-839-2              | N.D.              | N.D. | 0.01%        |
| V     | 46  | Strontium chromate*  | 7789-06-2                            | 232-142-6              | N.D.              | N.D. | 0.01%        |
| V     | 47  | <sup>①</sup> 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters   | 68515-42-4                           | 271-084-6              | N.D.              | N.D. | 0.01%        |
| V     | 48  | Hydrazine  | 7803-57-8<br>302-01-2                | 206-114-9              | N.D.              | N.D. | 0.01%        |
| V     | 49  | 1-methyl-2-pyrrolidone   | 872-50-4                             | 212-828-1              | N.D.              | N.D. | 0.01%        |
| V     | 50  | 1,2,3-trichloropropane   | 96-18-4                              | 202-486-1              | N.D.              | N.D. | 0.01%        |
| V     | 51  | <sup>①</sup> 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich  | 71888-89-6                           | 276-158-1              | N.D.              | N.D. | 0.01%        |



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| Batch | No. | Substance Name(s)  | CAS No.    | EC No.    | Concentration (%) |      | Report Limit |
|-------|-----|--|------------|-----------|-------------------|------|--------------|
|       |     |  |            |           | (1)               | (2)  |              |
| VI    | 52  | Dichromium tris(chromate)*   | 24613-89-6 | 246-356-2 | N.D.              | N.D. | 0.01%        |
| VI    | 53  | Potassium hydroxyoctaoxodizincatedichromate*   | 11103-86-9 | 234-329-8 | N.D.              | N.D. | 0.01%        |
| VI    | 54  | Pentazinc chromate octahydroxide*  | 49663-84-5 | 256-418-0 | N.D.              | N.D. | 0.01%        |
| VI    | 55  | <sup>②</sup> Aluminosilicate Refractory Ceramic Fibres (RCF) **                      | -          | -         | N.D.              | N.D. | 0.05%        |
| VI    | 56  | <sup>②</sup> Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) **          | -          | -         | N.D.              | N.D. | 0.05%        |
| VI    | 57  | <sup>①</sup> Formaldehyde, oligomeric reaction products with aniline (technical MDA) | 25214-70-4 | 500-036-1 | N.D.              | N.D. | 0.01%        |
| VI    | 58  | Bis(2-methoxyethyl) phthalate  | 117-82-8   | 204-212-6 | N.D.              | N.D. | 0.005%       |
| VI    | 59  | 2-Methoxyaniline(o-Amsidine)   | 90-04-0    | 201-963-1 | N.D.              | N.D. | 0.005%       |
| VI    | 60  | 4-(1,1,3,3-tetramethylbutyl)phenol (4-tert-Octylphenol)                              | 140-66-9   | 205-426-2 | N.D.              | N.D. | 0.005%       |
| VI    | 61  | 1,2-Dichloroethane   | 107-06-2   | 203-458-1 | N.D.              | N.D. | 0.005%       |
| VI    | 62  | Bis(2-methoxyethyl) ether  | 111-96-6   | 203-924-4 | N.D.              | N.D. | 0.005%       |
| VI    | 63  | Arsenic acid*  | 7778-39-4  | 231-901-9 | N.D.              | N.D. | 0.01%        |
| VI    | 64  | Calcium arsenate*  | 7778-44-1  | 231-904-5 | N.D.              | N.D. | 0.01%        |
| VI    | 65  | Trilead diarsenate*  | 3687-31-8  | 222-979-5 | N.D.              | N.D. | 0.01%        |
| VI    | 66  | N,N-dimethylacetamide (DMAC)   | 127-19-5   | 204-826-4 | N.D.              | N.D. | 0.005%       |
| VI    | 67  | 2,2'-dichloro-4,4'-methylenedianiline (MOCA)   | 101-14-4   | 202-918-9 | N.D.              | N.D. | 0.005%       |
| VI    | 68  | Phenolphthalein  | 77-9-8     | 201-004-7 | N.D.              | N.D. | 0.005%       |
| VI    | 69  | Lead diazide*  | 13424-46-9 | 236-542-1 | N.D.              | N.D. | 0.01%        |
| VI    | 70  | Lead 2,4,6-trinitro-m-phenylene dioxide (Lead styphnate)*                            | 15245-44-0 | 239-290-0 | N.D.              | N.D. | 0.01%        |
| VI    | 71  | Lead dipicrate*  | 6477-64-1  | 229-335-2 | N.D.              | N.D. | 0.01%        |
| VII   | 72  | 1,2-bis(2-methoxyethoxy) ethane (TEGDME, triglyme)                                   | 112-49-2   | 203-977-3 | N.D.              | N.D. | 0.01%        |
| VII   | 73  | 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)                          | 110-71-4   | 203-794-9 | N.D.              | N.D. | 0.01%        |
| VII   | 74  | Diboron trioxide   | 1303-86-2  | 215-125-8 | N.D.              | N.D. | 0.01%        |
| VII   | 75  | Formamide  | 75-12-7    | 200-842-0 | N.D.              | N.D. | 0.01%        |
| VII   | 76  | Lead(II) bis methanesulfonate*   | 17570-76-2 | 401-750-5 | N.D.              | N.D. | 0.01%        |

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| Batch | No. | Substance Name(s)   | CAS No.    | EC No.    | Concentration (%) |      | Report Limit |
|-------|-----|---|------------|-----------|-------------------|------|--------------|
|       |     |   |            |           | (1)               | (2)  |              |
| VII   | 77  | TGIC(1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)  | 2451-62-9  | 219-514-3 | N.D.              | N.D. | 0.01%        |
| VII   | 78  | $\beta$ -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6- (1H,3H,5H)-trione)   | 59653-74-6 | 423-400-0 | N.D.              | N.D. | 0.01%        |
| VII   | 79  | 4,4'-bis(dimethylamino) benzophenone (Michler's ketone)   | 90-94-8    | 202-027-5 | N.D.              | N.D. | 0.01%        |
| VII   | 80  | N,N,N',N'-tetramethyl-4,4'-methylene dianiline (Michler's base)   | 101-61-1   | 202-959-2 | N.D.              | N.D. | 0.01%        |
| VII   | 81  | [4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride(C.I. Basic Violet 3)***   | 548-62-9   | 208-955-6 | N.D.              | N.D. | 0.01%        |
| VII   | 82  | [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  | 219-943-6 | N.D.              | N.D. | 0.01%        |
| VII   | 83  | $\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)***  | 6786-83-0  | 229-851-8 | N.D.              | N.D. | 0.01%        |
| VII   | 84  | 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol   | 561-41-1   | 209-218-2 | N.D.              | N.D. | 0.01%        |
| VIII  | 85  | Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)  | 1163-19-5  | 214-604-9 | N.D.              | N.D. | 0.05%        |
| VIII  | 86  | <sup>①</sup> 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] | -          | -         | N.D.              | N.D. | 0.05%        |
| VIII  | 87  | Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))   | 123-77-3   | 204-650-8 | N.D.              | N.D. | 0.05%        |

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| Batch | No. | Substance Name(s)   | CAS No.  | EC No.                                     | Concentration (%) |      | Report Limit |
|-------|-----|---|--|--|-------------------|------|--------------|
|       |     |   |  |  | (1)               | (2)  |              |
| VIII  | 88  | 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]                     | -  | -  | N.D.              | N.D. | 0.05%        |
| VIII  | 89  | Henicosfluoroundecanoic acid  | 2058-94-8                                      | 218-165-4                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 90  | Pentacosfluorotridecanoic acid  | 72629-94-8                                     | 276-746-2                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 91  | Cyclohexane-1,2-dicarboxylic anhydride, cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride                    | 85-42-7, 13149-00-3, 14166-21-3                | 201-604-9, 236-086-3, 238-009-9            | N.D.              | N.D. | 0.05%        |
| VIII  | 92  | Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride | 25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9 | 247-094-1, 243-072-0, 256-356-4, 260-566-1 | N.D.              | N.D. | 0.05%        |
| VIII  | 93  | Heptacosfluorotetradecanoic acid  | 376-06-7                                       | 206-803-4                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 94  | Diisopentylphthalate(DIPP)  | 605-50-5                                       | 210-088-4                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 95  | <sup>o</sup> 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear   | 84777-06-0                                     | 284-032-2                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 96  | N-pentyl-isopentylphthalate   | 776297-69-9                                    | -  | N.D.              | N.D. | 0.05%        |
| VIII  | 97  | Methoxyacetic acid  | 625-45-6                                       | 210-894-6                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 98  | Tricosfluorododecanoic acid   | 307-55-1                                       | 206-203-2                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 99  | 1,2-Diethoxyethane  | 629-14-1                                       | 211-076-1                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 100 | 3-methyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine   | 143860-04-2                                    | 421-150-7                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 101 | 4-methyl-m-phenylenediamine (toluene-2,4-diamine)   | 95-80-7  | 202-453-1                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 102 | N-methylacetamide   | 79-16-3  | 201-182-6                                  | N.D.              | N.D. | 0.05%        |
| VIII  | 103 | Pentalead tetraoxide sulphate*  | 12065-90-6                                     | 235-067-7                                  | N.D.              | N.D. | 0.01%        |
| VIII  | 104 | Biphenyl-4-ylamine  | 92-67-1  | 202-177-1                                  | N.D.              | N.D. | 0.05%        |



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|-------|-----|--|------------|-----------|-------------------|------|--------------|
|       |     |  |            |           | (1)               | (2)  |              |
| VIII  | 105 | Dinoseb<br>(6-sec-butyl-2,4-dinitrophenol)   | 88-85-7    | 201-861-7 | N.D.              | N.D. | 0.05%        |
| VIII  | 106 | Dioxobis(stearato)trilead*   | 12578-12-0 | 235-702-8 | N.D.              | N.D. | 0.01%        |
| VIII  | 107 | Lead dinitrate*  | 10099-74-8 | 233-245-9 | N.D.              | N.D. | 0.01%        |
| VIII  | 108 | Tetralead trioxide sulphate*   | 12202-17-4 | 235-380-9 | N.D.              | N.D. | 0.01%        |
| VIII  | 109 | Lead monoxide (lead oxide)*  | 1317-36-8  | 215-267-0 | N.D.              | N.D. | 0.01%        |
| VIII  | 110 | Lead titanium trioxide*  | 12060-00-3 | 235-038-9 | N.D.              | N.D. | 0.01%        |
| VIII  | 111 | 4,4'-methylenedi-o-toluidine   | 838-88-0   | 212-658-8 | N.D.              | N.D. | 0.05%        |
| VIII  | 112 | Acetic acid, lead salt, basic*   | 51404-69-4 | 257-175-3 | N.D.              | N.D. | 0.01%        |
| VIII  | 113 | Dimethyl sulphate  | 77-78-1    | 201-058-1 | N.D.              | N.D. | 0.05%        |
| VIII  | 114 | Furan  | 110-00-9   | 203-727-3 | N.D.              | N.D. | 0.05%        |
| VIII  | 115 | Pyrochlore, antimony lead yellow*  | 8012-00-8  | 232-382-1 | N.D.              | N.D. | 0.01%        |
| VIII  | 116 | Tetraethyllead*  | 78-00-2    | 201-075-4 | N.D.              | N.D. | 0.01%        |
| VIII  | 117 | [Phthalato(2-)]dioxotrilead*   | 69011-06-9 | 273-688-5 | N.D.              | N.D. | 0.01%        |
| VIII  | 118 | Diethyl sulphate   | 64-67-5    | 200-589-6 | N.D.              | N.D. | 0.05%        |
| VIII  | 119 | Lead cyanamidate*  | 20837-86-9 | 244-073-9 | N.D.              | N.D. | 0.01%        |
| VIII  | 120 | Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt<br>(1:1), lead-doped* | 68784-75-8 | 272-271-5 | N.D.              | N.D. | 0.01%        |
| VIII  | 121 | Trilead dioxide phosphonate*   | 12141-20-7 | 235-252-2 | N.D.              | N.D. | 0.01%        |
| VIII  | 122 | <i>o</i> -Toluidine  | 95-53-4    | 202-429-0 | N.D.              | N.D. | 0.05%        |
| VIII  | 123 | <i>o</i> -aminobenzotoluene  | 97-56-3    | 202-591-2 | N.D.              | N.D. | 0.05%        |
| VIII  | 124 | 4-aminobenzene   | 60-09-3    | 200-453-6 | N.D.              | N.D. | 0.05%        |
| VIII  | 125 | 6-methoxy- <i>m</i> -toluidine ( <i>p</i> -cresidine)  | 120-71-8   | 204-419-1 | N.D.              | N.D. | 0.05%        |
| VIII  | 126 | Dibutyltin dichloride (DBTC)   | 683-18-1   | 211-670-0 | N.D.              | N.D. | 0.05%        |
| VIII  | 127 | Lead titanium zirconium oxide*   | 12626-81-2 | 235-727-4 | N.D.              | N.D. | 0.01%        |
| VIII  | 128 | Methyloxirane (Propylene oxide)  | 75-56-9    | 200-879-2 | N.D.              | N.D. | 0.05%        |
| VIII  | 129 | 1-bromopropane (n-propyl bromide)  | 106-94-5   | 203-445-0 | N.D.              | N.D. | 0.05%        |
| VIII  | 130 | Trilead bis(carbonate)dihydroxide*   | 1319-46-6  | 215-290-6 | N.D.              | N.D. | 0.01%        |
| VIII  | 131 | Fatty acids, C16-18, lead salts*   | 91031-62-8 | 292-966-7 | N.D.              | N.D. | 0.01%        |
| VIII  | 132 | Orange lead (lead tetroxide)*  | 1314-41-6  | 215-235-6 | N.D.              | N.D. | 0.01%        |
| VIII  | 133 | Sulfurous acid, lead salt, dibasic*  | 62229-08-7 | 263-467-1 | N.D.              | N.D. | 0.01%        |
| VIII  | 134 | 4,4'-oxydianiline and its salts  | 101-80-4   | 202-977-0 | N.D.              | N.D. | 0.05%        |
| VIII  | 135 | Lead oxide sulfate*  | 12036-76-9 | 234-853-7 | N.D.              | N.D. | 0.01%        |
| VIII  | 136 | Lead bis(tetrafluoroborate)*   | 13814-96-5 | 237-486-0 | N.D.              | N.D. | 0.01%        |
| VIII  | 137 | Silicic acid, lead salt*   | 11120-22-2 | 234-363-3 | N.D.              | N.D. | 0.01%        |
| VIII  | 138 | N,N-dimethylformamide  | 68-12-2    | 200-679-5 | N.D.              | N.D. | 0.05%        |

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| Batch | No. | Substance Name(s)  | CAS No.    | EC No.    | Concentration (%) |      | Report Limit |
|-------|-----|--|------------|-----------|-------------------|------|--------------|
|       |     |  |            |           | (1)               | (2)  |              |
| IX    | 139 | Cadmium  | 7440-43-9  | 231-152-8 | N.D.              | N.D. | 0.01%        |
| IX    | 140 | Cadmium oxide*   | 1306-19-0  | 215-146-2 | N.D.              | N.D. | 0.01%        |
| IX    | 141 | Dipentyl phthalate (DPP)   | 131-18-0   | 205-017-9 | N.D.              | N.D. | 0.01%        |
| IX    | 142 | <sup>①</sup> 4-Nonylphenol, branched and linear, ethoxylated/ <i>substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof</i> | -          | -         | N.D.              | N.D. | 0.05%        |
| IX    | 143 | Ammonium pentadecafluorooctanoate (APFO)   | 3825-26-1  | 223-820-4 | N.D.              | N.D. | 0.01%        |
| IX    | 144 | Pentadecafluorooctanoic acid (PFOA)  | 335-67-1   | 206-397-9 | N.D.              | N.D. | 0.01%        |
| X     | 145 | Trixylyl phosphate   | 25155-23-1 | 246-677-8 | N.D.              | N.D. | 0.01%        |
| X     | 146 | 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)   | 1957-37-7  | 217-710-3 | N.D.              | N.D. | 0.01%        |
| X     | 147 | Dihexyl phthalate  | 84-75-3    | 201-559-5 | N.D.              | N.D. | 0.01%        |
| X     | 148 | Cadmium sulphide*  | 1306-23-6  | 215-147-8 | N.D.              | N.D. | 0.01%        |
| X     | 149 | Disodium 5,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)***  | 573-58-0   | 209-358-4 | N.D.              | N.D. | 0.01%        |
| X     | 150 | Lead di(acetate)*  | 301-04-2   | 206-104-4 | N.D.              | N.D. | 0.01%        |
| X     | 151 | Imidazolidine-2-thione; 2-imidazoline-2-thiol  | 96-45-7    | 202-506-9 | N.D.              | N.D. | 0.01%        |
| XI    | 152 | <sup>①</sup> 2-Benzenedicarboxylic acid, dihexyl ester, branched and linear  | 68515-50-4 | 271-093-5 | N.D.              | N.D. | 0.01%        |
| XI    | 153 | Cadmium chloride*  | 10108-64-2 | 233-296-7 | N.D.              | N.D. | 0.01%        |



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| Batch | No. | Substance Name(s)  | CAS No.                   | EC No.                  | Concentration (%) |      | Report Limit |
|-------|-----|--|---------------------------|-------------------------|-------------------|------|--------------|
|       |     |  |                           |                         | (1)               | (2)  |              |
| XI    | 154 | <sup>®</sup> Sodium perborate; perboric acid, sodium salt*****   | -                         | 239-172-9,<br>234-390-0 | N.D.              | N.D. | 0.01%        |
| XI    | 155 | <sup>®</sup> Sodium peroxometaborate*****  | 7632-04-4                 | 231-556-4               | N.D.              | N.D. | 0.01%        |
| XII   | 156 | 2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)   | 25973-55-1                | 247-384-8               | N.D.              | N.D. | 0.01%        |
| XII   | 157 | 2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)   | 3846-71-7                 | 223-346-6               | N.D.              | N.D. | 0.01%        |
| XII   | 158 | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DQTE)*  | 15571-58-1                | 239-622-4               | N.D.              | N.D. | 0.05%        |
| XII   | 159 | Cadmium fluoride*  | 7790-79-6                 | 232-222-0               | N.D.              | N.D. | 0.01%        |
| XII   | 160 | Cadmium sulphate*  | 10124-36-4,<br>31119-53-6 | 233-831-6               | N.D.              | N.D. | 0.01%        |
| XII   | 161 | <sup>①</sup> Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DQTE and MOTE)* | -                         | -                       | N.D.              | N.D. | 0.05%        |
| XIII  | 162 | <sup>①</sup> 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)   | 68515-51-5,<br>68648-93-1 | 271-094-0,<br>272-013-1 | N.D.              | N.D. | 0.05%        |
| XIII  | 163 | <sup>①</sup> 5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]                     | -                         | -                       | N.D.              | N.D. | 0.05%        |
| XIV   | 164 | Nitrobenzene   | 98-95-3                   | 202-716-0               | N.D.              | N.D. | 0.01%        |
| XIV   | 165 | 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)   | 3864-99-1                 | 223-383-8               | N.D.              | N.D. | 0.01%        |

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| Batch | No. | Substance Name(s)  | CAS No.                             | EC No.                       | Concentration (%) |      | Report Limit |
|-------|-----|--|-------------------------------------|------------------------------|-------------------|------|--------------|
|       |     |  |                                     |                              | (1)               | (2)  |              |
| XIV   | 166 | 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)   | 36437-37-3                          | 253-037-1                    | N.D.              | N.D. | 0.01%        |
| XIV   | 167 | 1,3-propanesultone   | 1129-71-4                           | 214-317-9                    | N.D.              | N.D. | 0.01%        |
| XIV   | 168 | Perfluorononan-1-oic-acid and its sodium and ammonium salts  | 375-95-1<br>21049-39-8<br>4149-60-4 | 206-801-3                    | N.D.              | N.D. | 0.01%        |
| XV    | 169 | Benzo[def]chrysene (Benzo[a]pyrene)  | 50-32-8                             | 200-028-5                    | N.D.              | N.D. | 0.01%        |
| XVI   | 170 | 4,4'-isopropylidenediphenol (bisphenol A; BPA)   | 80-05-7                             | 201-245-8                    | N.D.              | N.D. | 0.01%        |
| XVI   | 171 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts   | 3108-42-7<br>335-76-2<br>3830-45-3  | 221-470-5<br>206-400-3<br>-- | N.D.              | N.D. | 0.01%        |
| XVI   | 172 | <i>p</i> -(1,1-dimethylpropyl)phenol   | 80-46-6                             | 201-280-9                    | N.D.              | N.D. | 0.01%        |
| XVI   | 173 | <sup>①</sup> 4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] | --                                  | --                           | N.D.              | N.D. | 0.05%        |

**Test Method:**

Refer to US EPA3052:1996, US EPA 3050B:1996, US EPA3060A:1996, US EPA 3550C:2007, US EPA 3540C:1996, ISO 17353:2004(E), BS EN 14582:2007 for sample pretreatment.

Analyzed by ICP-OES, UV-Vis, IC, HPLC, GC-MS, GC-MS(NCI), Headspace-GCMS and LC-MS-MS.

**Tested Sample/Part Description**

- (1) Transparent resin
- (2) PCB(Tested as a whole) #

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## Note:

1. w/w = weight by weight; 0.1% = 1000 mg/kg = 1000 ppm
2. N.D. = Not Detected (<report limit)
3. \*: Concentration value of the substance by the conversion from the test results of certain elements.  
Concentration value of Bis(tributyltin)oxide(TBTO), 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE), Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) by the conversion from the test results of certain compounds(Tributyl Tins(TBT), Dioctyl Tins(DOT), Monoctyl Tins(MOT)).
4. \*\*: All refractory ceramic fibres are covered by index number 650-017-00-8 in Annex VI of the Regulation on Classification, Labeling and Packaging of chemical substances and mixtures, the so called CLP Regulation (Regulation (EC) No 1272/2008).
5. \*\*\*:C.I.: Colour Index
6. \*\*\*\*:Light fractions from distillation
7. \*\*\*\*\*: Concentration value of Disodiumtetraborate, anhydrous and Tetraboron disodium heptaoxide, hydrate is evaluated by Disodiumtetraborate, with no consider of the hydrate. Concentration value of Sodium perborate; perboric acid, sodium salt; Sodium peroxometaborate is evaluated by Sodium perborate, with no consider of the hydrate.
8. ^:Concentration value of Formaldehyde, oligomeric reaction products with aniline(technical MDA) by the conversion from the test results of certain compounds(2,4-Diaminodiphenylmethane, 4,4'-Diaminodiphenylmethane, 2,6-Diaminodiphenylmethane).
9. ①: In view of the substances are established as UVCB substances (substances of unknown or variable composition, complex reaction products or biological materials) consisting of different and variable constituents, the test results are calculated based on the main constituents of the representative compounds for substances.
10. ②: In view of the substance contain variable substances, the test results are calculated based on main constituents of the representative compounds for the substances, and the test results of the representative compounds are calculated based on the result of specified heavy metal elements.
11. ③: Concentration value of Boric acid; Disodiumtetraborate, anhydrous; Tetraboron disodium heptaoxide,hydrate; Diboron trioxide; Sodium perborate; perboric acid, sodium salt; Sodium peroxometaborate is calculated by the conversion from the test results of certain elements and confirmed by appropriate solvent extraction, meanwhile the book of materials is suggested to be checked for further confirmation.

## Remark:

#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.



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## Appendix:

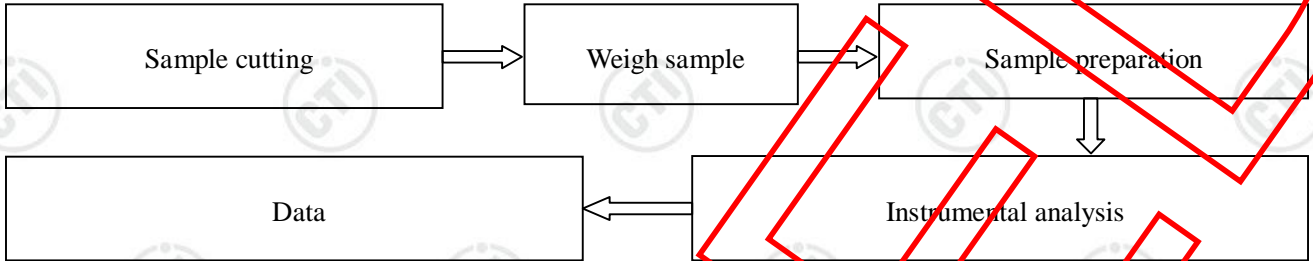
1. Any supplier of an article containing a substance that is included in the Candidate List in a concentration above 0.1 % weight by weight (w/w) has the duty to communicate information in accordance with Article 33 of European Union regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).
  - 1) Any supplier shall provide the recipient of the article with sufficient information to allow safe use of the article including, as a minimum, the name of that substance.
  - 2) On request by a consumer any supplier shall provide the consumer with sufficient information to allow safe use of the article including, as a minimum, the name of that substance within 45 days of receipt of the request, free of charge.
2. The supplier of a substance that is included in the Candidate List on their own shall provide the recipient of the substance with a safety data sheet for free compiled in accordance with Article 3 and Annex II of REACH.
3. The supplier of a mixture that containing a substance that is included in the Candidate List shall exchange information in accordance with Article 31, Article 32, and Annex II of REACH.
  - 1) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation meets the criteria for classification as dangerous in accordance with Directives 1999/45/EC.
  - 2) Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation does not meet the criteria for classification as dangerous in accordance with Directive 1999/45/EC, but contains any substance that is included in the Candidate List in an individual concentration of  $\geq 0.1$  % by weight for non-gaseous mixtures or  $\geq 0.2$  % by volume for gaseous mixtures.

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## Test Process



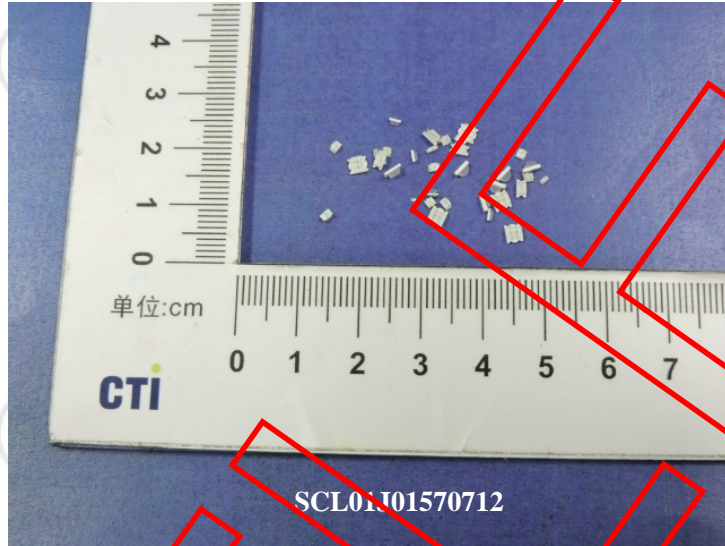
**RECEIVED**

# Test Report

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## Photo(s) of the Finished Product(s)





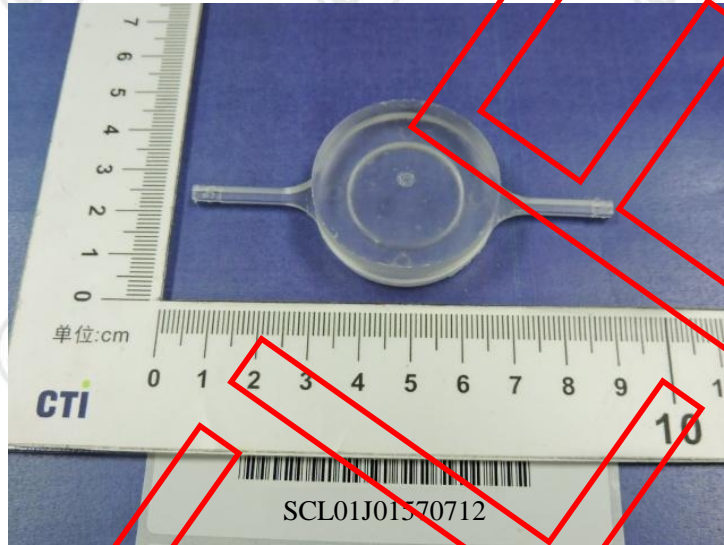
# Test Report

Report No. SCL01J01570712

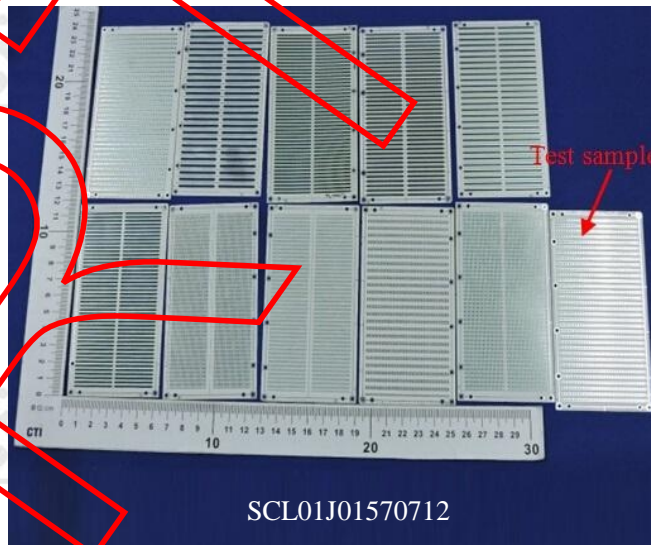
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## Photo(s) of the sample(s)

(1)



(2)



\*\*\* End of Report \*\*\*

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.