



Technical Report No.68.402.20.0883.02

Rev. 01

Dated 2020-12-22

Client: Lead Opto-technology Co., Limited

Address: Laowei Village Group, Yuechang Village, Xinxu Town, Huiyang District, Huizhou City, Guangdong Province, China.

Attn.: Ms. Amy Cai

Sample Description: Solar LED Light

Model No.: LD-SFL-2W-Flame, LD-SWL-15W-Transformer, LD-SSL-40W-Pro, LD-SBL-10W-iLead, LD-UVC-5W, LSD-SNL-3.5W-Fairy, LD-SFL-5W-LeadPad, LD-SFL-10W-LeadPad, LSD-SWL-1.5WPlus-Butterfly, LD-SSL-4W-Pro, LSD-SWL-6.8W-Butterfly, LD-SFL-10W-TwinsPad-PIR, LD-SPL-20W-Guardian

Ref. Model No.: Please refer to APPENDIX IV

Sample Received Date: 2020-09-11, 2020-11-12

Test Period: From 2020-09-11 to 2020-10-21; From 2020-11-12 to 2020-11-17

Location of Testing: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

Purpose of examination: REACH Regulation (EC) No. 1907/2006
- 209 Substances of Very High Concern (SVHC) analysis based on the Candidate List published by the European Chemicals Agency (ECHA)

Test Result: Refer to following page(s)

Summary: According to the specified scope and analytical techniques, the concentration of Lead is >0.1% (w/w) in certain component(s), the concentration of each other SVHCs is <0.1% (w/w) in the component(s) of submitted product(s).

Remark: The result relates only to the items tested.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
TÜV SÜD Group

Prepared by:

Reviewed by:

Elsa Deng



Scarlett Liang

Elsa Deng
Project Handler

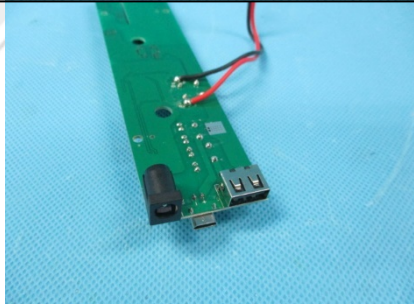
Scarlett Liang
Designated Reviewer

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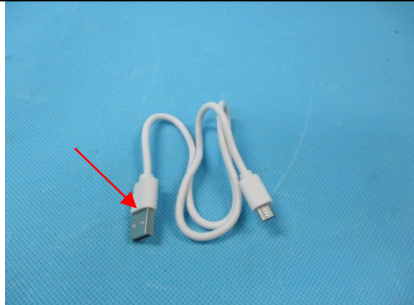
TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
TÜV SÜD Group
Building 12&13, Zhiheng Wisdomland Business Park,
Nantou Checkpoint road 2,
Shenzhen 518052, P. R. China

Tel.: (86) 755 88286998
Fax: (86) 755 88285299

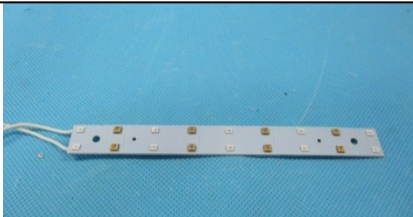
1. TESTED SUBJECT DESCRIPTION

Sample Number	Tested Material Description	Photo
001	White glue	
002	Black plastic case	
003	Translucent soft plastic gasket	
004	Transparent plastic case	
005a	Black plastic button	
005b	Silvery metal spring	
005c	Gray plastic button	
005d	Silvery metal button	
005e	Black plastic case	
005f	Silvery metal pin	
006a	Black plastic shell	
006b	Silvery metal plate	
006c	Silvery metal pin	
006d	Silvery metal shell	
006e	Black plastic holder	
006f	Silvery/Golden metal pin	
007	White plastic sleeve	
008	Silvery metal pipe	
009	Silvery metal screw	

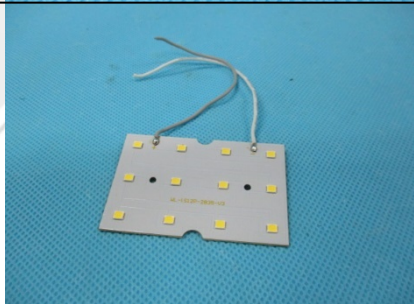
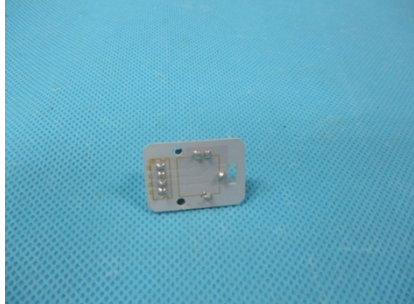
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Sample Number	Tested Material Description	Photo
010a	White soft plastic shell	
010b	Silvery metal solder	
010c	Silvery metal shell	
010d	White plastic holder	
010e	Silvery/Golden metal pin	
011a	White soft plastic shell	
011b	Silvery metal shell	
011c	Silvery/Golden holder	
011d	Black plastic holder	
011e	Silvery/Golden metal pin	
012	White soft plastic cable jacket	
013	Pink soft plastic wire jacket	
014	Light yellow soft plastic wire jacket	
015	Coppery metal wire	
016a	Silvery fiber tape	
016b	Gray fiber wire	
016c	Gray/Dark gray fiber cloth	
017	White plastic case	
018	Coppery coated white plastic button	
019a	White fiber tape	
019b	White plastic holder	
019c	White fiber wire	

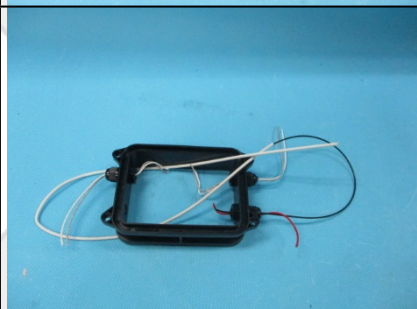
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Sample Number	Tested Material Description	Photo
020	White PCB board with EC	
021	Red soft plastic wire jacket	
022a	Blue soft plastic wire jacket	
022b	Silvery metal wire	
022c	Black plastic	
022d	Silvery metal shell	
022e	Silvery metal shaft	
022f	Silvery magnet	
022g	Coppery metal coil	
022h	Green PCB board	
022i	Golden metal holder	
022j	Silvery metal plate	
022k	Black plastic	
023	White soft plastic gasket	
024	Gray soft plastic tape	
025	Silvery metal plate with solder	
026	Silvery metal spring	
027	Silvery metal screw	
028	Yellow plastic sleeve	

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Sample Number	Tested Material Description	Photo
029	Golden metal holder	
030	Black plastic holder	
031	Black coated silvery metal screw	
032	Green/Beige PCB board with EC	
033	White/Yellow PCB board with EC	
034	White/Beige PCB board	

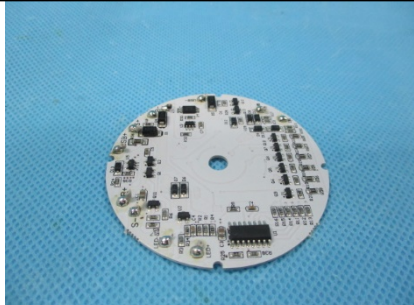
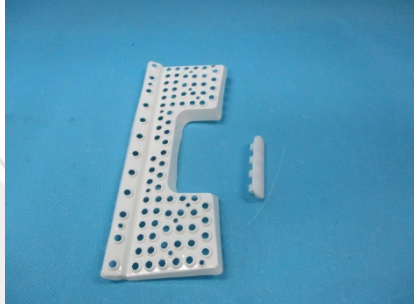
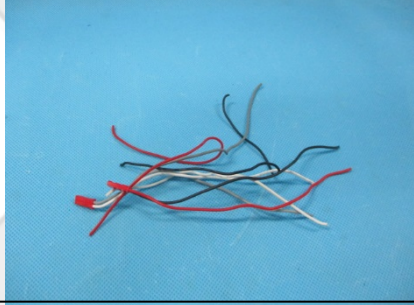
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Sample Number	Tested Material Description	Photo
035	Dark gray coated metal case	
036	Black coated metal case and holder	
037	White fiber sleeve	
038	Silvery metal screw	
039	Silvery metal gasket	
040	Black plastic case	

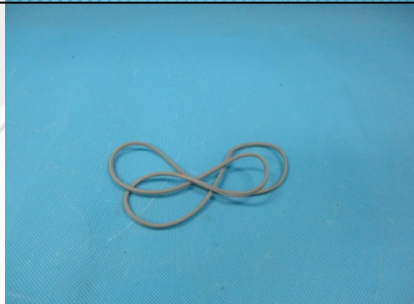
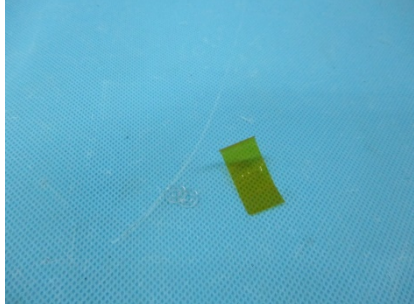
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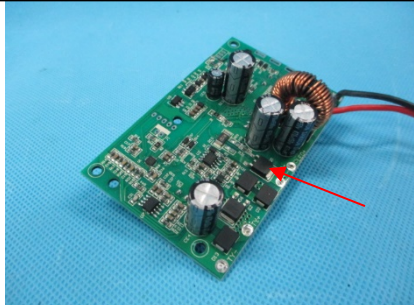
Sample Number	Tested Material Description	Photo
041a	Black soft plastic cable jacket	
041b	Red soft plastic wire jacket	
041c	Black soft plastic wire jacket	
041d	Coppery metal wire	
042	Black plastic holder	
043	Dark green soft plastic button	
044	Transparent black plastic case	
045	Black plastic case	
046	Black plastic pipe	
047	Black plastic holder	
048	Transparent plastic case	
049	Black/Beige PCB board	
050	Transparent plastic case	
051	Black soft plastic tape	
052	Black foam with glue	
053	Red soft plastic wire jacket	
054	Black soft plastic wire jacket	
055	White soft plastic wire jacket	
056	Gray soft plastic wire jacket	
057	Silvery metal wire	

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Sample Number	Tested Material Description	Photo
058	White PCB board with EC	
059	White plastic plate	
060	White soft plastic button	
061a	Red plastic shell	
061b	Silvery metal pin	
062	Silvery metal nut	
063	Silvery metal screw	
064	Multi-color printed white plastic plate	
065	Black plastic case	

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Sample Number	Tested Material Description	Photo
066	Black plastic holder	
067	Transparent plastic plate	
068	Silvery metal screw	
069	Green/Brown PCB board with EC	
070	Gray soft plastic gasket	
071	Transparent plastic gasket	
072	Transparent yellow plastic film	

Sample Number	Tested Material Description	Photo
073	Silvery/Coppery metal plate with solder	
074	Silvery metal shaft	
075	Silvery metal screw	
076	Multi-color printed silvery plastic plate	
077	Black plastic case	
078a	Black soft plastic shell	
078b	Silvery metal solder	
078c	Silvery metal shell	
078d	Black plastic holder	
078e	Silvery metal pin	

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Sample Number	Tested Material Description	Photo
079	Black soft plastic cable jacket	
080	Red soft plastic wire jacket	
081	Black soft plastic wire jacket	
082	Coppery metal wire	
083	Black plastic nut	
084	Silvery metal screw	
085	Beige plastic case	
086	White plastic case	
087	Silvery metal magnet	

2. TEST RESULTS

Test method: Screening test. [Reporting limit: 0.010%]

For organic substance(s) analysis, extracted by organic solvent, followed by using Liquid Chromatography with Tandem Mass Spectrometry Detection (LC-MS/MS), Gas Chromatography and Mass Spectrometry (GC-MS), headspace GC-MS and High Performance Liquid Chromatography-Diode Array Detection (HPLC-DAD);

For heavy metal(s) analysis, digested by acid, followed by using Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES), Atomic Absorption Spectrometry (AAS) and Ultraviolet-visible spectrophotometer (UV-Vis).

Test Item(s)	Result [%]	
	Sample 001	Sample 002+004+007+017+018+028+030+040
Each of 209 substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 003	Sample 005
Dodecamethylcyclodioxane (D6) (CAS No. 540-97-6)	0.018	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 006	Sample 008+009+015+025+026+027+029+031
Each of 209 substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 010	Sample 011
Each of 209 substances of very high concern (SVHCs)*	< 0.010	< 0.010

Note:

- “%” denotes percent by weight
- “<” denotes less than
- “*” refer to APPENDIX I for detailed list of SVHCs

(Continued)

Test Item(s)	Result [%]	
	Sample 012	Sample 013
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP) (CAS No. 85535-84-8)	0.078	0.057
Bis (2-ethylhexyl) phthalate (DEHP) (CAS No. 117-81-7)	0.021	0.019
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	0.011	< 0.010
Diisobutyl phthalate (DIBP) (CAS No. 84-69-5)	0.014	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 014	Sample 016
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP) (CAS No. 85535-84-8)	0.043	< 0.010
Bis (2-ethylhexyl) phthalate (DEHP) (CAS No. 117-81-7)	0.012	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 019	Sample 020
N,N-dimethylformamide; dimethyl formamide (CAS No. 68-12-2)	< 0.010	0.020
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Note:

- “%” denotes percent by weight
- “<” denotes less than
- “*” refer to APPENDIX I for detailed list of SVHCs

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Test Item(s)	Result [%]	
	Sample 021	Sample 022
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	0.011	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 023+051+060	Sample 024
4,4'-isopropylidenediphenol (bisphenol A; BPA) (CAS No. 80-05-7)	< 0.010	0.025
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 032	Sample 033+034+049
N,N-dimethylformamide; dimethyl formamide (CAS No. 68-12-2)	0.022	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 035	Sample 036+038+039+057+062+ 063+068+074+075+082
Lead (CAS No. 7439-92-1)	0.034	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Note:

- “%” denotes percent by weight
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(Continued)

Test Item(s)	Result [%]	
	Sample 037	Sample 041
Each of 209 substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 042+043+044+045+046+ 047+048+050+059	Sample 052
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	< 0.010	0.017
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 053	Sample 054
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	0.014	0.011
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 055	Sample 056
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	0.014	0.013
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP) (CAS No. 85535-84-8)	0.013	0.013
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Note:

- “%” denotes percent by weight
- “<” denotes less than
- “*” refer to APPENDIX I for detailed list of SVHCs

(Continued)

Test Item(s)	Result [%]	
	Sample 058	Sample 061
Each of 209 substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 064+065+066+067+071+ 072+076+085+086	Sample 069
Each of 209 substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 070	Sample 073
Dodecamethylcyclhexasiloxane (D6) (CAS No. 540-97-6)	0.015	< 0.010
Lead (CAS No. 7439-92-1)	< 0.010	3.45
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]	
	Sample 077	Sample 078
4,4'-isopropylidenediphenol (bisphenol A; BPA) (CAS No. 80-05-7)	0.062	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Note:

- “%” denotes percent by weight
- “<” denotes less than
- “*” refer to APPENDIX I for detailed list of SVHCs

(Continued)

Test Item(s)	Result [%]	
	Sample 079+080+081	Sample 083
4,4'-isopropylidenediphenol (bisphenol A; BPA) (CAS No. 80-05-7)	< 0.010	0.068
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	0.023	< 0.010
Other substances of very high concern (SVHCs)*	< 0.010	< 0.010

Test Item(s)	Result [%]
	Sample 084+087
Each of 209 substances of very high concern (SVHCs)*	< 0.010

Note:

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- “*” refer to APPENDIX I for detailed list of SVHCs

APPENDIX I – 209 SUBSTANCES OF VERY HIGH CONCERN (SVHCs)

1. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN OCTOBER 2008 BY ECHA

Substance Name	CAS NO.	EC NO.
Anthracene	120-12-7	204-371-1
4,4'- Diaminodiphenylmethane (MDA)	101-77-9	202-974-4
Dibutyl phthalate (DBP)	84-74-2	201-557-4
Cobalt dichloride*	7646-79-9	231-589-4
Diarsenic pentaoxide*	1303-28-2	215-116-9
Diarsenic trioxide*	1327-53-3	215-481-4
Sodium dichromate*	7789-12-0 and 10588-01-9	234-190-3
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4
Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	204-211-0
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-HBCDD, Beta-HBCDD, Gamma-HBCDD	25637-99-4 and 3194-55-6 (134237-50-6, 134237-51-7, 134237-52-8)	247-148-4 and 221-695-9
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP)	85535-84-8	287-476-5
Bis(tributyltin)oxide (TBTO)*	56-35-9	200-268-0
Lead hydrogen arsenate*	7784-40-9	232-064-2
Benzyl butyl phthalate (BBP)	85-68-7	201-622-7
Triethyl arsenate*	15606-95-8	427-700-2

2. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JANUARY 2010 AND MARCH 2010 BY ECHA

Substance Name	CAS NO.	EC NO.
Anthracene oil [#]	90640-80-5	292-602-7
Anthracene oil, anthracene paste, distn. lights [#]	91995-17-4	295-278-5
Anthracene oil, anthracene paste, anthracene fraction [#]	91995-15-2	295-275-9
Anthracene oil, anthracene-low [#]	90640-82-7	292-604-8
Anthracene oil, anthracene paste [#]	90640-81-6	292-603-2
Pitch, coal tar, high temp [#]	65996-93-2	266-028-2
2,4-Dinitrotoluene	121-14-2	204-450-0
Diisobutyl phthalate (DIBP)	84-69-5	201-553-2
Tris(2-chloroethyl)phosphate	115-96-8	204-118-5
Lead chromate [*]	7758-97-6	231-846-0
Lead sulfochromate yellow (C.I. Pigment Yellow 34) [*]	1344-37-2	215-693-7
Lead chromate molybdate sulphate red (C.I. Pigment Red 104) [*]	12656-85-8	235-759-9
Acrylamide	79-06-1	201-173-7

3. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2010 BY ECHA

Substance Name	CAS NO.	EC NO.
Trichloroethylene	79-01-6	201-167-4
Boric acid*	10043-35-3 11113-50-1	233-139-2 234-343-4
Disodium tetraborate, anhydrous*	1330-43-4 12179-04-3 1303-96-4	215-540-4
Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3
Sodium chromate*	7775-11-3	231-889-5
Potassium chromate*	7789-00-6	232-140-5
Ammonium dichromate*	7789-9-5	232-143-1
Potassium dichromate*	7778-50-9	231-906-6

4. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN DECEMBER 2010 BY ECHA

Substance Name	CAS NO.	EC NO.
Cobalt(II) sulphate*	10124-43-3	233-334-2
Cobalt(II) dinitrate*	10141-05-6	233-402-1
Cobalt(II) carbonate*	513-79-1	208-169-4
Cobalt(II) diacetate*	71-48-7	200-755-8
2-Methoxyethanol	109-86-4	203-713-7
2-Ethoxyethanol	110-80-5	203-804-1
Chromium trioxide*	1333-82-0	215-607-8
Acids generated from chromium trioxide and their oligomers*	7738-94-5 13530-68-2 not yet assigned	231-801-5 236-881-5 not yet assigned

5. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2011 BY ECHA

Substance Name	CAS NO.	EC NO.
2-Ethoxyethyl acetate (2-EEA)	111-15-9	203-839-2
Strontium chromate*	7789-06-2	232-142-6
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)#	68515-42-4	271-084-6
Hydrazine	7803-57-8, 302-01-2	206-114-9
1-Methyl-2-pyrrolidone	872-50-4	212-828-1
1,2,3-Trichloropropane	96-18-4	202-486-1
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	276-158-1

6. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN DECEMBER 2011 BY ECHA

Substance Name	CAS NO.	EC NO.
1,2-Dichloroethane	107-06-2	203-458-1
2,2'-Dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9
2-Methoxyaniline, o-Anisidine	90-04-0	201-963-1
4-(1,1,3,3-Tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	205-426-2
Aluminosilicate Refractory Ceramic Fibres (RCF)	--	---
Arsenic acid*	7778-39-4	231-901-9
Bis(2-methoxyethyl) ether	111-96-6	203-924-4
Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6
Calcium arsenate*	7778-44-1	231-904-5
Dichromium tris(chromate) *	24613-89-6	246-256-2
Formaldehyde, oligomeric reaction products with aniline (technical MDA) #	25214-70-4	500-036-1
Lead diazide*	13424-46-9	236-542-1
Lead dipicrate*	6477-64-1	229-335-2
Lead styphnate*	15245-44-0	239-290-0
N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4
Pentazinc chromate octahydroxide*	49663-84-5	256-418-0
Phenolphthalein	77-09-8	201-004-7
Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	234-329-8
Trilead diarsenate*	3687-31-8	222-979-5
Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) *	--	---

7. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2012 BY ECHA

Substance Name	CAS NO.	EC NO.
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9
Diboron trioxide*	1303-86-2	215-125-8
Formamide	75-12-7	200-842-0
Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5
1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (TGIC)	2451-62-9	219-514-3
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	423-400-0
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	202-027-5
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	219-943-6
[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	208-953-6
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	209-218-2
α,α-Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	229-851-8

8. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN DECEMBER 2012 BY ECHA

Substance Name	CAS NO.	EC NO.
Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	214-604-9
Pentacosafuorotridecanoic acid	72629-94-8	276-745-2
Tricosafuorododecanoic acid	307-55-1	206-203-2
Henicosafuoroundecanoic acid	2058-94-8	218-165-4
Heptacosafuorotetradecanoic acid	376-06-7	206-803-4
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated§	-	-
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§	-	-
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8
Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7	
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
Methoxy acetic acid	625-45-6	210-894-6
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2
Diisopentylphthalate (DIPP)	605-50-5	210-088-4
N-pentyl-isopentylphthalate	776297-69-9	-
1,2-Diethoxyethane	629-14-1	211-076-1
N,N-dimethylformamide; dimethyl formamide	68-12-2	200-679-5
Dibutyltin dichloride (DBT)	683-18-1	211-670-0
Acetic acid, lead salt, basic*	51404-69-4	257-175-3
Basic lead carbonate (trilead bis(carbonate)dihydroxide)*	1319-46-6	215-290-6
Lead oxide sulfate (basic lead sulfate)*	12036-76-9	234-853-7
[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)*	69011-06-9	273-688-5
Dioxobis(stearato)trilead*	12578-12-0	235-702-8
Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7
Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0
Lead cyanamate*	20837-86-9	244-073-9
Lead dinitrate*	10099-74-8	233-245-9
Lead oxide (lead monoxide)*	1317-36-8	215-267-0
Lead tetroxide (orange lead)*	1314-41-6	215-235-6
Lead titanium trioxide*	12060-00-3	235-038-9
Lead Titanium Zirconium Oxide*	12626-81-2	235-727-4
Pentalead tetraoxide sulphate*	12065-90-6	235-067-7

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Substance Name	CAS NO.	EC NO.
Pyrochlore, antimony lead yellow*	8012-00-8	232-382-1
Silicic acid, barium salt, lead-doped*	68784-75-8	272-271-5
Silicic acid, lead salt*	11120-22-2	234-363-3
Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1
Tetraethyllead*	78-00-2	201-075-4
Tetralead trioxide sulphate*	12202-17-4	235-380-9
Trilead dioxide phosphonate*	12141-20-7	235-252-3
Furan	110-00-9	203-727-3
Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2
Diethyl sulphate	64-67-5	200-589-6
Dimethyl sulphate	77-78-1	201-058-1
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7
Dinoseb	88-85-7	201-861-7
4,4'-methylenedi-o-toluidine	838-88-0	212-658-8
4,4'-oxydianiline and its salts	101-80-4	202-977-0
4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	200-453-6
4-methyl-m-phenylenediamine (2,4-toluenediamine)	95-80-7	202-453-1
6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1
Biphenyl-4-ylamine	92-67-1	202-177-1
o-aminoazotoluene	97-56-3	202-591-2
o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0
N-methylacetamide	79-16-3	201-182-6
1-bromopropane; n-propyl bromide	106-94-5	203-445-0

9. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2013 BY ECHA

Substance Name	CAS NO.	EC NO.
Cadmium	7440-43-9	231-152-8
Cadmium oxide*	1306-19-0	215-146-2
Dipentyl phthalate (DPP)	131-18-0	205-017-9
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]	-	-
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4
Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-379-9

10. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN DECEMBER 2013 BY ECHA

Substance Name	CAS NO.	EC NO.
Cadmium sulphide*	1306-23-6	215-147-8
Disodium 3,3'-[[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	209-358-4
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	217-710-3
Di-n-hexyl phthalate	84-75-3	201-559-5
Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9
Lead di (acetate)	301-04-2	206-104-4
Trixylyl phosphate	25155-23-1	246-677-8

11. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2014 BY ECHA

Substance Name	CAS NO.	EC NO.
1, 2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5
Cadmium chloride*	10108-64-2	233-296-7
Sodium perborate, perboric acid, sodium salt*	--	239-172-9, 234-390-0
Sodium peroxometaborate*	7632-04-4	231-556-4

12. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN DECEMBER 2014 BY ECHA

Substance Name	CAS NO.	EC NO.
Cadmium fluoride*	7790-79-6	232-222-0
Cadmium sulphate*	10124-36-4; 31119-53-6	233-331-6
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4
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)	--	--

13. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2015 BY ECHA

Substance Name	CAS NO.	EC NO.
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 68648-93-1	271-094-0 272-013-1
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 isomers of [1] and [2] or any combination thereof	--	--

14. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN DECEMBER 2015 BY ECHA

Substance Name	CAS NO.	EC NO.
1,3-propanesultone	1120-71-4	214-317-9
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1
Nitrobenzene	98-95-3	202-716-0
Perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluorononanoic acid and its sodium and ammonium salts	375-95-1; 21049-39-8; 4149-60-4	206-801-3

15. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2016 BY ECHA

Substance Name	CAS NO.	EC NO.
Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5

16. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JANUARY 2017 BY ECHA

Substance Name	CAS NO.	EC NO.
4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	201-245-8
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2, 3830-45-3, 3108-42-7	206-400-3, 221-470-5
p-(1,1-dimethylpropyl)phenol	80-46-6	201-280-9
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]	-	-

17. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JULY 2017 BY ECHA

Substance Name	CAS NO.	EC NO.
Perfluorohexane-1-sulfonic acid and its salts (PFHxS)	-	-

18. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JANUARY 2018 BY ECHA

Substance Name	CAS NO.	EC NO.
1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16.9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	-	-
Benz[a]anthracene	200-280-6	56-55-3
Cadmium nitrate	233-710-6	10325-94-7
Cadmium carbonate	208-168-9	513-78-0
Cadmium hydroxide	244-168-5	21041-95-2
Chrysene	205-923-4	218-01-9
Reaction products of 1,3,4-thiadiazolidine-2,5-dithione formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear	-	-

19. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2018 BY ECHA

Substance Name	CAS NO.	EC NO.
Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7
Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9
Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8
Lead	7439-92-1	231-100-4
Disodium octaborate	12008-41-2	234-541-0
Benzo[ghi]perylene	191-24-2	205-883-8
Terphenyl hydrogenated	61788-32-7	262-967-7
Ethylenediamine	107-15-3	203-468-6
Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride) (TMA)	552-30-7	209-008-0
Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9

20. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JANUARY 2019 BY ECHA

Substance Name	CAS NO.	EC NO.
2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1
Benzo[k]fluoranthene	207-08-9	205-916-6
Fluoranthene	206-44-0	205-912-4
Phenanthrene	85-01-8	201-581-5
Pyrene	129-00-0	204-927-3
1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2,2,1]heptan-2-one	15087-24-8	239-139-9

21. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JULY 2019 BY ECHA

Substance Name	CAS NO.	EC NO.
2,3,3,3-tetrafluoro-2(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	-
2-methoxyethyl acetate	110-49-6	203-772-9
Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	-	-
4-tert-butylphenol (PTBP)	98-54-4	202-679-0

22. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JANUARY 2020 BY ECHA

Substance Name	CAS NO.	EC NO.
2-benzyl-2-dimethylamino-4'morpholinobutyrophenone	119313-12-1	404-360-3
2-methyl-1-(4-methylthiophenyl)-2morpholinopropan-1-one	71868-10-5	400-600-6
Diisohexyl phthalate	71850-09-4	276-090-2
Perfluorobutane sulfonic acid (PFBS) and its salts	-	-

23. REACH SVHCS ON THE CANDIDATE LIST, PUBLISHED IN JUNE 2020 BY ECHA

Substance Name	CAS NO.	EC NO.
1-vinylimidazole	1072-63-5	214-012-0
2-methylimidazole	693-98-1	211-765-7
Butyl 4-hydroxybenzoate (Butylparaben)	94-26-8	202-318-7
Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	245-152-0

Note:

- “*” denotes the concentration of substance cannot be determined directly but be converted from the concentration of specific heavy metal(s).
- “#” denotes the substances are UVCB (substance of unknown or variable composition, complex reaction products or biological material), the test results are calculated based on the main constituents.
- “§” The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological material), the test results are calculated based on the main constituents.

APPENDIX II

1. According to the Article 33 of the Regulation (EC) No 1907/2006(REACH)-Duty to communicate information on substances in articles.

—Any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a Result above 0.1% weight by weight(w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

—On request by a consumer any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a Result above 0.1% weight by weight(w/w) shall provide the consumer with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance. The relevant information shall be provided, free of charge, within 45 days of receipt of the request.

2. According to the Article 33 of the Regulation (EC) No 1907/2006(REACH)-Notification of the Substance in Article.

—If a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1), EU and EEA producers or importers of articles have to notify ECHA when their article contains a substance on the Candidate List. This obligation applies if the substance is present above 0.1%(w/w) and its quantities in the produced/imported articles are above 1 tonne in total per year.

3. According to the other articles of the Regulation (EC) No 1907/2006(REACH), The relevant obligation for the substance on its own or in preparation.

—OBLIGATIONS: SUBSTANCES

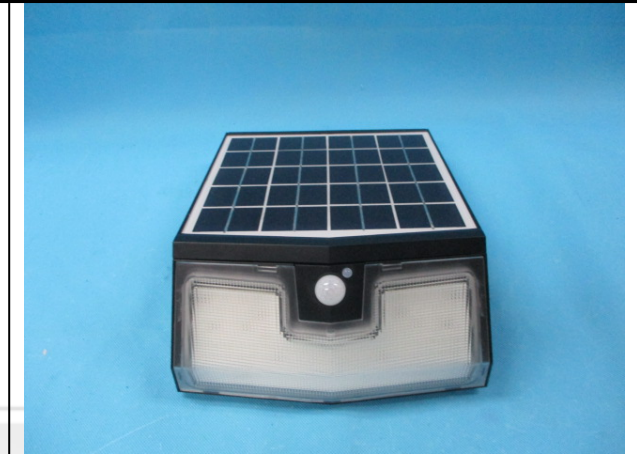
From 28 October 2008, EU&EEA suppliers of a substance have to provide a safety data sheet to their customers when the substance is on the Candidate List.

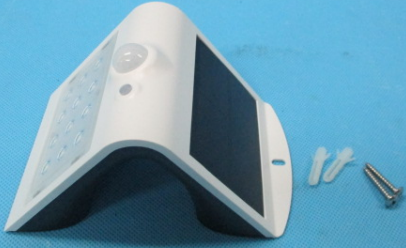
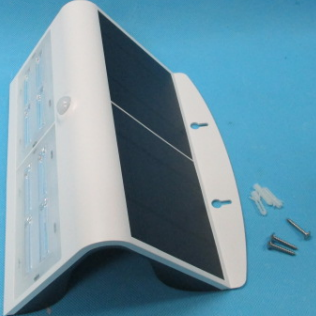
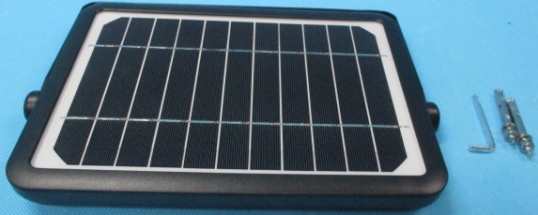
—OBLIGATIONS: PREPARATIONS

From 28 October 2008, EU&EEA suppliers of a preparation not classified as dangerous according to Directive 1999/45/EC have to provide the recipients, at their request, with a safety data sheet if the preparation contains at least one substance on the Candidate List and its individual Result is at least 0.1%(w/w) for non gaseous preparations and at least 0.2% by volume for gaseous preparations.

APPENDIX III

Photos of submitted products

	
LD-SFL-2W-Flame	LD-SWL-15W-Transformer
	
LD-SSL-40W-Pro	LD-SBL-10W-iLead
	
LD-UVC-5W	LSD-SNL-3.5W-Fairy

	
LD-SFL-5W-LeadPad	LSD-SWL-1.5WPlus-Butterfly
	
LD-SSL-4W-Pro	LSD-SWL-6.8W-Butterfly
	
LD-SFL-10W-LeadPad	LD-SFL-10W-TwinsPad-PIR

	/
LD-SPL-20W- Guardian	/



APPENDIX IV:

According to client's declaration, tested material would be produced as relevant product(s):

LSD-SWL-2W-Butterfly, LSD-SWL-3.2W-Butterfly, LSD-SWL-4W-Butterfly, LSD-SWL-8W-Butterfly, LSD-SNL-1.5W-Fairy, LSD-SNL-2W-Fairy, LD-SPL-40W-Guardian, LSD-SWL-2W-Crown, LSD-SGL-2W-XCrown, LD-SWL-5W-Transformer, LD-SWL-7W-Transformer, LD-SSL-8W-Pro, LD-SSL-15W-Pro, LD-SSL-40WPlus-Pro, LD-SSL-40W-StarTrek, LD-SSL-80W-StarTrek, LD-SSL-120W-StarTrek, LD-SCL-Clock, LD-UVC-Mini, LD-SGL-20W-Dolphin, LD-SSL-60W-Eagle, LD-SSL-100W-Eagle, LD-SSL-120W-Eagle, LD-SGL-25W-Lotus, LD-SGL-3W-Halo, LD-SGL-8W-Halo, LD-SGL-3W-Strip, LD-SSL-40W-Eagle, LD-SSL-80W-Eagle

-----End of Report-----

