



**CENTRE OF TESTING SERVICE  
INTERNATIONAL**

**OPERATE ACCORDING TO ISO/IEC 17025**

# **TEST REPORT**

**Test Report Number : CNB3131118-04441-C**



**CTS (Ningbo) Testing Service Technology Co., Ltd.**

**Fl.2 South Huoju Building, No.181 Canghai Rd., Jiangdong High-tech Park, Ningbo China**

**PHONE +86-574-87912121 FAX +86-574-87907993**

**TEST REPORT**

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**CTS (Ningbo) Testing Service Technology Co., Ltd.**

Fl.2 south Huoju Building, No.181 canghai Rd., Jiangdong High-tech Park Ningbo China

Tel: +86-574-87912121 (16 lines)

Fax: +86-574-87907993

Complaint line: +86-574-87908003

E-mail: cts@cts-lab.com

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**1 General Information****1.1 Application Details**

Name : YUEQING LANGIR ELECTRIC CO.,LTD.  
Address : 4F,NO.188,LIUQING NORTH ROAD, LIUSHI TOWN,YUEQING  
CITY,ZHEJIANG PROVINCE, CHINA  
Contact : /  
Telephone : +86-577-62737672  
Fax : +86-577-62737671  
Mobile telephone : 8613695747282  
Email : sales@sunshinele.com

**1.2 Manufacturer & Buyer**

Manufacturer name : YUEQING LANGIR ELECTRIC CO.,LTD.  
Address : 4F,NO.188,LIUQING NORTH ROAD, LIUSHI TOWN,YUEQING  
CITY,ZHEJIANG PROVINCE, CHINA  
Contact : /  
Telephone : +86-577-62737672  
Fax : +86-577-62737671  
Mobile telephone : 8613695747282  
Email : sales@sunshinele.com  
Buyer name : /

**1.3 Description of the Test Item**

Sample name : VANDAL RESISTANT PUSHBUTTON SWITCH  
Model No. : L25,V12,V16,V19,V22,P12,  
LS16,L16,L19,L19A,L19M,LF19,L22,PZ  
Brand name : LANGIR  
Condition of sample(s) : EFFECTIVE

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## 2 Test Results

### 2.1 General Information

#### 2.1.1 Sample Receiving Date

Nov. 18, 2013

#### 2.1.2 Testing Period

Nov. 18, 2013 to Nov. 22, 2013

#### 2.1.3 Test Requested

- 1) As specified by applicant, based on the list published by European chemicals agency (ECHA) on 2008 October 28 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the fifteen (15) Substances of Very High Concern (SVHC) content in the submitted sample.
- 2) As specified by applicant, based on the list published by European chemicals agency (ECHA) on 2010 January 13 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the thirteen (13) Substances of Very High Concern (SVHC) content in the submitted sample.
- 3) As specified by applicant, based on the list published by European chemicals agency (ECHA) on 2010 June 18 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the eight (8) Substances of Very High Concern (SVHC) content in the submitted sample.
- 4) As specified by applicant, based on the list of the fourth published by European chemicals agency (ECHA) on 2010 December for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the eight (8) Substances of Very High Concern (SVHC) content in the submitted sample.
- 5) As specified by applicant, based on the list of the fifth published by European chemicals agency (ECHA) on 2011 May 31 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the seven (7) Substances of Very High Concern (SVHC) content in the submitted sample.
- 6) As specified by applicant, based on the list of the sixth published by European chemicals agency (ECHA) on 2011 December 19 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the twenty (20) Substances of Very High Concern (SVHC) content in the submitted sample.
- 7) As specified by applicant, based on the list of the seventh published by European chemicals agency (ECHA) on 2012 June 18 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the thirteen (13) Substances of Very High Concern (SVHC) content in the submitted sample.

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- 8) As specified by applicant, based on the list of the eighth published by European chemicals agency (ECHA) on 2012 December 19 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the fifty four (54) Substances of Very High Concern (SVHC) content in the submitted sample.
- 9) As specified by applicant, based on the list of the ninth published by European chemicals agency (ECHA) on 2013 June 20 for public consultation regarding regulation (EC) No 1907/2006 concerning the REACH, to determine the six (6) Substances of Very High Concern (SVHC) content in the submitted sample.

### **2.1.4 Test Method and Test Instrument**

Refer to US EPA3052:1996, US EPA 3050B:1996, US EPA3060A:1996, US EPA 3550C:2007, US EPA 3540C:1996, ISO 17353:2004, BS EN 14582:2007, EN 14372:2004 for sample pretreatment. Analyzed by ICP-OES, UV-Vis, IC, HPLC, GC-MS and LC-MS-MS.

### **2.1.5 Conclusion**

According to the specified scope and analytical technique, concentrations of all SVHC are <0.1% in the submitted sample(s)

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### 2.2 Results

1) The fifteen (15) Substances of Very High Concern (SVHC) content

| Substance Name  | CAS No.  | Unit | MQL   | Result            | Classification |
|---|--|------|-------|-------------------|----------------|
|   |  |      |       | No.1 <sup>△</sup> |                |
| Anthracene  | 120-12-7   | %    | 0.005 | N.D.              | PBT            |
| 4,4'-Diaminodiphenylmethane                                 | 101-77-9   | %    | 0.005 | N.D.              | CMR            |
| Dibutyl phthalate(DBP)                                      | 84-74-2  | %    | 0.005 | N.D.              | CMR            |
| Benzyl butyl phthalate (BBP)                                | 85-68-7  | %    | 0.005 | N.D.              | CMR            |
| Cobalt dichloride*  | 7646-79-9  | %    | 0.05  | N.D.              | CMR            |
| Diarsenic pentaoxide*                                       | 1303-28-2  | %    | 0.05  | N.D.              | CMR            |
| Diarsenic trioxide*   | 1327-53-3  | %    | 0.05  | N.D.              | CMR            |
| Sodium dichromate, dehydrate <sup>#</sup>                   | 7789-12-0,<br>10588-01-9   | %    | 0.05  | N.D.              | CMR            |
| 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)          | 81-15-2  | %    | 0.005 | N.D.              | vPvB           |
| Bis (2-ethyl(hexyl)phthalate) (DEHP)                        | 117-81-7   | %    | 0.005 | N.D.              | CMR            |
| Hexabromocyclododecane (HBCDD)                              | 25637-99-4<br>and 3194-55-6<br>(134237-51-7,<br>134237-50-6,<br>134237-52-8) | %    | 0.005 | N.D.              | PBT            |
| Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) | 85535-84-8   | %    | 0.005 | N.D.              | PBT            |
| Bis(tributyltin)oxide                                       | 56-35-9  | %    | 0.005 | N.D.              | PBT            |
| Lead hydrogen arsenate*                                     | 7784-40-9  | %    | 0.05  | N.D.              | CMR            |
| Triethyl arsenate*  | 15606-95-8   | %    | 0.05  | N.D.              | CMR            |

Note : 1. N.D. = not detected (less than MQL)  
 N.A.=Not applicable  
 2. 1mg/kg=1ppm=0.0001%  
 3. MQL=Method Quantitation Limit

The measurement results only apply to the submitted samples.  
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4. \*The Substances are tested in term of their respective elements (e.g. As,Pb,Co).
5. #The Substances are tested in term of hexavalent chromium, Cr(VI).
6.  $\Delta$ The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

2) The thirteen (13) Substances of Very High Concern (SVHC) content

| Substance Name   | CAS No.    | Unit | MQL   | Result        | Classification   |
|--|------------|------|-------|---------------|--|
|  |            |      |       | No.1 $\Delta$ |  |
| Anthracene oil(**)   | 90640-80-5 | %    | 0.05  | N.D.          | PBT  |
| Anthracene oil, anthracene paste, distn. Lights(**)        | 91995-17-4 | %    | 0.05  | N.D.          | PBT  |
| Anthracene oil, anthracene paste, anthracene fraction(**)  | 91995-15-2 | %    | 0.05  | N.D.          | PBT  |
| Anthracene oil, anthracene-low(**)                         | 90640-82-7 | %    | 0.05  | N.D.          | PBT  |
| Anthracene oil, anthracene paste(**)                       | 90640-81-6 | %    | 0.05  | N.D.          | PBT  |
| Pitch, coal tar, high-temp.(**)                            | 65996-93-2 | %    | 0.05  | N.D.          | PBT  |
| DIBP (Di-isobutyl phthalate)                               | 84-69-5    | %    | 0.005 | N.D.          | Toxic to Reproduction Category 2                           |
| 2,4-Dinitrotoluene   | 121-14-2   | %    | 0.005 | N.D.          | Carcinogen Category 2                                      |
| Tris(2-chloroethyl) phosphate (TCEP)                       | 115-96-8   | %    | 0.005 | N.D.          | Toxic to Reproduction Category 2                           |
| Lead chromate  | 7758-97-6  | %    | 0.01  | N.D.          | Carcinogen Category 2;<br>Toxic to Reproduction Category 1 |
| Lead chromate molybdate sulphate red(C.I. Pigment Red 104) | 12656-85-8 | %    | 0.01  | N.D.          | Carcinogen Category 2;<br>Toxic to Reproduction Category 1 |
| Lead sulfochromate yellow (C.I. Pigment Yellow 34)         | 1344-37-2  | %    | 0.01  | N.D.          | Carcinogen Category 2;<br>Toxic to Reproduction Category 1 |
| Acrylamide   | 79-06-1    | %    | 0.01  | N.D.          | Carcinogen Category2;<br>Mutagen Category 2                |

Note : 1. N.D. = not detected (less than MQL)  
 N.A.=Not applicable

The measurement results only apply to the submitted samples.  
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2. 1mg/kg=1ppm=0.0001%
3. MQL=Method Quantitation Limit
4. (\*\*): The concentrations of above-mentioned mixtures are evaluated per the gained composition rate between the selected marks and the mixtures.
5. Classification of this report in accordance with 67/548/EEC and Regulation (EC) No 1907/2006.
6. If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.
7. <sup>△</sup>The samples was/were analyzed on behalf of the applicant as mixing sample in one testing. The above results was/were only given as the informality value.

### 3) The eight (8) Substances of Very High Concern (SVHC) content

| Substance Name                           | CAS No.                              | Unit | MQL  | Result            | Classification  |
|--|--------------------------------------|------|------|-------------------|---|
|  |                                      |      |      | No.1 <sup>△</sup> |   |
| Trichloroethylene                        | 79-01-6                              | %    | 0.05 | N.D.              | Carcinogenic category 2   |
| Boric acid*                              | 10043-35-3<br>11113-50-1             | %    | 0.05 | N.D.              | Toxic for reproduction category 2   |
| Disodium tetraborate, anhydrous*         | 1330-43-4<br>12179-04-3<br>1303-96-4 | %    | 0.05 | N.D.              | Toxic for reproduction category 2   |
| Tetraboron disodium heptaoxide, hydrate* | 12267-73-1                           | %    | 0.05 | N.D.              | Toxic for reproduction category 2   |
| Sodium chromate*                         | 7775-11-3                            | %    | 0.05 | N.D.              | Carcinogenic category 2;<br>mutagenic category 2; toxic for reproduction category 2 |
| Potassium chromate*                      | 7789-00-6                            | %    | 0.05 | N.D.              | Carcinogenic category 2;<br>mutagenic category 2                                    |
| Ammonium dichromate*                     | 7789-09-5                            | %    | 0.05 | N.D.              | Carcinogenic category 2;<br>mutagenic category 2; toxic for reproduction category 2 |

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|                       |           |   |      |      |   |
|-----------------------|-----------|---|------|------|---|
| Potassium dichromate* | 7778-50-9 | % | 0.05 | N.D. | Carcinogenic category 2;<br>mutagenic category 2;<br>toxic for reproduction<br>category 2 |
|-----------------------|-----------|---|------|------|---|

- Note :
1. N.D. = not detected (less than MQL)  
N.A.=Not applicable
  2. 1mg/kg=1ppm=0.0001%
  3. MQL=Method Quantitation Limit
  4. \*The Substances are tested in term of their respective elements (e.g. B, Cr).
  5. <sup>△</sup>The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

4) The eight (8) Substances of Very High Concern (SVHC) content

| Substance Name        | CAS No.    | Unit | MQL  | Result            | Classification  |
|-----------------------|------------|------|------|-------------------|---|
|                       |            |      |      | No.1 <sup>△</sup> |   |
| Cobalt(II) sulphate*  | 10124-43-3 | %    | 0.05 | N.D.              | CMR<br>(carcinogen, cat. 2; toxic for reproduction, cat. 2) |
| Cobalt(II) dinitrate* | 10141-05-6 | %    | 0.05 | N.D.              | CMR<br>(carcinogen, cat. 2; toxic for reproduction, cat. 2) |
| Cobalt(II) carbonate* | 513-79-1   | %    | 0.05 | N.D.              | CMR<br>(carcinogen, cat. 2; toxic for reproduction, cat. 2) |
| Cobalt(II) diacetate* | 71-48-7    | %    | 0.05 | N.D.              | CMR<br>(carcinogen, cat. 2; toxic for reproduction, cat. 2) |
| 2-Methoxyethanol      | 109-86-4   | %    | 0.05 | N.D.              | CMR<br>(toxic for reproduction, cat. 2)                     |
| 2-Ethoxyethanol       | 110-80-5   | %    | 0.05 | N.D.              | CMR<br>(toxic for reproduction, cat. 2)                     |

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|   |                         |   |      |      |   |
|---|-------------------------|---|------|------|---|
| Chromium trioxide*  | 1333-82-0               | % | 0.05 | N.D. | CMR<br>(carcinogen, cat. 1;<br>mutagen, cat. 2) |
| 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 | % | 0.05 | N.D. | CMR<br>(carcinogen, cat. 2)                     |

- Note :
1. N.D. = not detected (less than MQL)  
N.A.=Not applicable
  2. 1mg/kg=1ppm=0.0001%
  3. MQL=Method Quantitation Limit
  4. \*The Substances are tested in term of their respective elements (e.g.Co, Cr).
  5. <sup>△</sup>The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

5) The seven (7) Substances of Very High Concern (SVHC) content

| Substance Name   | CAS No.               | Unit | MQL  | Result            | Classification   |
|--|-----------------------|------|------|-------------------|--|
|  |                       |      |      | No.1 <sup>△</sup> |  |
| 2-ethoxyethylacetate   | 111-15-9              | %    | 0.05 | N.D.              | CMR<br>(toxic for reproduction,<br>cat. 2)                     |
| 1,2-Benzenedicarboxylic acid, di-C7-11- branched and linear alkyl esters ( DHNUP ) | 68515-42-4            | %    | 0.05 | N.D.              | CMR<br>(toxic for reproduction,<br>cat. 2)                     |
| hydrazine  | 7803-57-8<br>302-01-2 | %    | 0.05 | N.D.              | CMR<br>(carcinogen, cat. 2)                                    |
| 1-methyl-2-pyrrolidone   | 872-50-4              | %    | 0.05 | N.D.              | CMR<br>(toxic for reproduction,<br>cat. 2)                     |
| 1,2,3-trichloropropane   | 96-18-4               | %    | 0.05 | N.D.              | CMR<br>(carcinogen, cat. 2; toxic for<br>reproduction, cat. 2) |

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|  |            |   |      |      |   |
|--|------------|---|------|------|---|
| 1,2-Benzenedicarboxylic acid, di-C6-8- branched alkyl esters, C7-rich ( DIHP ) | 71888-89-6 | % | 0.05 | N.D. | CMR<br>(toxic for reproduction, cat. 2) |
| Strontium chromate *   | 7789-06-2  | % | 0.05 | N.D. | CMR<br>(carcinogen, cat. 2)             |

- Note :
1. N.D. = not detected (less than MQL)  
N.A.=Not applicable
  2. 1mg/kg=1ppm=0.0001%
  3. MQL=Method Quantitation Limit
  4. \*The Substances are tested in term of their respective elements (e.g. B, Cr).
  5.  $\Delta$ The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

6) The twenty (20) Substances of Very High Concern (SVHC) content

| Substance Name   | CAS No.   | Unit | MQL   | Result        | Classification              |
|--|-----------|------|-------|---------------|-----------------------------|
|  |           |      |       | No.1 $\Delta$ |                             |
| 1,2-Dichloroethane                                       | 107-06-2  | %    | 0.050 | N.D.          | carcinogenic                |
| 2,2'-dichloro-4,4'-methylenedianiline (MOCA)             | 101-14-4  | %    | 0.050 | N.D.          | carcinogenic                |
| 2-Methoxyaniline o-Anisidine                             | 90-04-0   | %    | 0.050 | N.D.          | carcinogenic                |
| 4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol) | 140-66-9  | %    | 0.050 | N.D.          | equivalent level of concern |
| Aluminosilicate Refractory Ceramic Fibres(RCF)*          | --        | %    | 0.005 | N.D.          | carcinogenic                |
| Arsenic acid*  | 7778-39-4 | %    | 0.005 | N.D.          | carcinogenic                |
| Bis(2-methoxyethyl) ether                                | 111-96-6  | %    | 0.050 | N.D.          | toxic for reproduction      |

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| Bis(2-methoxyethyl) phthalate   | 117-82-8   | % | 0.050 | N.D. | toxic for reproduction                |
| Calcium arsenate*   | 7778-44-1  | % | 0.005 | N.D. | carcinogenic                          |
| Dichromium tris(chromate) *   | 24613-89-6 | % | 0.005 | N.D. | carcinogenic                          |
| Formaldehyde, oligomeric reaction products with aniline (technical MDA) | 25214-70-4 | % | 0.050 | N.D. | carcinogenic                          |
| Lead diazide*   | 13424-46-9 | % | 0.005 | N.D. | toxic for reproduction                |
| Lead dipicrate*   | 6477-64-1  | % | 0.005 | N.D. | toxic for reproduction                |
| Lead styphnate*   | 15245-44-0 | % | 0.005 | N.D. | toxic for reproduction                |
| N,N-dimethylacetamide (DMAC)  | 127-19-5   | % | 0.050 | N.D. | toxic for reproduction                |
| Pentazinc chromate octahydroxide*                                       | 49663-84-5 | % | 0.005 | N.D. | carcinogenic                          |
| Phenolphthalein   | 77-09-8    | % | 0.050 | N.D. | carcinogenic                          |
| Potassium hydroxyoctaoxodizincatedichromate*                            | 11103-86-9 | % | 0.005 | N.D. | carcinogenic                          |
| Trilead diarsenate*   | 3687-31-8  | % | 0.005 | N.D. | carcinogenic & toxic for reproduction |
| Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)*            | --         | % | 0.005 | N.D. | carcinogenic                          |

- Note : 1. N.D. = not detected (less than MQL)  
 N.A.=Not applicable  
 2. 1mg/kg=1ppm=0.0001%  
 3. MQL=Method Quantitation Limit  
 4. \*The Substances are tested in term of their respective elements (e.g. As,Pb,Cr,Al,Ca,K,Zr).  
 5. <sup>△</sup>The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

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Fl.2 south Huoju Building, No.181 canghai Rd., Jiangdong High-tech Park Ningbo China

Tel: +86-574-87912121 (16 lines)

Fax: +86-574-87907993

Complaint line: +86-574-87908003

E-mail: cts@cts-lab.com

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7) The thirteen (13) Substances of Very High Concern (SVHC) content

| Substance Name   | CAS No.   | Unit | MQL   | Result            | Classification |
|--|-----------|------|-------|-------------------|----------------|
|  |           |      |       | No.1 <sup>△</sup> |                |
| 1,2-bis(2methoxy-ethoxy) ethane (TEGDME; triglyme)   | 112-49-2  | %    | 0.050 | N.D.              | CMR            |
| 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)  | 110-71-4  | %    | 0.050 | N.D.              | CMR            |
| 4,4'-bis(dimethylamino)-4''(methyl-amino)trityl alcohol (C.I. Solvent Violet 8)  | 561-41-1  | %    | 0.005 | N.D.              | CMR            |
| 4,4'-bis(dimethylamino) benzophenone (Michler's ketone)  | 90-94-8   | %    | 0.050 | N.D.              | CMR            |
| 4-[4,4'-bis(dimethyl-amino) benzhydrylidene]cyclohexa-2,5-dien- 1-ylidene]dimethyl ammonium chloride (C.I. Basic Violet 3)                 | 548-62-9  | %    | 0.005 | N.D.              | CMR            |
| [4-[[4-anilino-1-naphthyl] [4(dimethylamino)phenyl] methylene]cyclohexa-2,5-dien-1ylidene] dimethyl ammonium chloride (C.I. Basic Blue 26) | 2580-56-5 | %    | 0.005 | N.D.              | CMR            |
| N,N,N',N'-tetramethyl-4,4'methylenedianiline (Michler's base)  | 101-61-1  | %    | 0.005 | N.D.              | CMR            |
| α,α-Bis[4(dimethylamino) phenyl]-4-(phenylamino) naphthalene-1-methanol (C.I. Solvent Blue 4)  | 6786-83-0 | %    | 0.005 | N.D.              | CMR            |
| Diboron trioxide*  | 1303-86-2 | %    | 0.050 | N.D.              | CMR            |
| Formamide  | 75-12-7   | %    | 0.005 | N.D.              | CMR            |

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|  |            |   |       |      |     |
|--|------------|---|-------|------|-----|
| Lead(II)<br>bis(methanesulfonate) *  | 17570-76-2 | % | 0.050 | N.D. | CMR |
| TGIC (1,3,5tris(oxiranyl<br>methyl)-1,3,5triazine-<br>2,4,6(1H,3H,5H)trione)                     | 2451-62-9  | % | 0.050 | N.D. | CMR |
| β-TGIC (1,3,5-tris[(2S and<br>2R)-2,3-epoxypropyl]-1,3,5-<br>triazine-2,4,6(1H,3H,5H)<br>trione) | 59653-74-6 | % | 0.050 | N.D. | CMR |

- Note :
1. N.D. = not detected (less than MQL)  
N.A.=Not applicable
  2. 1mg/kg=1ppm=0.0001%
  3. MQL=Method Quantitation Limit
  4. \*The Substances are tested in term of their respective elements (e.g. Pb,B).
  5. <sup>△</sup>The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

8) The fifty four (54) Substances of Very High Concern (SVHC) content

| Substance Name   | CAS No.    | Unit | MQL   | Result            | Classification  |
|--|------------|------|-------|-------------------|---|
|  |            |      |       | No.1 <sup>△</sup> |   |
| Bis(pentabromophenyl) ether<br>(DecaBDE)   | 1163-19-5  | %    | 0.005 | N.D.              | PBT ;<br>vPvB   |
| Pentacosafuorotridecanoic acid   | 72629-94-8 | %    | 0.050 | N.D.              | vPvB  |
| Tricosafuorododecanoic acid  | 307-55-1   | %    | 0.050 | N.D.              | vPvB  |
| Henicosafuoroundecanoic acid   | 2058-94-8  | %    | 0.050 | N.D.              | vPvB  |
| Heptacosafuorotetradecanoic acid   | 376-06-7   | %    | 0.050 | N.D.              | vPvB  |
| 4-(1,1,3,3-tetramethylbutyl)<br>phenol, ethoxylated - covering<br>well-defined substances and<br>UVCB substances, polymers<br>and homologues | -          | %    | 0.050 | N.D.              | Equivalent level<br>of concern -<br>probable serious<br>effects on the<br>environment |

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Fl.2 south Huoju Building, No.181 canghai Rd., Jiangdong High-tech Park Ningbo China

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Complaint line: +86-574-87908003

E-mail: cts@cts-lab.com

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|  |   |   |       |      |  |
|--|---|---|-------|------|--|
| 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 | -   | % | 0.050 | N.D. | Equivalent level of concern - probable serious effects on the environment  |
| Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))  | 123-77-3  | % | 0.005 | N.D. | Equivalent level of concern - probable serious effects on human health   |
| Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)  | 85-42-7   | % | 0.005 | N.D. | Equivalent level of concern - probable serious effects on human health   |
| Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride  | 25550-51-0,<br>19438-60-9,<br>48122-14-1,<br>57110-29-9 | % | 0.005 | N.D. | Equivalent level of concern - probable serious effects on human health   |
| Methoxy acetic acid  | 625-45-6  | % | 0.050 | N.D. | Toxic for reproduction ; equivalent level of concern -probable serious effects on human health and the environment |
| 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear   | 84777-06-0  | % | 0.050 | N.D. | Toxic for reproduction   |
| Diisopentylphthalate (DIPP)  | 605-50-5  | % | 0.005 | N.D. | Toxic for reproduction   |
| N-pentyl-isopentylphthalate  | 776297-69-9   | % | 0.050 | N.D. | Toxic for reproduction   |
| 1,2-Diethoxyethane   | 629-14-1  | % | 0.050 | N.D. | Toxic for reproduction   |

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|   |            |   |       |      |                           |
|---|------------|---|-------|------|---------------------------|
| N,N-dimethylformamide;<br>dimethyl formamide                  | 68-12-2    | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Dibutyltin dichloride (DBT)                                   | 683-18-1   | % | 0.005 | N.D. | Toxic for<br>reproduction |
| Acetic acid, lead salt, basic*                                | 51404-69-4 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Basic lead carbonate (trilead<br>bis(carbonate)dihydroxide) * | 1319-46-6  | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead oxide sulfate (basic lead<br>sulfate) *                  | 12036-76-9 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| [Phthalato(2-)]dioxotrilead<br>(dibasic lead phthalate) *     | 69011-06-9 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Dioxobis(stearato)trilead*                                    | 12578-12-0 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Fatty acids, C16-18, lead salts*                              | 91031-62-8 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead bis(tetrafluoroborate) *                                 | 13814-96-5 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead cyanamate*   | 20837-86-9 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead dinitrate*   | 10099-74-8 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead oxide (lead monoxide) *                                  | 1317-36-8  | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead tetroxide (orange lead) *                                | 1314-41-6  | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead titanium trioxide*                                       | 12060-00-3 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Lead Titanium Zirconium Oxide*                                | 12626-81-2 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Pentalead tetraoxide sulphate*                                | 12065-90-6 | % | 0.050 | N.D. | Toxic for<br>reproduction |
| Pyrochlore, antimony lead<br>yellow*                          | 8012-00-8  | % | 0.050 | N.D. | Toxic for<br>reproduction |

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|  |             |   |       |      |                          |
|--|-------------|---|-------|------|--------------------------|
| Silicic acid, barium salt, lead-doped*             | 68784-75-8  | % | 0.050 | N.D. | Toxic for reproduction   |
| Silicic acid, lead salt*                           | 11120-22-2  | % | 0.050 | N.D. | Toxic for reproduction   |
| Sulfurous acid, lead salt, dibasic*                | 62229-08-7  | % | 0.050 | N.D. | Toxic for reproduction   |
| Tetraethyllead*                                    | 78-00-2     | % | 0.050 | N.D. | Toxic for reproduction   |
| Tetralead trioxide sulphate*                       | 12202-17-4  | % | 0.050 | N.D. | Toxic for reproduction   |
| Trilead dioxide phosphonate*                       | 12141-20-7  | % | 0.050 | N.D. | Toxic for reproduction   |
| Furan  | 110-00-9    | % | 0.050 | N.D. | Carcinogenic             |
| Propylene oxide; 1,2-epoxypropane; methyloxirane   | 75-56-9     | % | 0.050 | N.D. | Carcinogenic ; Mutagenic |
| Diethyl sulphate                                   | 64-67-5     | % | 0.050 | N.D. | Carcinogenic ; Mutagenic |
| Dimethyl sulphate                                  | 77-78-1     | % | 0.050 | N.D. | Carcinogenic             |
| 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine | 143860-04-2 | % | 0.050 | N.D. | Toxic for reproduction   |
| Dinoseb  | 88-85-7     | % | 0.050 | N.D. | Toxic for reproduction   |
| 4,4'-methylenedi-o-toluidine                       | 838-88-0    | % | 0.005 | N.D. | Carcinogenic             |
| 4,4'-oxydianiline and its salts                    | 101-80-4    | % | 0.005 | N.D. | Carcinogenic ; Mutagenic |
| 4-Aminoazobenzene; 4-Phenylazoaniline              | 60-09-3     | % | 0.005 | N.D. | Carcinogenic             |
| 4-methyl-m-phenylenediamine (2,4-toluene-diamine)  | 95-80-7     | % | 0.005 | N.D. | Carcinogenic             |
| 6-methoxy-m-toluidine (p-cresidine)                | 120-71-8    | % | 0.005 | N.D. | Carcinogenic             |
| Biphenyl-4-ylamine                                 | 92-67-1     | % | 0.005 | N.D. | Carcinogenic             |

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Complaint line: +86-574-87908003

E-mail: cts@cts-lab.com

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|                                  |          |   |       |      |                        |
|----------------------------------|----------|---|-------|------|------------------------|
| o-aminoazotoluene                | 97-56-3  | % | 0.005 | N.D. | Carcinogenic           |
| o-Toluidine; 2-Aminotoluene      | 95-53-4  | % | 0.005 | N.D. | Carcinogenic           |
| N-methylacetamide                | 79-16-3  | % | 0.005 | N.D. | Toxic for reproduction |
| 1-bromopropane; n-propyl bromide | 106-94-5 | % | 0.005 | N.D. | Toxic for reproduction |

- Note :
1. N.D. = not detected (less than MQL)  
N.A.=Not applicable
  2. 1mg/kg=1ppm=0.0001%
  3. MQL=Method Quantitation Limit
  4. \*The Substances are tested in term of their respective elements (e.g. Pb,Ba,Zr,Ti).
  5. <sup>△</sup>The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

9) The six (6) Substances of Very High Concern (SVHC) content

| Substance Name                           | CAS No.   | Unit | MQL  | Result            | Classification  |
|--|-----------|------|------|-------------------|---|
|  |           |      |      | No.1 <sup>△</sup> |   |
| Cadmium                                  | 7440-43-9 | %    | 0.05 | N.D.              | Carcinogenic (Article 57a);<br>Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| Cadmium oxide *                          | 1306-19-0 | %    | 0.05 | N.D.              | Carcinogenic (Article 57a);<br>Equivalent level of concern having probable serious effects to human health (Article 57 f) |
| Pentadecafluorooctanoic acid (PFOA)      | 335-67-1  | %    | 0.05 | N.D.              | Toxic for reproduction (Article 57 c);<br>PBT (Article 57 d)  |
| Ammonium pentadecafluorooctanoate (APFO) | 3825-26-1 | %    | 0.05 | N.D.              | Toxic for reproduction (Article 57 c);<br>PBT (Article 57 d)  |

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|   |          |   |      |      |   |
|---|----------|---|------|------|---|
| Dipentyl phthalate (DPP)  | 131-18-0 | % | 0.05 | N.D. | Toxic for reproduction (Article 57 c)   |
| 4-Nonylphenol, branched and linear, ethoxylated [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] | --       | % | 0.05 | N.D. | Equivalent level of concern having probable serious effects to the environment (Article 57 f) |

- Note :
1. N.D. = not detected (less than MQL)  
N.A.=Not applicable
  2. 1mg/kg=1ppm=0.0001%
  3. MQL=Method Quantitation Limit
  4. \*The Substances are tested in term of their respective elements (e.g. Cd).
  5.  $\Delta$ The samples was/were analyzed on behalf of the applicant as mixing sample in one testing.The above results was/were only given as the informality value.

Test Part Description :

No.1 : Vandal resistant pushbutton switch (mixed)

Written by: *Jessie*

Inspected by: *Suzei*

Approved by: *Vijay*



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

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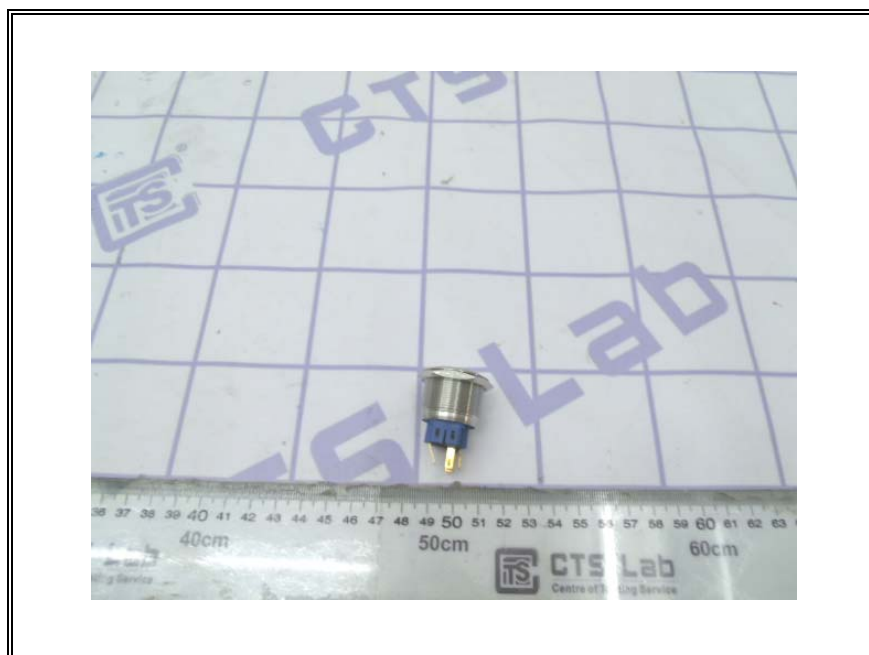
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### 3 Sample Reference Photo



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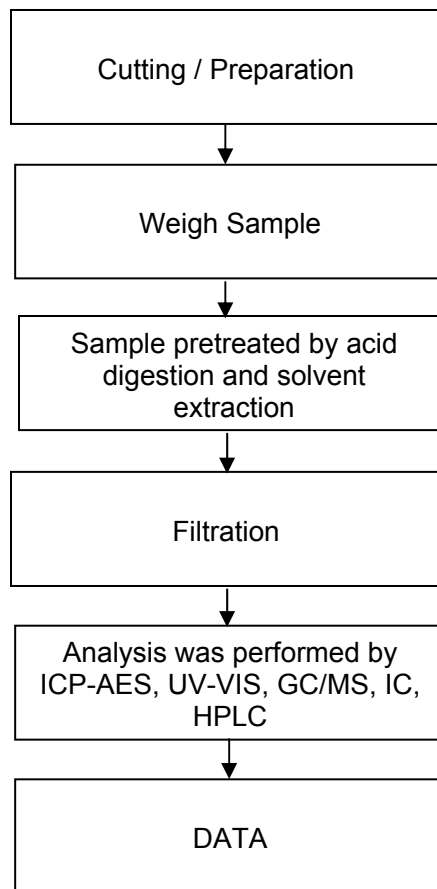
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### 4 Attachment

Analytical flow chart of SVHC



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