



## REACH Certificate of Compliance

OptiFuse fully supports and hereby certifies complete conformance to the requirements of REACH's 197 SVHC (Substances of Very High Concern), the European Community Regulation standard about chemicals and their safe use (EC 1907/2006) which is known as REACH (Registration, Evaluation, Authorization and Restriction of Chemicals).

OptiFuse is committed to providing safe products consistent with the improvement and protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.

OptiFuse currently conforms up to January 15, 2019, Amendment T, and will continue to conform to the requirements of REACH as new amendments are released. Specifically, the below listed chemical substances are not present in our products for quantities totaling over one ton per producer a year, and are not present above a concentration of 0.1% by weight.

OptiFuse defines "**REACH Compliant**", to mean that banned substances are not intentionally added during the manufacturing process and have upper concentrations within REACH acceptable limits.

The ongoing status is based on OptiFuse's understanding of REACH and OptiFuse's knowledge of the Materials that are used in its products.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
1	Anthracene	120-12-7	●		10/28/2008
2	4,4-Diaminodiphenylmethane	101-77-9	●		10/28/2008
3	Benzyl butyl phthalate	85-68-7	●		10/28/2008
4	Bis(2-ethyl(hexyl)phtalate)(DEHP)	117-81-7	●		10/28/2008
5	Dibutyl phthalate	84-74-2	●		10/28/2008
6	Cobalt dichloride	7646-79-9	●		10/28/2008 6/20/2011
7	Sodium dichromate, dehydrate	7789-12-0	●		10/28/2008
8	Lead hydrogen arsenate	7784-40-9	●		10/28/2008
9	Diarsenic pentaoxide	1303-28-2	●		10/28/2008
10	Triethyl arsenate	15606-95-8	●		10/28/2008
11	Diarsenic trioxide	1327-53-3	●		10/28/2008
12	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	●		10/28/2008
13	Hexabromocyclododecane (HBCDD) Alpha Hexabromocyclododecane Beta- Hexabromocyclododecane Gama Hexabromocyclododecane	25637-99-4 (134237-50-6) (134237-51-7) (134237-52-8)	●		10/28/2008
14	Alkanes Short Chain Chlorinated paraffins	85535-84-8	●		10/28/2008
15	Bis(tributyltin)oxide	56-35-9	●		10/28/2008

## **Amendment A**

In a press release dated 7 December 2009, the European Chemicals Agency (ECHA) announced 15 new substances identified as potential Substances of Very High Concern (SVHC). As of 13 January 2010 these substances were formally added to the Candidate List, as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
16	Anthracene Oil	90640-80-5	•		1/13/2010
17	Anthracene Oil, Anthracene Paste Distn. Lights	91995-17-4	•		1/13/2010
18	Anthracene oil, Athracene paste, Anthracene fraction	91995-15-2	•		1/13/2010
19	Anthracene oil, anthracene-low	90640-82-7	•		1/13/2010
20	Anthracene oil, Anthracene paste	90640-81-6	•		1/13/2010
21	Diisobutyl phthalate	84-69-5	•		1/13/2010
22	4,4-Diaminodiphenylmethane	Extracted from index 650-017-00-8	•		1/13/2010
23	Lead chromate	7758-97-6	•		1/13/2010
24	Bis(2-ethyl(hexyl)pphthalate)(DEHP)	12656-85-8	•		1/13/2010
25	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	•		1/13/2010
26	Tris(2-chloroethyl)phosphate	115-96-8	•		1/13/2010
27	Coal tar pitch, high temperature	65996-93-2	•		1/13/2010
28	2,4-Dinitrotoluene	204-450-0	•		1/13/2010

## **Amendment B**

In a press release dated 30 March 2010, the European Chemicals Agency (ECHA) announced 1 new substances identified as potential Substances of Very High Concern (SVHC). As of March 2010 this substances were formally added to the Candidate List, as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
29	Acrylamide	79-06-1	•		3/30/2010

## **Amendment C**

In a press release dated 18 June 2010, the European Chemicals Agency (ECHA) announced 8 new substances identified as potential Substances of Very High Concern (SVHC). As of June 2010 these substances were formally added to the Candidate List as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
30	Ammonium dichromate	232-143-1	•		6/18/2010
31	Boric acid	233-139-2 / 234-343-4	•		6/18/2010
32	Disodium tetraborate, anhydrous	215-540-4	•		6/18/2010
33	Potassium chromate	232-140-5	•		6/18/2010
34	Potassium dichromate	231-906-6	•		6/18/2010
35	Sodium chromate	231-889-5	•		6/18/2010
36	Tetraboron disodium heptaoxide, hydrate	235-541-3	•		6/18/2010
37	Trichloroethylene	201-167-4	•		6/18/2010

## **Amendment D**

In a press release dated 15 December 2010, the European Chemicals Agency (ECHA) announced 9 new substances identified as potential Substances of Very High Concern (SVHC). As of December 2010 these substances were formally added to the Candidate List as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
38	2-Ethoxyethanol	110-80-5	•		12/15/2010
39	2-Methoxyethanol	109-86-4	•		12/15/2010
40	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid	7738-94-5, 13530-68-2	•		12/15/2010
41	Chromium trioxide	1333-82-0	•		12/15/2010
42	Cobalt(II) carbonate	513-79-1	•		12/15/2010
43	Cobalt(II) diacetate	71-48-7	•		12/15/2010
44	Cobalt(II) dinitrate	10141-05-6	•		12/15/2010
45	Cobalt(II) sulphate	10124-43-3	•		12/15/2010

### **Amendment E**

In a press release dated 20 June 2011, the European Chemicals Agency (ECHA) announced 8 new substances identified as potential Substances of Very High Concern (SVHC). As of June 2011 these substances were formally added to the Candidate List as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
46	2-Ethoxyethyl acetate	111-15-9	•		6/20/2011
47	Strontium chromate	7789-06-2	•		6/20/2011
48	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	•		6/20/2011
49	Hydrazine	302-01-2 / 7803-57-8	•		6/20/2011
50	1-Methyl-2-pyrrolidone	872-50-4	•		6/20/2011
51	1,2,3-Trichloropropane	96-18-4	•		6/20/2011
52	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	•		6/20/2011

### **Amendment F**

In December 2011, the European Chemicals Agency (ECHA) announced 20 new substances identified as potential Substances of Very High Concern (SVHC). As of December 19, 2011 these substances were formally added to the Candidate List, as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
53	Potassium hydroxyoctaoxidizincatedi-chromate	234-329-8	•		12/19/2011
54	Pentazinc chromate octahydroxide	256-418-0	•		12/19/2011
55	4,4-Diaminodiphenylmethane	-	•		12/19/2011
56	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)	Extracted from index 650-017- 00-8	•		12/19/2011
57	Bis(2-ethyl(hexyl)pphtalate)(DEHP)	500-036-1	•		12/19/2011
58	Bis(2-methoxyethyl) phthalate	204-212-6	•		12/19/2011
59	2-Methoxyaniline; o-Anisidine	201-963-1	•		12/19/2011
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	205-426-2	•		12/19/2011
61	1,2-Dichloroethane 1,2	203-458-1	•		12/19/2011
62	Bis(2-methoxyethyl) ether	203-924-4	•		12/19/2011
63	Arsenic acid	231-901-9	•		12/19/2011
64	Calcium arsenate	231-904-5	•		12/19/2011
65	Trilead diarsenate	222-979-5	•		12/19/2011
66	N,N-dimethylacetamide (DMAC) N,N-(DMAC)	204-826-4	•		12/19/2011
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA) 4,4'-3,3'-(MOCA)	202-918-9	•		12/19/2011
68	Phenolphthalein	201-004-7	•		12/19/2011

69	Lead diazide	236-542-1	•		12/19/2011
70	Lead styphnate	239-290-0	•		12/19/2011
71	Lead dipicrate	229-335-2	•		12/19/2011

### **Amendment G**

In June 2012, the European Chemicals Agency (ECHA) announced 13 new substances identified as potential Substances of Very High Concern (SVHC). As of June 18, 2012 these substances were formally added to the Candidate List, as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
72	, -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)]	246-356-2	•		6/18/2012
73	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	•		6/18/2012
74	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3 H,5H)-trione (-TGIC)	59653-74-6	•		6/18/2012
75	Diboron trioxide	1303-86-2	•		6/18/2012
76	1,2bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	•		6/18/2012
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	•		6/18/2012
78	Lead(II) bis(methanesulfonate)	17570-76-2	•		6/18/2012
79	4,4-Diaminodiphenylmethane	75-12-7	•		6/18/2012
80	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3) [with 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	•		6/18/2012
81	Bis(2-ethyl(hexyl)ppthalate)(DEHP)	110-71-4	•		6/18/2012
82	[4-[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	•		6/18/2012
83	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	•		6/18/2012
84	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	•		6/18/2012

### **Amendment H**

In December 2012, the European Chemicals Agency (ECHA) announced 54 new substances identified as potential Substances of Very High Concern (SVHC). As of December 20, 2012 these substances were formally added to the Candidate List, as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
85	Pyrochlore, antimony lead yellow	8012-00-8	•		12/20/2012
86	6-methoxy-m-toluidine (p-cresidine)	120-71-8	•		12/20/2012
87	Henicosfluoroundecanoic acid	2058-94-8	•		12/20/2012

88	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo is...	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	•		12/20/2012
89	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and tr...	85-42-7, 13149-00-3, 14166-21-3	•		12/20/2012
90	Dibutyltin dichloride (DBTC)	683-18-1	•		12/20/2012
91	Lead bis(tetrafluoroborate)	13814-96-5	•		12/20/2012
92	4,4-Diaminodiphenylmethane	10099-74-8	•		12/20/2012
93	Silicic acid, lead salt	11120-22-2	•		12/20/2012
94	Bis(2-ethyl(hexyl)pphtalate)(DEHP)	60-09-3	•		12/20/2012
95	Lead titanium zirconium oxide	12626-81-2	•		12/20/2012
96	Lead monoxide (lead oxide)	1317-36-8	•		12/20/2012
97	o-Toluidine	95-53-4	•		12/20/2012
98	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	•		12/20/2012
99	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), lead-doped	68784-75-8	•		12/20/2012
100	<i>[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 member of the group entry of lead compounds, with index number 082-001-00-6 in Regulati...</i>		•		12/20/2012
101	Trilead bis(carbonate) dihydroxide	1319-46-6	•		12/20/2012
102	Furan	110-00-9	•		12/20/2012
103	N,N-dimethylformamide	68-12-2	•		12/20/2012
104	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	•		12/20/2012
105	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 isomer...	-	•		12/20/2012
106	4,4'-methylenedi-o-toluidine	838-88-0	•		12/20/2012
107	Diethyl sulphate	64-67-5	•		12/20/2012
108	Dimethyl sulphate	77-78-1	•		12/20/2012
109	Lead oxide sulfate	12036-76-9	•		12/20/2012
110	Lead titanium trioxide	12060-00-3	•		12/20/2012
111	Acetic acid, lead salt, basic	51404-69-4	•		12/20/2012
112	[Phthalato(2-)]dioxotrilead	69011-06-9	•		12/20/2012
113	Bis(pentabromophenyl)ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	•		12/20/2012
114	N-methylacetamide	79-16-3	•		12/20/2012
115	4,4-Diaminodiphenylmethane	88-85-7	•		12/20/2012
116	1,2-Diethoxyethane	629-14-1	•		12/20/2012
117	Bis(2-ethyl(hexyl)pphtalate)(DEHP)	12202-17-4	•		12/20/2012
118	N-pentyl-isopentylphthalate	776297-69-9	•		12/20/2012
119	Dioxobis(stearato)trilead	12578-12-0	•		12/20/2012
120	Tetraethyllead	78-00-2	•		12/20/2012
121	Pentalead tetraoxide sulphate	12065-90-6	•		12/20/2012
122	Pentacosafuorotridecanoic acid	72629-94-8	•		12/20/2012

123	Tricosafuorododecanoic acid	307-55-1	•		12/20/2012
124	Heptacosafuorotetradecanoic acid	376-06-7	•		12/20/2012
125	1-bromopropane (n-propyl bromide)	106-94-5	•		12/20/2012
126	Methoxyacetic acid	625-45-6	•		12/20/2012
127	Methyloxirane (Propylene oxide)	75-56-9	•		12/20/2012
128	Trilead dioxide phosphonate	12141-20-7	•		12/20/2012
129	o-aminoazotoluene	97-56-3	•		12/20/2012
130	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	•		12/20/2012
131	4,4'-oxydianiline and its salts	101-80-4	•		12/20/2012
132	Orange lead (lead tetroxide)	1314-41-6	•		12/20/2012
133	Biphenyl-4-ylamine	92-67-1	•		12/20/2012
134	Diisopentylphthalate	605-50-5	•		12/20/2012
135	Fatty acids, C16-18, lead salts	91031-62-8	•		12/20/2012
136	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	•		12/20/2012
137	Sulfurous acid, lead salt, dibasic	62229-08-7	•		12/20/2012
138	Lead cyanamidate	20837-86-9	•		12/20/2012

### **Amendment I**

In June 19, 2013, the European Chemicals Agency (ECHA) announced 6 new substances identified as potential Substances of Very High Concern (SVHC). As of June 19, 2013 these substances were formally added to the Candidate List, as per list below

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
139	Cadmium	7440-43-9	•		6/20/2013
140	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	•		6/20/2013
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	•		6/20/2013
142	Dipentyl phthalate (DPP)	131-18-0	•		6/20/2013
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 homologue...]		•		6/20/2013
144	Cadmium oxide	1306-19-0	•		6/20/2013

### **Amendment J**

On December 10, 2013, the European Chemicals Agency (ECHA) announced 7 new substances identified as potential Substances of Very High Concern (SVHC). As of December 10, 2013 these substances were formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
145	Cadmium sulfide	1306-23-6	•		12/16/2013
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	•		12/16/2013
147	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	•		12/16/2013
148	Dihexyl phthalate	84-75-3	•		12/16/2013
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	•		12/16/2013
150	Lead di(acetate)	301-04-2	•		12/16/2013
151	Trixylyl phosphate	25155-23-1	•		12/16/2013

## **Amendment K**

On June 6, 2013, the European Chemicals Agency (ECHA) announced 4 new substances identified as potential Substances of Very High Concern (SVHC). As of June 6, 2013 these substances were formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
152	Cadmium chloride	10108-64-2	•		6/6/2014
153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	•		6/6/2014
154	Sodium peroxometaborate	7632-4-4	•		6/6/2014
155	Sodium perborate; perborate acid, sodium salt		•		6/6/2014

## **Amendment L**

On December 17, 2014, the European Chemicals Agency (ECHA) announced 6 new substances identified as potential Substances of Very High Concern (SVHC). As of December 17, 2014 these substances were formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
156	Cadmium sulfate	10124-36-4, 31119-53-6	•		12/17/2014
157	Cadmium fluoride	7790-79-6	•		12/17/2014
158	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	•		12/17/2014
159	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)		•		12/17/2014
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	•		12/17/2014
161	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	•		12/17/2014

## **Amendment M**

On June 15, 2015, the European Chemicals Agency (ECHA) announced 2 new substances identified as potential Substances of Very High Concern (SVHC). As of June 15, 2015 these substances were formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
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	•		6/15/2015
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]		•		6/15/2015

## **Amendment N**

On Dec 17th, 2015, the European Chemicals Agency (ECHA) announced 5 new substances identified as potential Substances of Very High Concern (SVHC). As of December 17, 2015 these substances were formally added to the Candidate List, as per list below list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
164	Nitrobenzene	98-95-3	•		12/17/2015
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	•		12/17/2015
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	•		12/17/2015
167	1,3-propanesultone	1120-71-4	•		12/17/2015
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1, 21049-39-8, 4149-60-4	•		12/17/2015

### **Amendment O**

On June 20th, 2016, the European Chemicals Agency (ECHA) announced 1 new substance identified as potential Substances of Very High Concern (SVHC). As of June 20, 2016 this substance was formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
169	Benzo[def]chrysene	50-32-8	•		6/20/2016

### **Amendment P**

On January 12th, 2017, the European Chemicals Agency (ECHA) announced 4 new substances identified as potential Substances of Very High Concern (SVHC). As of January 12, 2017 these substances were formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	•		1 /12/2017
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2, 3830-45-3 3108-42-7	•		1 /12/2017
172	p-(1,1-dimethylpropyl)phenol	80-46-6	•		1 /12/2017
173	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]		•		1 /12/2017

### **Amendment Q**

On 10 July 2017, the European Chemicals Agency ECHA adds Perfluorohexane-1-sulphonic acid and its salts (PFHxS) to SVHC candidate list.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)		•		07/07/2017

### **Amendment R**

On Jan 15th, 2018, the European Chemicals Agency (ECHA) announced 7 new substance identified as potential Substances of Very High Concern (SVHC). As of Jan 15, 2018 this substance was formally added to the Candidate List, as per list below.



No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
175	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)		•		1/15/2018
176	Dodecachloropentacyclo[12.2.1.16.9.02,13.05,10] octadeca-7,15-diene ("Dechlorane Plus"™)		•		1/15/2018
177	Chrysene	218-01-9, 1719-03-5	•		1/15/2018
178	Cadmium nitrate	10022-68-1, 10325-94-7	•		1/15/2018
179	Cadmium hydroxide	21041-95-2	•		1/15/2018
180	Cadmium carbonate	513-78-0	•		1/15/2018
181	Benz[a]anthracene	56-55-3, 1718-53-2	•		1/15/2018

### **Amendment S**

On June 27th, 2018, the European Chemicals Agency (ECHA) announced 10 new substance identified as potential Substances of Very High Concern (SVHC). As of June 27, 2018 this substance was formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
182	benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride)(TMA)	552-30-7	•		6/27/2018
183	Dicyclohexyl phthalate (DCHP)	84-61-7	•		6/27/2018
184	Terphenyl, hydrogenated	61788-32-7	•		6/27/2018
185	Octamethylcyclotetrasiloxane(D4)	556-67-2	•		6/27/2018
186	Lead	7439-92-1	•		6/27/2018
187	Ethylenediamine	107-15-3	•		6/27/2018
188	Dodecamethylcyclohexasiloxane(D6)	540-97-6	•		6/27/2018
189	Disodium octaborate	12008-41-2	•		6/27/2018
190	Decamethylcyclopentasiloxane (D5)	541-02-6	•		6/27/2018
191	Benzo[ghi]perylene	191-24-2	•		6/27/2018

### **Amendment T**

On January 15, 2019, the European Chemicals Agency (ECHA) announced 6 new substance identified as potential Substances of Very High Concern (SVHC). As of January 15, 2019, this substance was formally added to the Candidate List, as per list below.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	•		1/15/2019
193	Benzo[k]fluoranthene	207-08-9	•		1/15/2019
194	Fluoranthene	206-44-0	•		1/15/2019
195	Phenanthrene	85-01-8	•		1/15/2019
196	Pyrene	129-00-0	•		1/15/2019
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	•		1/15/2019

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**Jim Kalb**  
President