

Test Report

Report No.: WTH19H08053537X1C-2

Date: Aug. 12, 2019

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Applicant: SHENZHEN BEST LED OPTO-ELECTRONIC CO., LTD

Address: Building No. 1 Lane 1 Liuwu Nanlian The Fifth Industry Area, Longgang, Shenzhen, Guangdong, China.
518116

Report on the submitted sample(s) said to be:

Sample Name: LED

Sample Model: Please refer to the following page(s).

Sample Received Date: Aug. 3, 2019

Testing Period: Aug. 3, 2019 - Aug. 8, 2019

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

Test Requested:	Conclusion
As specified by client, refer to EU Regulation (EC) No 1907/2006 (REACH), to screen Two hundred and one (201) Substances of Very High Concern (SVHC) in the submitted sample. The list is the one that is published by European Chemicals Administration (ECHA) on July 16, 2019.	PASS

Remark: Pass means each result of 201 SVHC are less than 0.1%.

Signed for and on behalf of HCT



Michael Huang



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Sample Model:

U5299FRBLGWD ZD6179SRGWD Z309SRGWD 509URYGWD 309URBWD U5293WC 2835WI 5050RGB-S9
3528RGB-MP 3528-3-03-RGB 5050-3-03-RGB 3528FRC-50 3528UBC-50 3528FOC 304FRC 304FYC 304WC 304BC
304LGC 304PGC 304IRC 304UVC 304FOC 503URC 503FRC 503FYC 504BC 504LGC 504PGC 503UYGC 503IRC
504UVC 503FOC 5050IRC 5050FRC 5050FYC 5050UBC 5050LGC 5050PGC 5050WC 5054WC 5050WW 5050CW
5050UVC 5054WW 5054IRC 5050FOC 2835IRC 2835FIRC 2835FRC 2835FYC 2835BC 2835LGC 2835PGC
2835WC 2835WW 2835CW 2835UVC 3528IRC 3528FIRC 3528FRC 3528FYC 3528UBC 3528BC 3528GC 3528LGC
3528YGC 3528WC 3528WW 3030IRC 3030FIRC 5730IRC 5050RYG 5730FRC 5730UBC 5730LGC 5730FYC
5730WC 5730WW 5730WI 5730CW 1615RGB 0805RGB 2121RGB 1010RGB 3535RGB 3020IRC U5293IRC
U5293FRC U5293WC U5293FYC U5293FOC U5293BC U5293LGC 2835RGB-36S 2835RGB-12S 5050RGB-6812S
506RGB-36S 506RGB-12S 3527RGC 3528RBC 3527WWC 4014WC 3528RIRC 3528BPC 3528RGC 3528RBC
503URD 503UYD 503LGD 304URD 304UYD 304LGD 304YGD 503YGD 503UYGC 503UOC-LMDZ



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(SVHC)

Tested Sample:

Tested Sample Description:

Sample No.	Sample Description
WTH19H08053537C01	White body

Tested Method:

HCT In-house method HCT/SZ-SOP-WJ-PI034, HCT/SZ-SOP-YJ-PI053;
 Analysis was performed by ICP-OES/GC-MS (HS)/HPLC-DAD-MS/ IC/AAS/UV-VIS.

Test Result(s):

Test results of Substances in candidate list of SVHC

Unit: %

Batch	No.	Substance Name(s)	CAS No.	EC No.	Report Limit	Result(s)
/	/	All tested SVHC in candidate list	/	/	/	N.D.

Note:

- N.D.= Not Detected (<report limit)
- 0.1%=1000mg/kg
- mg/kg=ppm=parts per million
- The test results of Diboron trioxide, Boric acid, Disodium tetraborate, anhydrous, Tetraboron disodium heptaoxide, hydrate, Lead bis(tetrafluoroborate), Sodium peroxometaborate and Sodium perborate; perboric acid, sodium salt, Disodium octaborate were based on the water extraction content of Boron.
- As specified by client, only test the designated sample.
- This report replaces the report which report No. is WTH19H08053537C-2.
- Substances in candidate list of SVHC please refer to following page(s).

Remarks:

1. As the concentration of above substance that identified is based on the worst case scenario. Further investigation is required for confirmation of the presence of the substance in the sample.
2. The report limit is evaluated based on the representative substances.



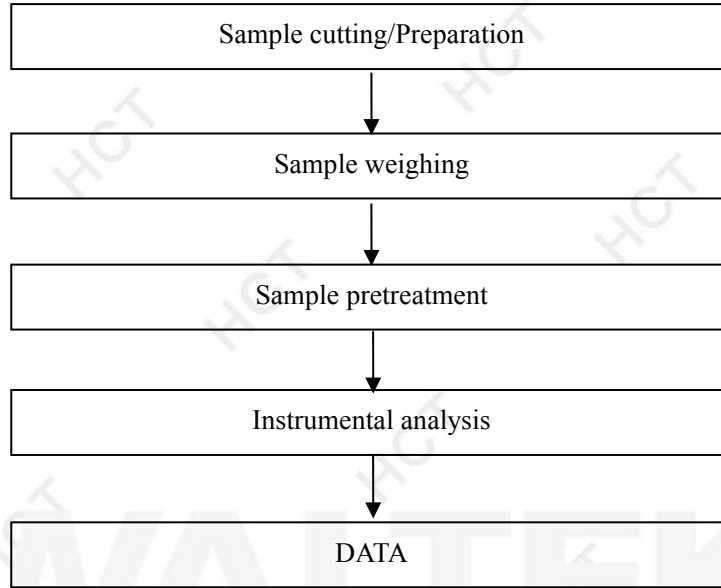
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Test Flow Chart

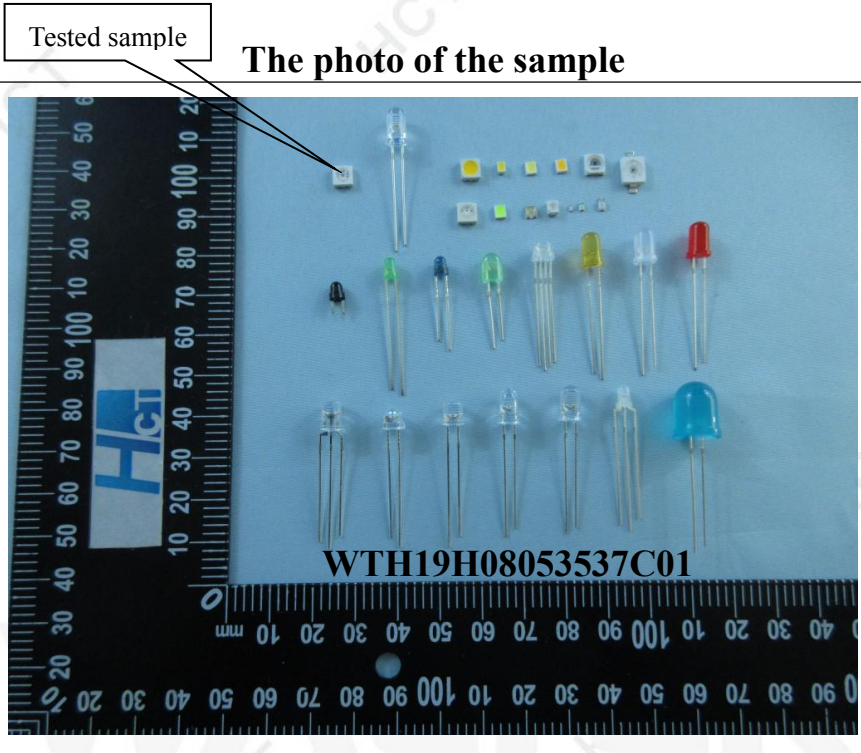


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Full list of tested SVHC:

The first 15 SVHC(Announced in October, 2008)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
1	Anthracene	120-12-7	204-371-1	0.0050
2	4,4'-Diaminodiphenylmethane	101-77-9	202-974-4	0.0050
3	Dibutyl phthalate(DBP)	84-74-2	201-557-4	0.0050
4	Di-(2-ethylhexyl)phthalate(DEHP)	117-81-7	204-211-0	0.0050
5	Benzyl butyl phthalate(BBP)	85-68-7	201-622-7	0.0050
6	Bis(tributyltin)oxide(TBTO)	56-35-9	200-268-0	0.0050
7	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	0.0050
8	Hexabromocyclododecane and all major diastereoisomers identified:(α -HBCDD, β -HBCDD, γ -HBCDD)(HBCDD)	25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4/ 221-695-9	0.0050
9	Short Chain Chlorinated Paraffins(SCCPs)	85535-84-8	287-476-5	0.0100
10	Lead hydrogen arsenate*	7784-40-9	232-064-2	0.0500
11	Triethyl arsenate*	15606-95-8	427-700-2	0.0500
12	Diarsenic pentaoxide*	1303-28-2	215-116-9	0.0500
13	Diarsenic trioxide*	1327-53-3	215-481-4	0.0500
14	Cobalt dichloride*	7646-79-9	231-589-4	0.0500
15	Sodium dichromate*	7789-12-0, 10588-01-9	234-190-3	0.0500



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The second 13 SVHC(Announced in January and March, 2010)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
16	^① Anthracene oil	90640-80-5	292-602-7	0.0500
17	^① Anthracene oil, anthracene paste, distn. Lights****	91995-17-4	295-278-5	0.0500
18	^① Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	0.0500
19	^① Anthracene oil, anthracene-low	90640-82-7	292-604-8	0.0500
20	^① Anthracene oil, anthracene paste	90640-81-6	292-603-2	0.0500
21	Diisobutyl phthalate(DIBP)	84-69-5	201-553-2	0.0050
22	2,4-Dinitrotoluene	121-14-2	204-450-0	0.0100
23	^② Lead chromate	7758-97-6	231-846-0	0.0500
24	^② Lead chromate molybdate sulphate red (C.I. Pigment Red 104) ***	12656-85-8	235-759-9	0.0500
25	^② Lead sulfochromate yellow(C.I. Pigment Yellow 34)***	1344-37-2	215-693-7	0.0500
26	^① Pitch, coal tar, high temperature	65996-93-2	266-028-2	0.0500
27	Tris(2-chloroethyl)phosphate(TCEP)	115-96-8	204-118-5	0.0100
28	Acrylamide	79-06-1	201-173-7	0.0100

The third 8 SVHC(Announced in June, 2010)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
29	Trichloroethylene	79-01-6	201-167-4	0.0100
30	Boric acid*	10043-35-3/ 11113-50-1	233-139-2 234-343-4	0.0500
31	Disodium tetraborate, anhydrous*	1330-43-4 12179-04-3 1303-96-4	215-540-4	0.0500
32	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3	0.0500
33	Sodium chromate*	7775-11-3	231-889-5	0.0500
34	Potassium chromate*	7789-00-6	232-140-5	0.0500
35	Ammonium dichromate*	7789-09-5	232-143-1	0.0500
36	Potassium dichromate*	7778-50-9	231-906-6	0.0500



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The fourth 8 SVHC(Announced in December,2010)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
37	Chromium trioxide*	1333-82-0	215-607-8	0.0500
38	2-Methoxyethanol	109-86-4	203-713-7	0.0500
39	2-Ethoxyethanol	110-80-5	203-804-1	0.0500
40	Cobalt(II) diacetate*	71-48-7	200-755-8	0.0500
41	Cobalt(II) carbonate*	513-79-1	208-169-4	0.0500
42	Cobalt(II) dinitrate*	10141-05-6	233-402-1	0.0500
43	Cobalt(II) sulphate*	10124-43-3	233-334-2	0.0500
44	Acids generated from chromium trioxide* and their oligomers: Chromic acid, Dichromic acid Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2	231-801-5 236-881-5	0.0500

The fifth 7 SVHC(Announced in June, 2011)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
45	(2-EEA)2-ethoxyethyl acetate	111-15-9	203-839-2	0.0100
46	strontium chromate*	7789-06-2	232-142-6	0.0500
47	①1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters(DHNUP)	68515-42-4	271-084-6	0.0500
48	Hydrazine	7803-57-8 302-01-2	206-114-9	0.0100
49	1-methyl-2-pyrrolidone	872-50-4	212-828-1	0.0100
50	1,2,3-trichloropropane	96-18-4	202-486-1	0.0100
51	①1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP)	71888-89-6	276-158-1	0.0500



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The sixth 20 SVHC(Announced in December, 2011)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
52	Aluminosilicate, Refractory Ceramic Fibres	—	650-017-00-8**	0.0500
53	Zirconia Aluminosilicate, Refractory Ceramic Fibres	—	650-017-00-8**	0.0500
54	Dichromium tris(chromate) *	24613-89-6	246-356-2	0.0500
55	Potassium hydroxyoctaoxodizincate di-chromate*	11103-86-9	234-329-8	0.0500
56	Pentazinc chromate octahydroxide (C.I. pigment yellow 36)***	49663-84-5	256-418-0	0.0500
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	500-036-1	0.0500
58	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	204-212-6	0.0050
59	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	0.0100
60	4-(1,1,3,3-tetramethylbutyl)phenol,(4-tert-Octylphenol)	140-66-9	205-426-2	0.0100
61	1,2-Dichloroethane	107-06-2	203-458-1	0.0100
62	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	0.0100
63	Arsenic acid*	7778-39-4	231-901-9	0.0500
64	Calcium arsenate*	7778-44-1	231-904-5	0.0500
65	Trilead diarsenate*	3687-31-8	222-979-5	0.0500
66	N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4	0.0100
67	Phenolphthalein	77-09-8	201-004-7	0.0500
68	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9	0.0100
69	Lead azide; Lead diazide*	13424-46-9	236-542-1	0.0500
70	Lead styphnate*	15245-44-0	239-290-0	0.0500
71	Lead dipicrate*	6477-64-1	229-335-2	0.0500



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The seventh 13 SVHC(Announced in June, 2012)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	0.0100
73	1, 2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	0.0100
74	Diboron trioxide*	1303-86-2	215-125-8	0.0500
75	Formamide	75-12-7	200-842-0	0.0100
76	Lead(II)bis(methanesulfonate)*	17570-76-2	401-750-5	0.0500
77	TGIC(1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9	219-514-3	0.0500
78	β -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	0.0500
79	4,4'-bis(dimethylamino)benzophenone (Michler'sketone)	90-94-8	202-027-5	0.0100
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler'sbase)	101-61-1	202-959-2	0.0100
81	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. BasicViolet 3)	548-62-9	208-953-6	0.0500
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammoniumchloride (C.I. Basic Blue 26)	2580-56-5	219-943-6	0.0500
83	α, α -Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	229-851-8	0.0500
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	0.0100



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The eighth 54 SVHC(Announced in December, 2012)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	214-604-9	0.0050
86	Pentacosfluorotridecanoic acid	72629-94-8	276-745-2	0.0100
87	Tricosfluorododecanoic acid	307-55-1	206-203-2	0.0100
88	Henicosfluoroundecanoic acid	2058-94-8	218-165-4	0.0100
89	Heptacosfluorotetradecanoic acid	376-06-7	206-803-4	0.0100
90	①4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues	—	—	0.0100
91	①4-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	—	—	0.0100
92	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	0.0100
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7	201-604-9	0.0100
94	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	0.0100
95	Methoxy acetic acid	625-45-6	210-894-6	0.0100
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	0.0100
97	Diisopentylphthalate (DIPP)	605-50-5	210-088-4	0.0100
98	N-pentyl-isopentylphthalate	776297-69-9	—	0.0100
99	1,2-Diethoxyethane	629-14-1	211-076-1	0.0100
100	N,N-dimethylformamide; dimethyl formamide	68-12-2	200-679-5	0.0100
101	Dibutyltin dichloride (DBT)	683-18-1	211-670-0	0.0100
102	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	0.0500
103	Basic lead carbonate (trileadbis(carbonate)dihydroxide)*	1319-46-6	215-290-6	0.0500
104	Lead oxide sulfate (basic lead sulfate)*	12036-76-9	234-853-7	0.0500
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)*	69011-06-9	273-688-5	0.0500
106	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	0.0500



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No.	Substance Name(s)	CAS No.	EC No.	Report Limit
107	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	0.0500
108	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	0.0500
109	Lead cyanamidate*	20837-86-9	244-073-9	0.0500
110	Lead dinitrate*	10099-74-8	233-245-9	0.0500
111	Lead oxide (lead monoxide)*	1317-36-8	215-267-0	0.0500
112	Lead tetroxide (orange lead)*	1314-41-6	215-235-6	0.0500
113	Lead titanium trioxide*	12060-00-3	235-038-9	0.0500
114	Lead Titanium Zirconium Oxide*	12626-81-2	235-727-4	0.0500
115	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	0.0500
116	Pyrochlore, antimony lead yellow C.I.***	8012-00-8	232-382-1	0.0500
117	Silicic acid, barium salt, lead-doped*	68784-75-8	272-271-5	0.0500
118	Silicic acid, lead salt*	11120-22-2	234-363-3	0.0500
119	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	0.0500
120	Tetraethyllead*	78-00-2	201-075-4	0.0500
121	Tetralead trioxide sulphate*	12202-17-4	235-380-9	0.0500
122	Trilead dioxide phosphonate*	12141-20-7	235-252-2	0.0500
123	Furan	110-00-9	203-727-3	0.0100
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2	0.0100
125	Diethyl sulphate	64-67-5	200-589-6	0.0100
126	Dimethyl sulphate	77-78-1	201-058-1	0.0100
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	0.0100
128	Dinoseb	88-85-7	201-861-7	0.0100
129	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	0.0100
130	4,4'-oxydianiline and its salts	101-80-4	202-977-0	0.0100
131	4-Aminoazobenzene;4-Phenylazoaniline	60-09-3	200-453-6	0.0100
132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	202-453-1	0.0100
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	0.0100
134	Biphenyl-4-ylamine	92-67-1	202-177-1	0.0100
135	o-aminoazotoluene	97-56-3	202-591-2	0.0050
136	o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0	0.0100
137	N-methylacetamide	79-16-3	201-182-6	0.0100
138	1-bromopropane; n-propyl bromide	106-94-5	203-445-0	0.0100



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The ninth 6 SVHC(Announced in June, 2013)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
139	Cadmium	7440-43-9	231-152-8	0.0050
140	Cadmium oxide*	1306-19-0	215-146-2	0.0500
141	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	0.0100
142	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	0.0100
143	Dipentyl phthalate (DPP)	131-18-0	205-017-9	0.0100
144	①4-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]	—	—	0.0500

The tenth 7 SVHC(Announced in December, 2013)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
145	Cadmium sulphide *	1306-23-6	215-147-8	0.0100
146	Dihexyl phthalate	84-75-3	201-559-5	0.0100
147	②Disodium 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	0.0100
148	②Disodium 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	0.0100
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	0.0100
150	Lead di(acetate) *	301-04-2	206-104-4	0.0500
151	Trixylyl phosphate	25155-23-1	246-677-8	0.0100

The eleventh 4 SVHC(Announced in June, 2014)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	0.0100
153	Cadmium chloride*	10108-64-2	233-296-7	0.0100
154	Sodium perborate; perboric acid, sodium salt*	—	239-172-9, 234-390-0	0.0100
155	Sodium peroxometaborate*	7632-04-4	231-556-4	0.0100



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The twelfth 6 SVHC(Announced in December, 2014)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
156	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	0.0100
157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	0.0100
158	Cadmium fluoride*	7790-79-6	232-222-0	0.0500
159	Cadmium sulphate*	10124-36-4; 31119-53-6	233-331-6	0.0500
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate(DOTE)	15571-58-1	239-622-4	0.0500
161	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)	—	—	0.0500

The thirteenth 2 SVHC(Announced in June, 2015)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 68648-93-1	271-094-0 272-013-1	0.0100
163	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]	—	—	0.0100



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The fourteenth 5 SVHC(Announced in December, 2015)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
164	Nitrobenzene	98-95-3	202-716-0	0.0100
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	0.0100
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1	0.0100
167	1,3-propanesultone	1120-71-4	214-317-9	0.0100
168	Perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-hepta-decafluorononanoic acid and its sodium and ammonium salts)	375-95-1 21049-39-8 4149-60-4	206-801-3	0.0100

The fifteenth 1 SVHC(Announced in June, 2016)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
169	Benzo[def]chrysene	50-32-8	200-028-5	0.0100

The sixteenth 4 SVHC(Announced in January, 2017)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
170	4,4'-isopropylidenediphenol (bisphenol A) (BPA)	80-05-7	201-245-8	0.0100
171	4-heptylphenol, branched and linear (4-HPbl)	—	—	0.0500
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7 335-76-2 3830-45-3	-- 206-400-3 221-470-5	0.0100
173	4-tert-pentylphenol (PTAP)	80-46-6	201-280-9	0.0100

The seventeenth 1 SVHC(Announced in July, 2017)

Unit: %

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	—	—	0.0100



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The eighteenth 7 SVHC(Announced in January, 2018)

Unit:%

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
175	Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus" TM) covering any of its individual anti- and syn-isomers or any combination thereof	—	—	0.0500
176	Benz[a]anthracene	56-55-3, 1718-53-2	200-280-6	0.0100
177	Cadmium nitrate*	10022-68-1, 10325-94-7	233-710-6	0.0500
178	Cadmium carbonate*	513-78-0	208-168-9	0.0500
179	Cadmium hydroxide*	21041-95-2	244-168-5	0.0500
180	Chrysene	218-01-9, 1719-03-5	205-923-4	0.0100
181	^① 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 (4-HPbl)	—	—	0.0500

The nineteenth 10 SVHC(Announced in June, 2018)

Unit:%

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
182	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	209-008-0	0.0100
183	Benzo[ghi]perylene	191-24-2	205-883-8	0.0100
184	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	0.0100
185	Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9	0.0100
186	Disodium octaborate*	12008-41-2	234-541-0	0.0500
187	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	0.0100
188	Ethylenediamine (EDA)	107-15-3	203-468-6	0.0500
189	Lead	7439-92-1	231-100-4	0.0100
190	Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	0.0100
191	Terphenyl, hydrogenated	61788-32-7	262-967-7	0.0100



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The twentieth 6 SVHC(Announced in January, 2019)

Unit:%

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
192	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor)	15087-24-8	239-139-9	0.0100
193	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1	0.0100
194	Benzo[k]fluoranthene	207-08-9	205-916-6	0.0100
195	Fluoranthene	206-44-0, 93951-69-0	205-912-4	0.0100
196	Phenanthrene	85-01-8	201-581-5	0.0100
197	Pyrene	129-00-0, 1718-52-1	204-927-3	0.0100

The twenty-first 4 SVHC(Announced in July , 2019)

Unit:%

No.	Substance Name(s)	CAS No.	EC No.	Report Limit
198	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	—	—	0.0100
199	4-tert-Butylphenol(PTBP)	98-54-4	202-679-0	0.0100
200	2-methoxyethyl acetate	110-49-6	203-772-9	0.0100
201	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	—	—	0.0100

Note:

-0.1%=1000mg/kg=1000ppm

-*: Inorganic SVHC compounds are obtained by converting the test results of cobalt, chloride, sodium, arsenic, chromium, potassium, lead, boron, zirconium, titanium, tin, phosphorus, calcium, zinc, strontium, molybdenum, aluminum and cadmium elements, and confirmed through the appropriate solvent extraction. At the same time, customers are suggested to check the chemical formula table, to further confirm whether above materials are contained.

-**: 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).

-***:C.I.:Colour Index

-****:Light fractions from distillation

-^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.

-^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



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on the result of specified heavy metal elements.

Appendix:

(1) The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA:

<http://echa.europa.eu/web/guest/candidate-list-table>

These lists are under evaluation by ECHA and may subject to change in the future.

(2) Concerning article(s):

In accordance with Regulation (EC) No 1907/2006, any EU producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance in the Candidate List is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance in the Candidate List is present in those articles above a concentration of 0.1% weight by weight (w/w).

Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration 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 in the Candidate List.

(3) Concerning material(s):

Test results in this report are based on the tested sample. This report refers to testing result of tested sample submitted as homogenous material(s). In case such material is being used to compose an article, the results indicated in this report may not represent SVHC concentration in such article. If this report refers to testing result of composite material group by equal weight proportion, the material in each composite test group may come from more than one article.

If the sample is a substance or mixture, and it directly exports to EU, client has the obligation to comply with the supply chain communication obligation under Article 31 of Regulation (EC) No. 1907/2006 and the conditions of Authorization of substance of very high concern included in the Annex XIV of the Regulation (EC) No. 1907/2006.

(4) Concerning substance and preparation:

If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and its amendments, client is suggested to prepare a Safety Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:

-a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.

-a mixture that is classified as hazardous under the CLP Regulation (EC) No 1272/2008, when it contains a substance with concentration equal to, or greater than the classification limit as set in Regulation (EC) No. 1272/2008; or

-a mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008, but contains either:

(a) a substance posing human health or environmental hazards in an individual concentration of $\geq 1\%$ by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or $\geq 0.2\%$ by volume for gaseous mixtures; or

(b) a substance that is PBT, or vPvB in an individual concentration of $\geq 0.1\%$ by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or

(c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of $\geq 0.1\%$ by weight for non-gaseous mixtures; or

(d) a substance for which there are Europe-wide workplace exposure limits.

End

This report will go into effect with HCT stamp. This report could not be revised. This report is only responsible for the test result of submitted samples. Without written authorization, any copy of this report for propaganda is invalid.

