



**REACH Product Content Declaration**

Below is the current candidate list of substances of very high concern(SVHC). The articles manufactured by Seoul Semiconductor do not contain any of the following substances in concentrations greater than 0.1% weight by the total product weight.

Number of Substances on the Candidate List : 173 (last updated: 12 Jan 2017)

No	Substance name	CAS No.	EC. No	Date of inclusion
1	Anthracene	120-12-7	204-371-1	2008-10-28
2	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	202-974-4	2008-10-28
3	Dibutyl phthalate (DBP)	84-74-2	201-557-4	2008-10-28
4	Cobalt dichloride	7646-79-9	231-589-4	2008-10-28
5	Diarsenic pentaoxide	1303-28-2	215-116-9	2008-10-28
6	Diarsenic trioxide	1327-53-3	215-481-4	2008-10-28
7	Sodium dichromate, dehydrate	7789-12-0 10588-01-9	234-190-3	2008-10-28
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	2008-10-28
9	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0	2008-10-28
10	Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	247-148-4 221-695-9	2008-10-28
11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP)	85535-84-8	287-476-5	2008-10-28
12	Bis(tributyltin)oxide (TBTO)	56-35-9	200-268-0	2008-10-28
13	Lead hydrogen arsenate	7784-40-9	232-064-2	2008-10-28
14	Triethyl arsenate	15606-95-8	427-700-2	2008-10-28
15	Benzyl butyl phthalate(BBP)	85-68-7	201-622-7	2008-10-28
16	Anthracene oil	90640-80-5	292-602-7	2010-01-13
17	Anthracene oil, anthracene paste, distn. lights	91995-17-4	295-278-5	2010-01-13
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	2010-01-13
19	Anthracene oil, anthracene-low	90640-82-7	292-604-8	2010-01-13
20	Anthracene oil, anthracene paste	90640-81-6	292-603-2	2010-01-13
21	Pitch, coal tar, high temp.	65996-93-2	266-028-2	2010-01-13
-	Aluminosilicate Refractory Ceramic Fibres	-	-	-
-	Zirconia Aluminosilicate, Refractory Ceramic Fibres	-	-	-
22	2,4-Dinitrotoluene	121-14-2	204-450-0	2010-01-13
23	Diisobutyl phthalate	84-69-5	201-553-2	2010-01-13
24	Lead chromate	7758-97-6	231-846-0	2010-01-13
25	Lead chromate molybdate sulphate red(C.I. Pigment Red 104)	12656-85-8	235-759-9	2010-01-13
26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7	2010-01-13
27	tris(2-chloroethyl)phosphate	115-96-8	204-118-5	2010-01-13
28	Acrylamide	79-06-01	201-173-7	2010-03-30
29	Trichloroethylene (TCE)	79-01-6	201-167-4	2010-06-18
30	Boric acid	10043-35-3 11113-50-1	233-139-2 234-343-4	2010-06-18
31	Disodium tetraborate,anhydrous	1303-96-4 1330-43-4 12179-04-3	215-540-4	2010-06-18
32	Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3	2010-06-18
33	Sodium chromate	7775-11-3	231-889-5	2010-06-18
34	Potassium chromate	7789-00-6	232-140-5	2010-06-18
35	Ammonium dichromate	7789-09-5	232-143-1	2010-06-18
36	Potassium dichromate	7778-50-9	231-906-6	2010-06-18
37	Cobalt(II) sulphate	10124-43-3	233-334-2	2010-12-15
38	Cobalt(II) dinitrate	10141-05-6	233-402-1	2010-12-15
39	Cobalt(II) carbonate	513-79-1	208-169-4	2010-12-15
40	Cobalt(II) diacetate	71-48-7	200-755-8	2010-12-15
41	2-Methoxyethanol	109-86-4	203-713-7	2010-12-15
42	2-Ethoxyethanol	110-80-5	203-804-1	2010-12-15
43	Chromium trioxide	1333-82-0	215-607-8	2010-12-15

44	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid	7738-94-5 13530-68-2	231-801-5 236-881-5	2010-12-15
45	2-ethoxyethyl acetate	111-15-9	203-839-2	2011-06-20
46	strontium chromate	7789-06-2	232-142-6	2011-06-20
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	271-084-6	2011-06-20
48	Hydrazine	7803-57-8 302-01-2	206-114-9	2011-06-20
49	1-methyl-2-pyrrolidone	872-50-4	212-828-1	2011-06-20
50	1,2,3-trichloropropane	96-18-4	202-486-1	2011-06-20
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP)	71888-89-6	276-158-1	2011-06-20
52	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	2011-12-19
53	Calcium arsenate	7778-44-1	231-904-5	2011-12-19
54	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	2011-12-19
55	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	2011-12-19
56	Potassium hydroxyoctaoxidizincatedichromate	11103-86-9	234-329-8	2011-12-19
57	Lead dipicrate	6477-64-1	229-335-2	2011-12-19
58	N,N-dimethylacetamide	127-19-5	204-826-4	2011-12-19
59	Arsenic acid	7778-39-4	231-901-9	2011-12-19
60	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	2011-12-19
61	Trilead diarsenate	3687-31-8	222-979-5	2011-12-19
62	1,2-dichloroethane	107-06-2	203-458-1	2011-12-19
63	Pentazinc chromate octahydroxide	49663-84-5	256-418-0	2011-12-19
64	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	2011-12-19
65	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	2011-12-19
66	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	2011-12-19
67	Lead diazide, Lead azide	13424-46-9	236-542-1	2011-12-19
68	Phenolphthalein	1977-09-08	201-004-7	2011-12-19
69	Dichromium tris(chromate)	24613-89-6	246-356-2	2011-12-19
70	Lead styphnate	15245-44-0	239-290-0	2011-12-19
71	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	2011-12-19
72	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	2012-06-18
73	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	2012-06-18
74	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	2012-06-18
75	Diboron trioxide	1303-86-2	215-125-8	2012-06-18
76	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	2012-06-18
77	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	2012-06-18

78	Lead(II) bis(methanesulfonate)	17570-76-2	401-750-5	2012-06-18
79	Formamide	75-12-7	200-842-0	2012-06-18
80	[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	2012-06-18
81	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	2012-06-18
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	2012-06-18
83	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	219-514-3	2012-06-18
84	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	202-027-5	2012-06-18
85	Bis(pentabromophenyl) ether (DecaBDE)	1105-19-9	214-604-9	2012-12-19
86	Pentacosafuorotridecanoic acid	72629-94-8	276-745-2	2012-12-19
87	Tricosafuorododecanoic acid	307-55-1	206-203-2	2012-12-19
88	Henicosafuoroundecanoic acid	2058-94-8	218-165-4	2012-12-19
89	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	2012-12-19
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	-	-	2012-12-19
91	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	-	-	2012-12-19
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	2012-12-19
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7	201-604-9	2012-12-19
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	2012-12-19
95	Methoxy acetic acid	625-45-6	210-894-6	2012-12-19
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	2012-12-19
97	Diisopentylphthalate (DIPP)	605-50-5	210-088-4	2012-12-19
98	N-pentyl-isopentylphthalate	-	-	2012-12-19
99	1,2-Diethoxyethane	629-14-1	211-076-1	2012-12-19
100	N,N-dimethylformamide; dimethyl formamide	68-12-2	200-679-5	2012-12-19
101	Dibutyltin dichloride (DBT)	683-18-1	211-670-0	2012-12-19
102	Acetic acid, lead salt, basic	51404-69-4	257-175-3	2012-12-19
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)	1319-46-6	215-290-6	2012-12-19
104	Lead oxide sulfate (basic lead sulfate)	12036-76-9	234-853-7	2012-12-19
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)	69011-06-9	273-688-5	2012-12-19
106	Dioxobis(stearato)trilead	12578-12-0	235-702-8	2012-12-19
107	Fatty acids, C16-18, lead salts	91031-62-8	292-966-7	2012-12-19
108	Lead bis(tetrafluoroborate)	13814-96-5	237-486-0	2012-12-19
109	Lead cyanamate	20837-86-9	244-073-9	2012-12-19
110	Lead dinitrate	10099-74-8	233-245-9	2012-12-19
111	Lead oxide (lead monoxide)	1317-36-8	215-267-0	2012-12-19
112	Lead tetroxide (orange lead)	1314-41-6	215-235-6	2012-12-19
113	Lead titanium trioxide	12060-00-3	235-038-9	2012-12-19
114	Lead Titanium Zirconium Oxide	12626-81-2	235-727-4	2012-12-19
115	Pentalead tetraoxide sulphate	12065-90-6	235-067-7	2012-12-19
116	Pyrochlore, antimony lead yellow	8012-00-8	232-382-1	2012-12-19
117	Silicic acid, barium salt, lead-doped	68784-75-8	272-271-5	2012-12-19
118	Silicic acid, lead salt	11120-22-2	234-363-3	2012-12-19
119	Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1	2012-12-19
120	Tetraethyllead	78-00-2	201-075-4	2012-12-19
121	Tetralead trioxide sulphate	12202-17-4	235-380-9	2012-12-19
122	Trilead dioxide phosphonate	12141-20-7	235-252-2	2012-12-19
123	Furan	110-00-9	203-727-3	2012-12-19
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2	2012-12-19
125	Diethyl sulphate	64-67-5	200-589-6	2012-12-19
126	Dimethyl sulphate	77-78-1	201-058-1	2012-12-19
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	2012-12-19
128	Dinoseb	88-85-7	201-861-7	2012-12-19

129	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	2012-12-19
130	4,4'-oxydianiline and its salts	101-80-4	202-977-0	2012-12-19
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	200-453-6	2012-12-19
132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	202-453-1	2012-12-19
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	2012-12-19
134	Biphenyl-4-ylamine	92-67-1	202-177-1	2012-12-19
135	o-aminoazotoluene	97-56-3	202-591-2	2012-12-19
136	o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0	2012-12-19
137	N-methylacetamide	79-16-3	201-182-6	2012-12-19
138	1-bromopropane; n-propyl bromide	106-94-5	203-445-0	2012-12-19
139	Cadmium	7440-43-9	231-152-8	2013-06-20
140	Cadmium oxide	1306-19-0	215-146-2	2013-06-20
141	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	2013-06-20
142	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	2013-06-20
143	Dipentyl phthalate (DPP)	131-18-0	205-017-9	2013-06-20
144	4-Nonylphenol, branched and linear, ethoxylated <i>[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]</i>	-	-	2013-06-20
145	Cadmium sulphide	1306-23-6	215-147-8	2013-12-16
146	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	2013-12-16
147	Dihexyl phthalate	84-75-3	201-559-5	2013-12-16
148	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	2013-12-16
149	Trixylyl phosphate	25155-23-1	246-677-8	2013-12-16
150	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	2013-12-16
151	Lead di(acetate)	301-04-2	206-104-4	2013-12-16
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	2014-06-16
153	Cadmium chloride	10108-64-2	233-296-7	2014-06-16
154	Sodium perborate; perboric acid, sodium salt	-	239-172-9 234-390-0	2014-06-16
155	Sodium peroxometaborate	7632-04-04	231-556-4	2014-06-16
156	Cadmium fluoride	7790-79-6	232-222-0	2014-12-17
157	Cadmium sulphate	10124-36-4 31119-53-6	233-331-6	2014-12-17
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	2014-12-17
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	2014-12-17
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	2014-12-17
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)	-	-	2014-12-17
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	2015-06-15
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]	-	-	2015-06-15
164	1,3-propanesultone	1120-71-4	214-317-9	2015-12-17
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	2015-12-17
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1	2015-12-17
167	Nitrobenzene	98-95-3	202-716-0	2015-12-17
168	Perfluorononan-1-oiic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	206-801-3	2015-12-17
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5	2016-06-20
170	4,4'-isopropylidenediphenol	80-05-7	201-245-8	2017-01-12

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	-	-	2017-01-12
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts Nonadecafluorodecanoic acid Ammonium nonadecafluorodecanoate Decanoic acid, nonadecafluoro-, sodium salt	335-76-2 3108-42-7 3830-45-3	206-400-3 221-470-5 -	2017-01-12
173	p-(1,1-dimethylpropyl)phenol	80-46-6	201-280-9	2017-01-12

I hereby certify that the contents of this declaration are true.

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Seoul Semiconductor Co.,LTD  
Lee Sang Kook  
Head of Quality Group  
2017-01-16

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