

REACH Compliance Statement

The European Chemicals Agency (ECHA) has updated the Candidate List of Substances of Very High Concern (SVHCs) for Authorization published on 16 Jul., 2019 (the “Updated List”). The SVHCs List hereunder is a corresponding list as the Updated List on the website of ECHA. Insignis Technology Corporation, Inc. has used its commercially reasonable efforts to survey and acquire the relevant information from its suppliers regarding applying such SVHCs List.

Product Part or Model Number: (Please list the relevant part numbers here)

Product Part or Model Number
* applies to all Insignis part #s
(both DRAM and eMMC)

This letter is to confirm that the product(s) referenced above have been evaluated against Regulation (EC) 1907/2006 of the European Parliament, “**Registration, Evaluation, and Authorization of Chemicals (REACH)**”, as interpreted by EU Court of Justice decision C-106/14 of 10 September 2015. The compliance status of the product is confirmed by the sections below.

Article 33 of EU Regulation 1907/2006:

- The product(s) referenced above, as well as any articles* contained within the product(s), **DO NOT CONTAIN** any of the 201 REACH SVHCs as updated by ECHA on July 16, 2019 (<http://echa.europa.eu/candidate-list-table>).
- The products(s) referenced above have been evaluated for the presence of the 201 REACH SVHCs as updated BY ECHA on July 16, 2019. The product(s) and/or articles* contained within the product(s) **CONTAIN** the following SVHCs in amounts **no more than 1000ppm**, as provided in the table on the following page. *(Table must be completed if this option is selected.)*
- The products(s) referenced above have been evaluated for the presence of the 201 REACH SVHCs as updated BY ECHA on July 16, 2019. The product(s) and/or articles* contained within the product(s) **CONTAIN** the following SVHCs in amounts **more than 1000ppm**, as provided in the table on the following page. *(Table must be completed if this option is selected.)*

*An Article is any item within a part or component of the product which during production is given a special shape, surface or design that determines its function to a greater degree than its chemical composition. An example of articles within an electronic component would be the leads of a through-hole capacitor. For more information, please refer to Example 21 of the EU Chemicals Agency “Guidance for Requirements on Substances in Articles:”

https://echa.europa.eu/documents/10162/23036412/articles_en.pdf/cc2e3f93-8391-4944-88e4-efed5fb5112c

SVHCs List

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
1	Anthracene	120-12-7	< 0.1%
2	4,4'-Diaminodiphenylmethane (MDA)	101-77-9	
3	Dibutyl phthalate (DBP)	84-74-2	
4	Cobalt dichloride	7646-79-9	
5	Diarsenic pentaoxide	1303-28-2	
6	Diarsenic trioxide	1327-53-3	
7	Sodium dichromate	7789-12-0	
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	
9	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	
10	Hexabromocyclododecane, HBCDD and all major diastereoisomers identified.	25637-99-4	
11	Alkanes, C10-13, chloro (Short Chain chlorinated Paraffins)	85535-84-8	
12	Bis(tributyltin) oxide (TBTO)	56-35-9	
13	Lead hydrogen arsenate	7784-40-9	
14	Benzyl butyl phthalate (BBP)	85-68-7	
15	Triethyl arsenate	15606-95-8	
16	2,4-Dinitrotoluene	121-14-2	
17	Anthracene oil	90640-80-5	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
18	Anthracene oil, anthracene paste, distn. lights	91995-17-4	< 0.1%
19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	
20	Anthracene oil, anthracene-low	90640-82-7	
21	Anthracene oil, anthracene paste	90640-81-6	
22	Diisobutyl phthalate	84-69-5	
23	Lead chromate	7758-97-6	
24	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	
25	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	
26	Acrylamide	79-06-1	
27	Tris(2-chloroethyl) phosphate	115-96-8	
28	Pitch, coal tar, high temp.	65996-93-2	
29	Trichloroethylene	79-01-6	
30	Boric acid	10043-35-3 11113-50-1	
31	Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	
32	Tetraboron disodium heptaoxide hydrate	12267-73-1	
33	Sodium chromate	7775-11-3	
34	Potassium chromate	7789-00-6	
35	Ammonium dichromate	7789-09-5	
36	Potassium dichromate	7778-50-9	
37	Cobalt(II) sulphate	10124-43-3	
38	Cobalt(II) dinitrate	10141-05-6	
39	Cobalt(II) carbonate	513-79-1	
40	Cobalt(II) diacetate	71-48-7	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
41	2-Methoxyethanol	109-86-4	< 0.1%
42	2-Ethoxyethanol	110-80-5	
43	Chromium trioxide	1333-82-0	
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	
45	2-ethoxyethyl acetate	111-15-9	
46	Strontium chromate	7789-06-2	
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	
48	Hydrazine	7803-57-8 302-01-2	
49	1-methyl-2-pyrrolidone	872-50-4	
50	1,2,3-trichloropropane	96-18-4	
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	
52	Lead dipicrate	6477-64-1	
53	Lead styphnate	15245-44-0	
54	Lead diazide	13424-46-9	
55	Phenolphthalein	77-09-8	
56	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	
57	N,N-dimethylacetamide (DMAC)	127-19-5	
58	trilead diarsenate	3687-31-8	
59	calcium arsenate	7778-44-1	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
60	Arsenic acid	7778-39-4	< 0.1%
61	Bis(2-methoxyethyl) ether	111-96-6	
62	1,2-Dichloroethane	107-06-2	
63	4-(1,1,3,3-tetramethylbutyl) phenol, (4-tert-octylphenol)	140-66-9	
64	2-methoxyaniline o-anisidine	90-04-0	
65	Bis(2-methoxyethyl) phthalate	117-82-8	
66	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	
67	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) 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 ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight.	-	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
68	Aluminosilicate Refractory Ceramic Fibres (RCF) 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 ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight	-	< 0.1%
69	Pentazinc chromate octahydroxide	49663-84-5	
70	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	
71	Dichromium tris(chromate)	24613-89-6	
72	1,2-bis(2-methoxyethoxy) ethane (TEGDME triglyme)	112-49-2	
73	1,2-dimethoxyethane ethylene glycol dimethyl ether (EGDME)	110-71-4	
74	Diboron trioxide	1303-86-2	
75	Formamide	75-12-7	
76	Lead(II) bis(methanesulfonate)	17570-76-2	
77	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9	
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	
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
81	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	< 0.1%
82	[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	
83	α,α -Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	
86	Pentacosafuorotridecanoic acid	72629-94-8	
87	Tricosafuorododecanoic acid	307-55-1	
88	Henicosafuoroundecanoic acid	2058-94-8	
89	Heptacosafuorotetradecanoic acid	376-06-7	
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues	-	
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	-	
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7	
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	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
95	Methoxy acetic acid	625-45-6	< 0.1%
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	
97	Diisopentylphthalate (DIPP)	605-50-5	
98	N-pentyl-isopentylphthalate	776297-69-9	
99	1,2-Diethoxyethane	629-14-1	
100	N,N-dimethylformamide; dimethyl formamide	68-12-2	
101	Dibutyltin dichloride (DBT)	683-18-1	
102	Acetic acid, lead salt, basic	51404-69-4	
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)	1319-46-6	
104	Lead oxide sulfate (basic lead sulfate)	12036-76-9	
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)	69011-06-9	
106	Dioxobis(stearato)trilead	12578-12-0	
107	Fatty acids, C16-18, lead salts	91031-62-8	
108	Lead bis(tetrafluoroborate)	13814-96-5	
109	Lead cyanamidate	20837-86-9	
110	Lead dinitrate	10099-74-8	
111	Lead oxide (lead monoxide)	1317-36-8	
112	Lead tetroxide (orange lead)	1314-41-6	
113	Lead titanium trioxide	12060-00-3	
114	Lead Titanium Zirconium Oxide	12626-81-2	
115	Pentalead tetraoxide sulphate	12065-90-6	
116	Pyrochlore, antimony lead yellow	8012-00-8	
117	Silicic acid, barium salt, lead-doped	68784-75-8	
118	Silicic acid, lead salt	11120-22-2	
119	Sulfurous acid, lead salt, dibasic	62229-08-7	
120	Tetraethyllead	78-00-2	
121	Tetralead trioxide sulphate	12202-17-4	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
122	Trilead dioxide phosphonate	12141-20-7	< 0.1%
123	Furan	110-00-9	
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	
125	Diethyl sulphate	64-67-5	
126	Dimethyl sulphate	77-78-1	
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	
128	Dinoseb	88-85-7	
129	4,4'-methylenedi-o-toluidine	838-88-0	
130	4,4'-oxydianiline and its salts	101-80-4	
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	
132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	
134	Biphenyl-4-ylamine	92-67-1	
135	o-aminoazotoluene	97-56-3	
136	o-Toluidine; 2-Aminotoluene	95-53-4	
137	N-methylacetamide	79-16-3	
138	1-bromopropane; n-propyl bromide	106-94-5	
139	Cadmium	7440-43-9	
140	Ammoniumpentadecafluorootanoate (APFO)	3825-26-1	
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	
142	Dipentyl phthalate (DPP)	131-18-0	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
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]	-	<0.1%
144	Cadmium oxide	1306-19-0	
145	Cadmium sulphide	1306-23-6	
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	
147	Dihexyl phthalate	84-75-3	
148	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	
149	Trixylyl phosphate	25155-23-1	
150	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis (4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	
151	Lead di(acetate)	301-04-2	
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	
153	Sodium perborate; perboric acid, sodium salt	-	
154	Sodium peroxometaborate	7632-04-4	
155	Cadmium chloride	10108-64-2	
156	Cadmium fluoride	7790-79-6	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
157	reaction mass of 2-ethylhexyl10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3, 5-dithia-4-stannatetradecanoate and 2-ethylhexyl10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannate tradecanoate (reaction mass of DOTE and MOTE)	-	< 0.1%
158	2-ethylhexyl10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3, 5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	
159	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	
160	Cadmium sulphate	10124-36-4 31119-53-6	
161	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	
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	
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]	-	
164	Nitrobenzene	98-95-3	
165	2,4-Di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	
166	2-(2H-Benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	
167	1,3-Propanesultone	1120-71-4	
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	
169	Benzo[def]chrysene	50-32-8	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	Non-BGA product < 0.1% BGA product <1% Communicating information according to Article 33: BGA substrate core contains < 1 wt% of BPA as impurity or byproduct, which will not be exposed to cause contact induced risks.
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]	-	< 0.1%
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7 335-76-2 3830-45-3	
173	p-(1,1-dimethylpropyl)phenol	80-46-6	
174	Perfluorohexane-1-sulphonic acid and its salts	-	
175	Benz[a]anthracene	56-55-3, 1718-53-2	
176	Cadmium carbonate	513-78-0	

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
177	Cadmium hydroxide	21041-95-2	< 0.1%
178	Cadmium nitrate	10022-68-1, 10325-94-7	
179	Chrysene	218-01-9, 1719-03-5	
180	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	-	
181	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)	-	
182	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride trimellitic anhydride; TMA	552-30-7	
183	Benzo[ghi]perylene	191-24-2	
184	Decamethylcyclopentasiloxane D5	541-02-6	
185	Dicyclohexyl phthalate DCHP	84-61-7	
186	Disodium octaborate	12008-41-2	
187	Dodecamethylcyclohexasiloxane D6	540-97-6	
188	Ethylenediamine EDA	107-15-3	
189	Lead	7439-92-1	
190	Octamethylcyclotetrasiloxane D4	556-67-2	
191	Terphenyl, hydrogenated	61788-32-7	
192	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one 3-benzylidene camphor; 3-BC	15087-24-8	
193	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	
194	Benzo[k]fluoranthene	207-08-9	

REACH Compliance Statement

NO.	Substance Name	CAS Number	Threshold Limit (SVHC/Product weight)
195	Fluoranthene	206-44-0; 93951-69-0	< 0.1%
196	Phenanthrene	85-01-8	
197	Pyrene	129-00-0; 1718-52-1	
198	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides covering any of their individual isomers and combinations thereof	-	
199	2-methoxyethyl acetate	110-49-6	
200	4-tert-butylphenol	98-54-4	
201	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	-	

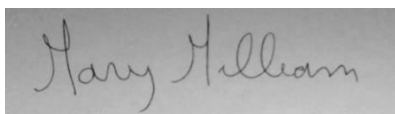
The latest 201 substances subject to analysis per the REACH Regulation were last updated on July 16, 2019. Please refer to the following for the most current candidate list of substances:

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

Additional information on the European Union's REACH regulation can be found here:

<https://echa.europa.eu/regulations/reach/understanding-reach>

This signature below verifies that the statement above is valid and accurate.



Name: Gary R. Gilliam
 Title: CTO and VP of Engineering
 Email: gary@insignis-tech.com
 Phone: 208-850-1042
 Date: 2/5/2021