

TO: Anglia

12-Jun-19

Non-use Warranty for SVHC (Substances of Very High Concern)

We hereby guarantee that our products do not contain any substances of those listed in the candidate list released by ECHA (European Chemical Agency) beyond 0.1wt% (weight percentage) per each product. However, Lead(CAS NO.7439-92-1) is excluded because of intentional use. Substance list is attached in following pages.

Non-use for all our semiconductor products that had been delivered before the date of each package of SVHC announcement released not being exactly assured, although it is very unlikely the usages in the past. Further such warranty notification may be provided soon after the each additional announcement of SVHC package taken place.

This letter does not directly mean any of full compensation against damages or claims may arise, unless our failure to obey the relative laws or directives are proved and unanimously confirmed. In any case, however, we would take our best efforts to solve and to prevent the problem by mean of cooperating with our affiliates.

***Item**

Please refer to Product List.

SVHC list (Announced on October, 2008)

No.	Substances	CAS No.	EC No.
1	Anthracene	120-12-7	204-371-1
2	4,4'-Diaminodiphenylmethane	101-77-9	202-974-4
3	Dibutyl phthalate	84-74-2	201-557-4
4	Cobalt dichloride	7646-79-9	231-589-4
5	Diarsenic pentaoxide	1303-28-2	215-116-9
6	Diarsenic trioxide	1327-53-3	215-481-4
7	Sodium dichromate	7789-12-0 10588-01-9	234-190-3
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4
9	Bis(2-ethyl(hexyl)phthalate)(DEHP)	117-81-7	204-211-0
10	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β -HBCDD, γ -HBCDD)	25637-99-4 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4 221-695-9
11	Alkanes, c10-13, chloro(SHORT Chain Chlorinated paraffins)	85535-84-8	287-476-5
12	Bis(tributyltin)oxide	56-35-9	200-268-0
13	Lead hydrogen arsenate	7784-40-9	232-064-2
14	Triethyl arsenate	15606-95-8	427-700-2
15	Benzyl butyl phthalate	85-68-7	201-622-7

SVHC list (Announced on January, 2010)

No.	Substances	CAS No.	EC No.
16	Anthracene oil	90640-80-5	292-602-7

17	Anthracene oil, anthracene paste, distn.lights	91995-17-4	295-278-5
18	Anthracene oil, anthracene paste,anthracene fraction	91995-15-2	295-275-9
19	Anthracene oil, anthracene-low	90640-82-7	292-604-8
20	Anthracene oil, anthracene paste	90640-81-6	292-603-2
21	Coal tar pitch, high temperature	65996-93-2	266-028-2
22	2,4-Dinitrotoluene	121-14-2	204-450-0
23	Diisobutyl phthalate	84-69-5	201-553-2
24	Lead chromate	7758-97-6	231-846-0
25	Lead chromate molybdate sulphate red (C.I. Pigment Yellow 34)	12656-85-8	235-759-9
26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7
27	Tris(2-chloroethyl)phosphate	115-96-8	204-118-5
28	Acrylamide	79-06-1	201-173-7

SVHC list (Announced on June, 2010)

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

SVHC list (Announced on Dec, 2010)

No.	Substances	CAS No.	EC No.
37	Cobalt(II) sulphate	10124-43-3	233-334-2
38	Cobalt(II) dinitrate	10141-05-6	233-402-1
39	Cobalt(II) carbonate	513-79-1	208-169-4
40	Cobalt(II) diacetate	71-48-7	200-755-8
41	2-Methoxyethanol	109-86-4	203-713-7
42	2-Ethoxyethanol	110-80-5	203-804-1
43	Chromium trioxide	1333-82-0	215-607-8
44	Group containing Chromic acid, Dichromic acid, Oligomers for chromic acid and dichromic acid.	7738-94-5 13530-68-2 -	231-801-5 236-881-5 -

SVHC list (Announced on June, 2011)

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

SVHC list (Announced on Dec, 2011)

No.	Substances	CAS No.	EC No.
52	Zirconia Aluminosilicate Refractory Ceramic Fibres	-	-
53	Calcium arsenate	7778-44-1	231-904-5
54	Bis(2-methoxyethyl) ether	111-96-6	203-924-4
55	Aluminosilicate Refractory Ceramic Fibres	-	-

56	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	234-329-8
57	Lead dipicrate	6477-64-1	229-335-2
58	N,N-dimethylacetamide	127-19-5	204-826-4
59	Arsenic acid	7778-39-4	231-901-9
60	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1
61	Trilead diarsenate	3687-31-8	222-979-5
62	1,2-dichloroethane	107-06-2	203-458-1
63	Pentazinc chromate octahydroxide	49663-84-5	256-418-0
64	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2
65	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1
66	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6
67	Lead diazide, Lead azide	13424-46-9	236-542-1
68	Lead styphnate	15245-44-0	239-290-0
69	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9
70	Phenolphthalein	77-09-8	201-004-7
71	Dichromium tris(chromate)	24613-89-6	246-356-2

SVHC list (Announced on Jun, 2012)

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

SVHC list (Announced on Dec, 2012)

No.	Substances	CAS No.	EC No.
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9
86	Pentacosafuorotridecanoic acid	72629-94-8	276-745-2
87	Tricosafuorododecanoic acid	307-55-1	206-203-2
88	Henicosafuoroundecanoic acid	2058-94-8	218-165-4
89	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4
90	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8

91	Cyclohexane-1,2-dicarboxylic anhydride cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7 13149-00-3 14166-21-3	201-604-9 236-086-3 238-009-9
92	Hexahydromethylphthalic anhydride Hexahydro-4-methylphthalic anhydride Hexahydro-1-methylphthalic anhydride Hexahydro-3-methylphthalic anhydride	25550-51-0 19438-60-9 48122-14-1 57110-29-9	247-094-1 243-072-0 256-356-4 260-566-1
93	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]	-	-
94	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-
95	Methoxyacetic acid	625-45-6	210-894-6
96	N,N-dimethylformamide	68-12-2	200-679-5
97	Dibutyltin dichloride (DBTC)	683-18-1	211-670-0
98	Lead monoxide (Lead oxide)	1317-36-8	215-267-0
99	Orange lead (Lead tetroxide)	1314-41-6	215-235-6
100	Lead bis(tetrafluoroborate)	13814-96-5	237-486-0
101	Trilead bis(carbonate)dihydroxide	1319-46-6	215-290-6
102	Lead titanium trioxide	12060-00-3	235-038-9
103	Lead titanium zirconium oxide	12626-81-2	235-727-4
104	Silicic acid, lead salt	11120-22-2	234-363-3
105	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a compounds, with index number 082-001-00-6 in Regulation (EC)]	68784-75-8	272-271-5
106	1-bromopropane (n-propyl bromide)	106-94-5	203-445-0
107	Methyloxirane (Propylene oxide)	75-56-9	200-879-2
108	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2
109	Diisopentylphthalate (DIPP)	605-50-5	210-088-4
110	N-pentyl-isopentylphthalate	776297-69-9	-
111	1,2-Diethoxyethane	629-14-1	211-076-1
112	Acetic acid, lead salt, basic	51404-69-4	257-175-3
113	Lead oxide sulfate	12036-76-9	234-853-7
114	[Phthalato(2-)]dioxotrilead	69011-06-9	273-688-5
115	Dioxobis(stearato)trilead	12578-12-0	235-702-8
116	Fatty acids, C16-18, lead salts	91031-62-8	292-966-7
117	Lead cyanamidate	20837-86-9	244-073-9
118	Lead dinitrate	10099-74-8	233-245-9
119	Pentalead tetraoxide sulphate	12065-90-6	235-067-7
120	Pyrochlore, antimony lead yellow	8012-00-8	232-382-1
121	Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1
122	Tetraethyllead	78-00-2	201-075-4
123	Tetralead trioxide sulphate	12202-17-4	235-380-9
124	Trilead dioxide phosphonate	12141-20-7	235-252-2
125	Furan	110-00-9	203-727-3
126	Diethyl sulphate	64-67-5	200-589-6
127	Dimethyl sulphate	77-78-1	201-058-1
128	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7
129	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7
130	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8
131	4,4'-oxydianiline and its salts	101-80-4	202-977-0
132	4-Aminoazobenzene	60-09-3	200-453-6

133	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1
134	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1
135	Biphenyl-4-ylamine	92-67-1	202-177-1
136	o-aminoazotoluene [(4-o-tolylazo-o-toluidine)]	97-56-3	202-591-2
137	o-Toluidine	95-53-4	202-429-0
138	N-methylacetamide	79-16-3	201-182-6

SVHC list (Announced on Jun, 2013)

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

SVHC list (Announced on Dec, 2013)

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

SVHC list (Announced on Jun, 2014)

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

SVHC list (Announced on Dec, 2014)

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

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)	-	-
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SVHC list (Announced on Jun, 2015)

No.	Substances	CAS No.	EC No.
162	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
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]	-	-

SVHC list (Announced on Dec, 2015)

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

SVHC list (Announced on Jun, 2016)

No.	Substances	CAS No.	EC No.
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5

SVHC list (Announced on Jan. 2017)

No.	Substances	CAS No.	EC No.
170	4,4'-isopropylidenediphenol(bisphenol A; BPA)	80-05-7	201-245-8
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)	-	-
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	-	-
	Nonadecafluorodecanoic acid	335-76-2	206-400-3
	Ammonium nonadecafluorodecanoate	3108-42-7	221-470-5
	Decanoic acid, nonadecafluoro-, sodium salt	3830-45-3	-
173	p-(1,1-dimethylpropyl)phenol	80-46-6	201-280-9

SVHC list (Announced on Jan. 2017)

No.	Substances	CAS No.	EC No.
174	Perfluorohexane-1-sulphonic acid and its salts(PFHxS)	-	-

SVHC list (Announced on Jan. 2018)

No.	Substances	CAS No.	EC No.
175	Benz[a]anthracene	56-55-3 1718-53-2	200-280-6
176	Cadmium carbonate	513-78-0	208-168-9
177	Cadmium hydroxide	21041-95-2	244-168-5
178	Cadmium nitrate; Cadmium dinitrate tetrahydrate	10022-68-1	233-710-6
	Cadmium nitrate	10325-94-7	
179	Chrysene	218-01-9 1719-03-5	205-923-4
180	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]	13560-89-9 135821-74-8 135821-03-3	236-948-9
181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	93925-00-9	300-298-5

SVHC list (Announced on June 2018)

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

*Lead: High-melting point solder/RoHS Exemption7(a)

SVHC list (Announced on Jan, 2019)

No.	Substances	CAS No.	EC No.
192	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	239-139-9
193	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1
194	Benzo[k]fluoranthene	207-08-9	205-916-6
195	FluorantheneFluoranthene-D10, 98 atom % D	206-44-0	205-912-4
		93951-69-0	
196	Phenanthrene	85-01-8	201-581-5
197	PyrenePyrene-1,2,3,4,5,6,7,8,9,10-d10	129-00-0	204-927-3
		1718-52-1	

Shindengen Electric Manufacturing Co., Ltd.
Quality assurance dept. Electronic device div. group.
Toru Kamiyama

T Kamiyama

Product List

No.	Product No.	Product Name
1	D10XB60-7000	Bridge diode
2	D1F60-5073	General diode
3	D1F60-5053	General diode
4	D1FL20U-5073	Fast recovery diode
5	D1FS4-5073	Schottky barrier diode
6	D1FS4-5053	Schottky barrier diode
7	D1FS6-5073	Schottky barrier diode
8	D20LC20U-7100	Fast recovery diode
9	D25XB60-7000	Bridge diode
10	D5SB60-7000	Bridge diode
11	K1V12-7060	Sidac
12	K1V22(W)-7061	Sidac
13	M1FS4-6063	Schottky barrier diode
14	M1FS6-6063	Schottky barrier diode
15	S1NB60-7062	Bridge diode
16	S1ZB60-7072	Bridge diode
17	S30SC4MT-5000	Schottky barrier diode
18	S4VB60-5000	Bridge diode