



TEST REPORT

Report No : WTF24H09221269X1C

Applicant : Ar Leader Printed Circuit Boards (Zhu Hai) Ltd.

Address : Office: Leader Printed Circuit Boards Ltd.
Address: Flat 2, 3/F Sun Cheong Ind Bldg ,2-4 Cheung
Yee St ,Cheung Sha Wan Kowloon HK
Factory: Ar Leader Printed Circuit Boards (Zhu Hai) Ltd.
Address: 1 Zhuo Yue Road, San Zao Town, Jin Wan 519040
Zhu Hai City, Guangdong Province, CHINA

Sample Name : LEAD-FREE HOT AIR LEVELLING PCB OSPEN TEK PCB
ELECTRO-GOLD PLATED PCB IMMERSION GOLD PCB

Test Requested : Refer to next page (s)

Test Conclusion : Refer to next page (s)

Date of Receipt sample : 2024-09-23

Testing period : 2024-09-23 ~ 2024-10-17

Date of Issue : 2024-10-17

Test Result : Refer to next page (s)

Prepared By:

Shenzhen Hongcai Testing Technology Co., Ltd.

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Signed for and on behalf of
Shenzhen Hongcai Testing Technology Co., Ltd.



Michael Huang
Shenzhen Hongcai Testing Technology Co., Ltd.
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Test Requested	Test Conclusion
1. Screen 241 substances of very high concern (SVHC) in the sample with reference to EU Regulation (EC) No 1907/2006 (REACH), The list of substances is published by European Chemicals Administration (ECHA).	PASS
2. Screen 7 Proposed substances of very high concern (SVHC) in the sample. The list is the one that is published by European Chemicals Administration (ECHA).	PASS
3. Screen 6 Potential intentional substances of very high concern (SVHC) in the sample, the substance list is published by the European Chemical Administration (ECHA).	PASS
4. Screen the Resorcinol content in the sample with reference to G/TBT/N/EU/803.	PASS

Remark: Pass means each result of all tested 241 SVHC, 7 Proposed SVHC, 6 Potential intentional SVHC and Resorcinol is less than 0.1%.

Test Result(s):

Test Method/Equipment: HCT/SZ-SOP-WJ-PI034, HCT/SZ-SOP-YJ-PI053; ICP-OES/GC-MS (HS)/HPLC-DAD-MS/ IC/AAS/UV-VIS

Test Item(s)		CAS No.	RL (%)	Result(s) (%)
Item(s)	Substance Name(s)			(1+2+3+4) ^{##}
241 SVHC	N,N-dimethylformamide	68-12-2	0.0100	0.0221
	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one(ACETOCURE 97; GENOCURE*PMP; IGM 4817; IRGACURE 907; SPEEDCURE 97)	71868-10-5	0.0100	0.0216
	Melamine	108-78-1	0.0100	0.0116
	Other 238 SVHC	—	0.0100	ND
7 Proposed SVHC		—	0.0100	ND
6 Potential intentional SVHC		—	0.0100	ND
Resorcinol		108-46-3	0.0100	ND

Note:

%=percentage

ND=Not Detected

MDL=Method Detection Limit

RL=Reporting Limit (Result will be shown if it $\geq$ RL. RL is not regulatory limit.)

[∇] =The results of boron compounds in SVHC candidate list were converted from the test result of water extraction content of Boron.

^{##}= As specified by client, the samples were equal mass proportional mixed to test, and the test results are calculated



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based on the total sample quality. The result(s) shown on this report may be different from the content of any homogeneous material.

For specimen(s) 1: The specimen(s) was(were) received on 2024-10-10.

This report replaces the report which report No. is WTF24H09221269C.

Substances in candidate list of SVHC please refer to following page(s).

Remarks:

1. As the Result of above SVHC 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 SVHC reporting limit is evaluated based on the representative substances.

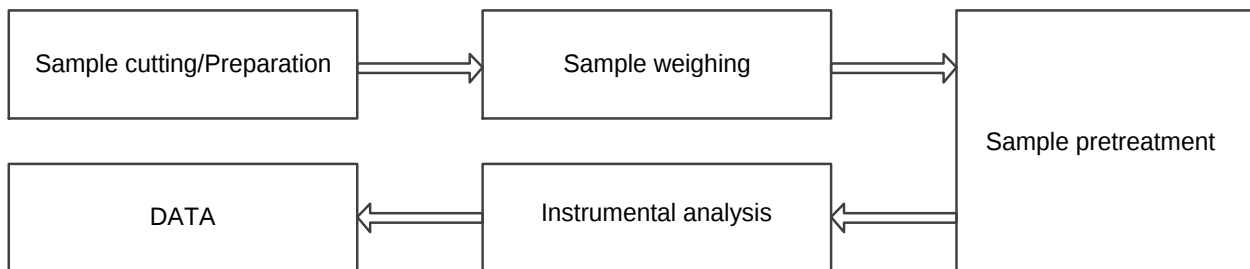
Sample Description:

No.	HCT Sample ID	Test Part Description		Note
1	WTF24H09221269C.1	1	Light beige copper-clad laminate with green, white, silver coating	•
2	WTF24H09221269C.2	2	Light beige copper-clad laminate with green, white coating	•
3	WTF24H09221269C.3	3	Light beige copper-clad laminate with green, white coating	•
4	WTF24H09221269C.4	4	Light beige copper-clad laminate with green, white coating	•
4		4	Light beige copper-clad laminate with green, white coating	•

Note:

•=Actual tested sample

Test Flow Chart:

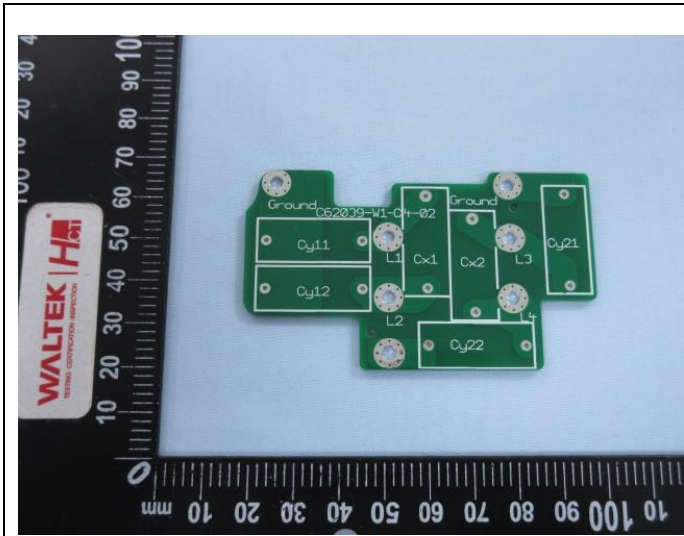


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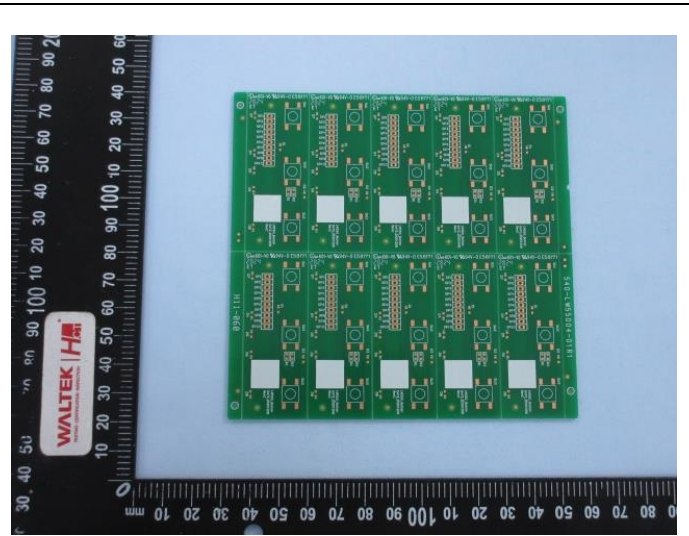
<http://www.hct-test.com>

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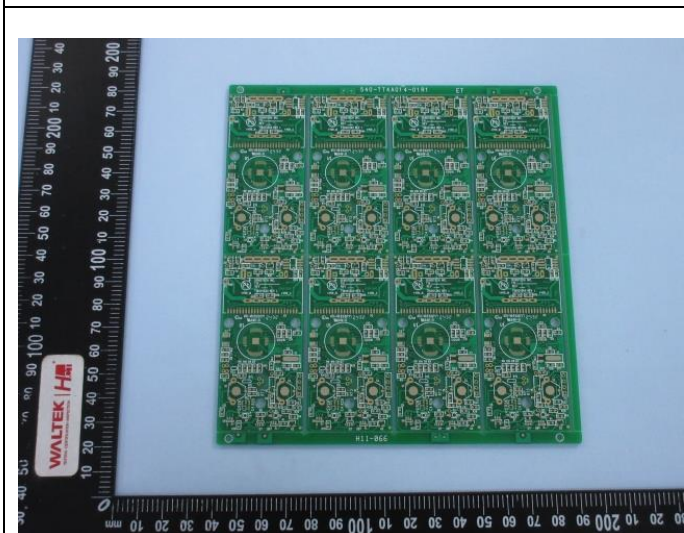
The photo of the sample



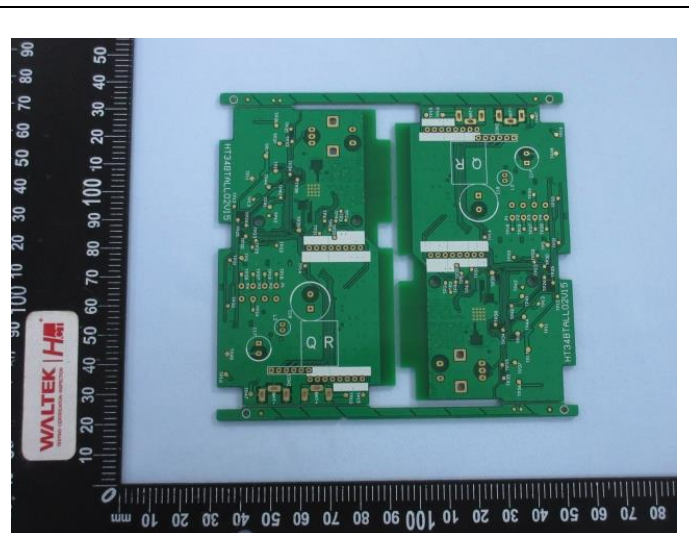
WTF24H09221269C.1



WTF24H09221269C.2



WTF24H09221269C.3



WTF24H09221269C.4

Full list of tested SVHC:

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
The first 15 SVHC(Announced in October, 2008)				
1	Anthracene	120-12-7	204-371-1	0.0100
2	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	202-974-4	0.0100
3	Dibutyl phthalate (DBP)	84-74-2	201-557-4	0.0100
4	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	204-211-0	0.0100
5	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	0.0100
6	Bis(tributyltin) oxide (TBTO)	56-35-9	200-268-0	0.0100
7	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	201-329-4	0.0100
8	Hexabromocyclododecane (HBCDD) (and all major diastereoisomers identified)	25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4/ 221-695-9	0.0100
9	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCPs)	85535-84-8	287-476-5	0.0100
10*	Lead hydrogen arsenate*	7784-40-9	232-064-2	0.0100
11*	Triethyl arsenate*	15606-95-8	427-700-2	0.0100
12*	Diarsenic pentaoxide*	1303-28-2	215-116-9	0.0100
13*	Diarsenic trioxide*	1327-53-3	215-481-4	0.0100
14*	Cobalt dichloride*	7646-79-9	231-589-4	0.0100
15*	Sodium dichromate*	7789-12-0, 10588-01-9	234-190-3	0.0100
The second 13 SVHC(Announced in January and March, 2010)				
16	① Anthracene oil	90640-80-5	292-602-7	0.0100
17	① Anthracene oil, anthracene paste, distn. lights****	91995-17-4	295-278-5	0.0100
18	① Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	0.0100
19	① Anthracene oil, anthracene-low	90640-82-7	292-604-8	0.0100
20	① Anthracene oil, anthracene paste	90640-81-6	292-603-2	0.0100
21	Diisobutyl phthalate	84-69-5	201-553-2	0.0100
22	2,4-dinitrotoluene	121-14-2	204-450-0	0.0100
23*	② Lead chromate	7758-97-6	231-846-0	0.0100
24*	② Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	12656-85-8	235-759-9	0.0100
25*	② Lead sulfochromate yellow (C.I. Pigment Yellow 34)***	1344-37-2	215-693-7	0.0100
26	① Pitch, coal tar, high-temp.	65996-93-2	266-028-2	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
27	Tris(2-chloroethyl) phosphate	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)				
29	Trichloroethylene	79-01-6	201-167-4	0.0100
30*	Boric acid* (EC No. 233-139-2 and EC No. 234-343-4)	10043-35-3/ 11113-50-1	233-139-2 234-343-4	0.0100
31*	Disodium tetraborate, anhydrous*	1330-43-4 12179-04-3 1303-96-4	215-540-4	0.0100
32*	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3	0.0100
33*	Sodium chromate*	7775-11-3	231-889-5	0.0100
34*	Potassium chromate*	7789-00-6	232-140-5	0.0100
35*	Ammonium dichromate*	7789-09-5	232-143-1	0.0100
36*	Potassium dichromate*	7778-50-9	231-906-6	0.0100
The fourth 8 SVHC(Announced in December,2010)				
37*	Chromium trioxide*	1333-82-0	215-607-8	0.0100
38	2-methoxyethanol	109-86-4	203-713-7	0.0100
39	2-ethoxyethanol	110-80-5	203-804-1	0.0100
40*	Cobalt(II) diacetate*	71-48-7	200-755-8	0.0100
41*	Cobalt(II) carbonate*	513-79-1	208-169-4	0.0100
42*	Cobalt(II) dinitrate*	10141-05-6	233-402-1	0.0100
43*	Cobalt(II) sulphate*	10124-43-3	233-334-2	0.0100
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	0.0100
The fifth 7 SVHC(Announced in June, 2011)				
45	2-ethoxyethyl acetate	111-15-9	203-839-2	0.0100
46*	Strontium chromate*	7789-06-2	232-142-6	0.0100
47	①1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	0.0100
48	Hydrazine	7803-57-8 302-01-2	206-114-9	0.0100
49	1-Methyl-2-pyrrolidone (NMP)	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	71888-89-6	276-158-1	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
The sixth 20 SVHC(Announced in December, 2011)				
52*	② Aluminosilicate Refractory Ceramic Fibres	—	650-017-00-8**	0.0100
53*	② Zirconia Aluminosilicate Refractory Ceramic Fibres	—	650-017-00-8**	0.0100
54*	Dichromium tris(chromate)*	24613-89-6	246-356-2	0.0100
55*	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	234-329-8	0.0100
56*	Pentazinc chromate octahydroxide***	49663-84-5	256-418-0	0.0100
57	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	0.0100
58	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	0.0100
59	2-Methoxyaniline, o-Anisidine	90-04-0	201-963-1	0.0100
60	4-(1,1,3,3-tetramethylbutyl)phenol	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	0.0100
64*	Calcium arsenate*	7778-44-1	231-904-5	0.0100
65*	Trilead diarsenate*	3687-31-8	222-979-5	0.0100
66	N,N-dimethylacetamide	127-19-5	204-826-4	0.0100
67	Phenolphthalein	77-09-8	201-004-7	0.0100
68	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	0.0100
69*	Lead diazide, Lead azide*	13424-46-9	236-542-1	0.0100
70*	Lead styphnate*	15245-44-0	239-290-0	0.0100
71*	Lead dipicrate*	6477-64-1	229-335-2	0.0100
The seventh 13 SVHC(Announced in June, 2012)				
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	0.0100
75	Formamide	75-12-7	200-842-0	0.0100
76*	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	0.0100
77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazine-2,4,6-trione (TGIC)	2451-62-9	219-514-3	0.0100
78	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	0.0100
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	202-027-5	0.0100
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
81	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) (with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2))	548-62-9	208-953-6	0.0100
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) (with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2))	2580-56-5	219-943-6	0.0100
83	α,α -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) (with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2))	6786-83-0	229-851-8	0.0100
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol (with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2))	561-41-1	209-218-2	0.0100
The eighth 54 SVHC(Announced in December, 2012)				
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	1163-19-5	214-604-9	0.0100
86	Pentacosafuorotridecanoic acid	72629-94-8	276-745-2	0.0100
87	Tricosafuorododecanoic acid	307-55-1	206-203-2	0.0100
88	Henicosafuoroundecanoic acid	2058-94-8	218-165-4	0.0100
89	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	0.0100
90	^① 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (covering well-defined substances and UVCB substances, polymers and homologues)	—	—	0.0100
91	^① 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)	—	—	0.0100
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)	123-77-3	204-650-8	0.0100
93	Cyclohexane-1,2-dicarboxylic anhydride (all possible combinations of the cis- and trans-isomers)	85-42-7, 14166-21-3, 13149-00-3	201-604-9, 238-009-9, 236-086-3	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
94	Hexahydromethylphthalic anhydride (including cis- and trans- stereo isomeric forms and all possible combinations of the isomers)	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	Methoxyacetic acid	625-45-6	210-894-6	0.0100
96	1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0	284-032-2	0.0100
97	Diisopentyl phthalate	605-50-5	210-088-4	0.0100
98	n-pentyl-isopentyl phthalate	776297-69-9	—	0.0100
99	1,2-diethoxyethane	629-14-1	211-076-1	0.0100
100	N,N-dimethylformamide	68-12-2	200-679-5	0.0100
101	Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	0.0100
102*	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	0.0100
103*	Trilead bis(carbonate) dihydroxide*	1319-46-6	215-290-6	0.0100
104*	Lead oxide sulfate*	12036-76-9	234-853-7	0.0100
105*	[Phthalato(2-)]dioxotrilead*	69011-06-9	273-688-5	0.0100
106*	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	0.0100
107*	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	0.0100
108*	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	0.0100
109*	Lead cyanamidate*	20837-86-9	244-073-9	0.0100
110*	Lead dinitrate*	10099-74-8	233-245-9	0.0100
111*	Lead monoxide (lead oxide)*	1317-36-8	215-267-0	0.0100
112*	Orange lead (lead tetroxide)*	1314-41-6	215-235-6	0.0100
113*	Lead titanium trioxide*	12060-00-3	235-038-9	0.0100
114*	Lead titanium zirconium oxide*	12626-81-2	235-727-4	0.0100
115*	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	0.0100
116*	Pyrochlore, antimony lead yellow***	8012-00-8	232-382-1	0.0100
117*	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped*	68784-75-8	272-271-5	0.0100
118*	Silicic acid, lead salt*	11120-22-2	234-363-3	0.0100
119*	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	0.0100
120*	Tetraethyllead*	78-00-2	201-075-4	0.0100
121*	Tetralead trioxide sulphate*	12202-17-4	235-380-9	0.0100
122*	Trilead dioxide phosphonate*	12141-20-7	235-252-2	0.0100
123	Furan	110-00-9	203-727-3	0.0100
124	Methyloxirane (Propylene oxide)	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

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine (ZOLDINE MS-PLUS)	143860-04-2	421-150-7	0.0100
128	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	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	60-09-3	200-453-6	0.0100
132	4-methyl-m-phenylenediamine (toluene-2,4-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	0.0100
136	o-toluidine	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
The ninth 6 SVHC(Announced in June, 2013)				
139*	Cadmium	7440-43-9	231-152-8	0.0100
140*	Cadmium oxide*	1306-19-0	215-146-2	0.0100
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)	—	—	0.0100
The tenth 7 SVHC(Announced in December, 2013)				
145*	Cadmium sulphide *	1306-23-6	215-147-8	0.0100
146	Diethyl 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	0.0100
151	Triethyl phosphate	25155-23-1	246-677-8	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
The eleventh 4 SVHC(Announced in June, 2014)				
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
The twelfth 6 SVHC(Announced in December, 2014)				
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	0.0100
159*	Cadmium sulphate*	10124-36-4; 31119-53-6	233-331-6	0.0100
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	0.0100
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)	—	—	0.0100
The thirteenth 2 SVHC(Announced in June, 2015)				
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or 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	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 stereoisomers of [1] and [2] or any combination thereof)	—	—	0.0100
The fourteenth 5 SVHC(Announced in December, 2015)				
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

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
168	Perfluorononan-1-oic-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)				
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5	0.0100
The sixteenth 4 SVHC(Announced in January, 2017)				
170	4,4'-isopropylidenediphenol (Bisphenol A; BPA)	80-05-7	201-245-8	0.0100
171	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)	—	—	0.0100
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	p-(1,1-dimethylpropyl)phenol	80-46-6	201-280-9	0.0100
The seventeenth 1 SVHC(Announced in July, 2017)				
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	—	—	0.0100
The eighteenth 7 SVHC(Announced in January, 2018)				
175	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)	—	—	0.0100
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	0.0100
178*	Cadmium carbonate*	513-78-0	208-168-9	0.0100
179*	Cadmium hydroxide*	21041-95-2	244-168-5	0.0100
180	Chrysene	218-01-9, 1719-03-5	205-923-4	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
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))	—	—	0.0100
The nineteenth 10 SVHC(Announced in June, 2018)				
182	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic 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	0.0100
187	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	0.0100
188	Ethylenediamine (EDA)	107-15-3	203-468-6	0.0100
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
The twentieth 6 SVHC(Announced in January, 2019)				
192	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one(3-benzylidene camphor; 3-BC)	15087-24-8	239-139-9	0.0100
193	2,2-bis(4'-hydroxyphenyl)-4-methylpentane(AP-5)	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)				
198	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	—	—	0.0100
199	4-tert-butylphenol	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

No.	Substance Name(s)	CAS No.	EC No.	RL (%)
The twenty-second 4 SVHC(Announced in January , 2020)				
202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone (CG 25-369; IRGACURE 369; TK 11-319)	119313-12-1	404-360-3	0.0100
203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one (ACETOCURE 97; GENOCURE*PMP; IGM 4817; IRGACURE 907; SPEEDCURE 97)	71868-10-5	400-600-6	0.0100
204	Diisohexyl phthalate	71850-09-4	276-090-2	0.0100
205	Perfluorobutane sulfonic acid (PFBS) and its salts	—	—	0.0100
The twenty-third 4 SVHC(Announced in June , 2020)				
206	1-vinylimidazole	1072-63-5	214-012-0	0.0100
207	2-methylimidazole	693-98-1	211-765-7	0.0100
208	Butyl 4-hydroxybenzoate	94-26-8	202-318-7	0.0100
209	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	245-152-0	0.0100
The twenty-fourth 2 SVHC(Announced in January , 2021)				
210	Bis(2-(2-methoxyethoxy)ethyl)ether	143-24-8	205-594-7	0.0100
211	Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	—	—	0.0100
The twenty-fifth 8 SVHC(Announced in July , 2021)				
212	1,4-dioxane	123-91-1	204-661-8	0.0100
213	2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 36483-57-5 1522-92-5 96-13-9	221-967-7 253-057-0 202-480-9	0.0100
214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	—	—	0.0100
215	4,4'-(1-methylpropylidene)bisphenol	77-40-7	201-025-1	0.0100
216	glutaral	111-30-8	203-856-5	0.0100
217	Medium-chain chlorinated paraffins (MCCP) UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17	—	—	0.0100
218*	orthoboric acid, sodium salt*	13840-56-7	237-560-2	0.0100

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No.	Substance Name(s)	CAS No.	EC No.	RL (%)
219	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	—	—	0.0100
The twenty-sixth 4 SVHC(Announced in January, 2022)				
220	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	—	—	0.0100
221	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	204-327-1	0.0100
222	S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	401-850-9	0.0100
223	tris(2-methoxyethoxy)vinylsilane	1067-53-4	213-934-0	0.0100
The twenty-seventh 1 SVHC(Announced in June, 2022)				
224	N-(hydroxymethyl)acrylamide	924-42-5	213-103-2	0.0100
The twenty-eighth 9 SVHC(Announced in January, 2023)				
225	1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene]	37853-59-1	253-692-3	0.0100
226	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (TBBPA)	79-94-7	201-236-9	0.0100
227	4,4'-sulphonyldiphenol	80-09-1	201-250-5	0.0100
228*	Barium diboron tetraoxide*	13701-59-2	237-222-4	0.0100
229	Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	—	—	0.0100
230	Isobutyl 4-hydroxybenzoate	4247-02-3	224-208-8	0.0100
231	Melamine	108-78-1	203-615-4	0.0100
232	Perfluoroheptanoic acid and its salts	—	—	0.0100
233	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	—	473-390-7	0.0100
The twenty-ninth 2 SVHC(Announced in June, 2023)				
234	bis(4-chlorophenyl) sulphone	80-07-9	201-247-9	0.0100
235	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	278-355-8	0.0100
The thirty 5 SVHC(Announced in January, 2024)				



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No.	Substance Name(s)	CAS No.	EC No.	RL (%)
236	2,4,6-tri-tert-butylphenol	732-26-3	211-989-5	0.0100
237	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)	3147-75-9	221-573-5	0.0100
238	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	119344-86-4	438-340-0	0.0100
239	Bumetizole (UV-326)	3896-11-5	223-445-4	0.0100
240	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	--	700-960-7	0.0100
The thirty-first 1 SVHC(Announced in June, 2024)				
241	Bis(α,α-dimethylbenzyl) peroxide	80-43-3	201-279-3	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL(%)
7 Proposed Substances of Very High Concern (Announced in March & August, 2024)				
1	Triphenyl phosphate	115-86-6	204-112-2	0.0100
2	Octamethyltrisiloxane	107-51-7	203-497-4	0.0100
3	Perfluamine	338-83-0	206-420-2	0.0100
4	O,O,O-triphenyl phosphorothioate	597-82-0	209-909-9	0.0100
5	Tris(4-nonylphenyl, branched) phosphite	--	701-028-2	0.0100
6	6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid	2156592-54-8	701-118-1	0.0100
7	Reaction mass of triphenylthiophosphate and tertiary butylated phenyl derivatives	192268-65-8	421-820-9	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL(%)
6 Potential Intentional Substances of Very High Concern (SVHC) (Announced in August, 2024)				
1	Hexamethyldisiloxane	107-46-0	203-492-7	0.0100
2	Dodecamethyl pentasiloxane	141-63-9	205-492-2	0.0100
3	Decamethyltetrasiloxane	141-62-8	205-491-7	0.0100
4	1,1,1,3,5,5,5-heptamethyltrisiloxane	1873-88-7	217-496-1	0.0100
5	1,1,1,3,5,5,5-heptamethyl-3-[(trimethylsilyl)oxy]trisiloxane	17928-28-8	241-867-7	0.0100
6*	Barium chromate*	10294-40-3	233-660-5	0.0100

No.	Substance Name(s)	CAS No.	EC No.	RL(%)
G/TBT/N/EU/803				
1	Resorcinol	108-46-3	203-585-2	0.0100



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Note:

-0.1%=1000mg/kg

-mg/kg (milligram per kilogram) = ppm (parts per million)

-*: 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, cadmium and barium 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.

-*: Inorganic substances.

-**: 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 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.

Statement:

1. This report is considered invalid without approved signature and special seal.
2. The Applicant name and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which HCT hasn't verified.
3. The result(s)(conclusion) shown in this report refer(s) only to the sample(s) tested.
4. Without written approval of HCT, this report can't be reproduced except in full.
5. The result(s) in no CMA logo report shall only be used for client's scientific research, teaching, internal quality control, product research and development, etc..and just for internal reference.
6. The "n" in CNAS logo report means that the test item(s) was (were) currently not applying for CNAS accreditation.
7. Decision rules used in this report:
 - (1) According to the Decision rules in the regulations/standards listed in the Test Requested;
 - (2) If there is no Decision rules specified in the regulations listed in the Test Requested, then according to CNAS-GL015 Guidelines on Decision Rules and Statements of Conformity, 6.2.1, Simple Acceptance ($w=0$) of The binary Decision rule:
PASS (Accepted) - The measured value is within the tolerance interval.
FAIL (Rejected) - The measured value is outside the tolerance interval.

===== End of Report =====

