

## REACH Certificate of Compliance

Carclo Optics fully supports and hereby certifies complete conformance to the requirements of REACH's 181 SVHC (Substances of Very High Concern), the European Community Regulation standard about chemicals and their safe use (EC 1907/2006), which is a new law entered into force on 07th July 2007 that will be phased in until 2018.

Carclo Optics 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.

Carclo Optics currently conforms up to 17<sup>th</sup> July 2017 Amendment Q, 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 tonne per producer a year, and are not present above a concentration of 0.1% by weight.

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
1	Anthracene	120-12-7	■		10/28/2008
2	4,4'-Diaminodiphenylmethane (MDA)	101-77-9	■		10/28/2008
3	Benzyl butyl phthalate (BBP)	85-68-7	■		10/28/2008
4	Bis[2-ethyl(hexyl)ppthalate](DEHP)	117-81-7	■		10/28/2008
5	Dibutyl phthalate (DBP)	84-74-2	■		10/28/2008
6	Cobalt dichloride	7646-79-9	■		10/28/2008
7	Sodium dichromate	7789-12-0 10588-01-9	■		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-tertbutyl-2,4,6-trinitro-mxylene (Musk xylene)	81-15-2	■		10/28/2008
13	Hexabromocyclododecane (HBCDD) and major diastereoisomer identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-994 3194-55-6 134237-50-6 134237-51-7 134237-52-8	■		10/28/2008
14	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	■		10/28/2008
15	Bis(tributyltin)oxide (TBTO)	56-35-9	■		10/28/2008

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

This status is based on Carclo Optics understanding of REACH and Carclo Optics knowledge of the materials that goes into its products as of the date of 1<sup>st</sup> June 2007 disclosure of REACH compliance.

### Amendment A

In a press release dated 7<sup>th</sup> December 2009, the European Chemicals Agency (ECHA) announced 15 new substances identified as potential Substances of Very High Concern (SVHC). As of 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, Anthracene 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	Aluminosilicate, Refractory Ceramic Fibers	Extracted from index 650017-008	■		1/13/2010
23	Lead chromate	7758-97-6	■		1/13/2010
24	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	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	Pitch, Coal Tar, high temperature	65996-93-2	■		1/13/2010
28	2,4-Dinitrotoluene	121-14-2	■		1/13/2010

This updated status is based on Carclo Optics understanding of REACH and Carclo Optics knowledge of the 15 new substances that go into its products as of the date of 1<sup>st</sup> January 2010 disclosure of REACH compliance.

### Amendment B

In a press release dated 30<sup>th</sup> March 2010, the European Chemicals Agency (ECHA) announced 1 new substance identified as potential Substances of Very High Concern (SVHC). As of March 2010 this substance was 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

This updated status is based on Carclo Optics understanding of REACH and Carclo Optics knowledge of the 1 new substance that go into its products as of the date of 30<sup>th</sup> March 2010 disclosure of REACH compliance.

### Amendment C

In a press release dated 18<sup>th</sup> 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	7789-09-05	■		6/18//2010
31	Boric acid	10043-35-3 11113-50-1	■		6/18//2010
32	Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	■		6/18//2010
33	Potassium chromate	7789-00-6	■		6/18//2010
34	Potassium dichromate	7778-50-9	■		6/18//2010
35	Sodium chromate	7775-11-3	■		6/18//2010
36	Tetraboron disodium heptaoxide, hydrate	12267-73-1	■		6/18//2010
37	Trichloroethylene	79-01-6	■		6/18//2010

This updated status is based on Carclo Optics understanding of REACH and Carclo Optics knowledge of the 1 new substance that go into its products as of the date of 18<sup>th</sup> June 2010 disclosure of REACH compliance.

### Amendment D

In a press release dated 15<sup>th</sup> 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	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic and 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

This updated status is based on Carclo Optics understanding of REACH and Carclo Optics knowledge of the 1 new substance that go into its products as of the date of 15<sup>th</sup> December 2010 disclosure of REACH compliance.

### Amendment E

In a press release dated 20<sup>th</sup> 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 (NMP)	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

This updated status is based on Carclo Optics understanding of REACH and Carclo Optics knowledge of the 1 new substance that go into its products as of the date of 20<sup>th</sup> June 2011 disclosure of REACH compliance.

### 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 19<sup>th</sup> December 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 hydroxyoctaoxodizincatedi-chromate	11103-86-9	■		12/19/2011
54	Pentazinc chromate octahydroxide	49663-84-5	■		12/19/2011
55	Aluminosilicate Refractory Ceramic Fibers are fibers 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, labeling and packaging of substances and mixtures, and fulfill the three following conditions: a) oxides of aluminum and silicon are the main components present (in the fibers) within variable concentration ranges b) fibers have length weighted geometric errors of 6 or less micrometers (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 (RCF)	-	■		12/19/2011
56	Zirconia Aluminosilicate Refractory Ceramic Fibers are 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, labeling and packaging of substances and mixtures, and fulfill the three following conditions: a) oxides of aluminum, silicon and zirconium are the main components present (in the fibers) within variable concentration ranges b) fibers have length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometers (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. (Zr-RCF)	-	■		12/19/2011

57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	■		12/19/2011
58	Bis(2-methoxyethyl) phthalate	11782-8	■		12/19/2011
59	2-Methoxyaniline; o-Anisidine	90040	■		12/19/2011
60	4-{1,1,3,3-tetramethylbutyl}phenol	14066-9	■		12/19/2011
61	1,2-Dichloroethane	10706-2	■		12/19/2011
62	Bis(2-methoxyethyl) ether	11196-6	■		12/19/2011
63	Arsenic acid	7778-39-4	■		12/19/2011
64	Calcium arsenate	7778-44-1	■		12/19/2011
65	Trilead diarsenate	3687-31-8	■		12/19/2011
66	N,N-dimethylacetamide (DMAC) N,N'-(DMAC)	127-19-5	■		12/19/2011
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA) 4,4'-3,3'-(MOCA)	101-14-4	■		12/19/2011
68	Dichromium tris (chromate)	24613-89-6	■		12/19/2011
69	Phenolphthalein	77-09-8	■		12/19/2011
70	Lead diazide, Lead azide	13424-46-9	■		12/19/2011
71	Lead styphnate	15245-44-0	■		12/19/2011
72	Lead dipicrate	6477-64-1	■		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 18<sup>th</sup> June 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
73	$\alpha, \alpha$ -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	■		6/18/2012
74	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	■		6/18/2012
75	1,3,5-tris[[2S and 2R]-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3 H,5H)-trione ( $\beta$ -TGIC)	59653-74-6	■		6/18/2012
76	Diboron trioxide	1303-86-2	■		6/18/2012
77	1,2-bis[2-methoxyethoxy]ethane (TEGDME; triglyme)	112-49-2	■		6/18/2012
78	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	■		6/18/2012
79	Lead(II) bis(methanesulfonate)	17570-76-2	■		6/18/2012
80	Formamide	75-12-7	■		6/18/2012
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	■		6/18/2012
82	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	■		6/18/2012
83	[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	■		6/18/2012
84	1,3,5-Tris[oxiran-2-ylmethyl]-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	■		6/18/2012
85	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 19<sup>th</sup> December 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
86	Pyrochlore, antimony lead yellow	8012-00-8	■		12/19/2012
87	6-methoxy-m-toluidine (p-cresidine)	12071-8	■		12/19/2012
88	Henicosaflluoroundecanoic acid	2058-94-8	■		12/19/2012
89	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 isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	■		12/19/2012
90	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 trans- isomers [1] are covered by this entry]	85-42-7, 13149-00-3, 14166-21-3	■		12/19/2012
91	Dibutyltin dichloride (DBTC)	683-18-1	■		12/19/2012
92	Lead bis(tetrafluoroborate)	13814-96-5	■		12/19/2012
93	Lead dinitrate	10099-74-8	■		12/19/2012
94	Silicic acid, lead salt	11120-22-2	■		12/19/2012
95	Lead titanium zirconium oxide	12626-81-2	■		12/19/2012
96	Lead monoxide (lead oxide)	1317-36-8	■		12/19/2012
97	o-Toluidine	95-53-4	■		12/19/2012
98	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	14386004-2	■		12/19/2012
99	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), 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 member of the group entry of lead compounds, with index number 082-001-006 in regulation (EC) No 1272/2008]	68784-75-8	■		12/19/2012
100	Trilead bis(carbonate)dihydroxide	1319-46-6	■		12/19/2012
101	Furan	110-00-9	■		12/19/2012
102	N,N-dimethylformamide	68-12-2	■		12/19/2012
103	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	■		12/19/2012
104	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]	-	■		12/19/2012
105	4,4'-methylene-di- <i>o</i> -toluidine	838-88-0	■		12/19/2012
106	Diethyl sulphate	64-67-5	■		12/19/2012
107	Dimethyl sulphate	77-78-1	■		12/19/2012
108	Lead oxide sulfate	12036-76-9	■		12/19/2012
109	Lead titanium trioxide	12060-00-3	■		12/19/2012
110	Acetic acid, lead salt, basic	51404-69-4	■		12/19/2012

111	[Phthalato(2-)]dioxotrilead	69011-06-9	■		12/19/2012
112	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	1163-19-5	■		12/19/2012
113	N-methylacetamide	79-16-3	■		12/19/2012
114	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	■		12/19/2012
115	1,2-Diethoxyethane	629-14-1	■		12/19/2012
116	Tetralead trioxide sulphate	12202-17-4	■		12/19/2012
117	N-pentylisopentylphthalate	776297-69-9	■		12/19/2012
118	Dioxobis(stearato)trilead	12578-12-0	■		12/19/2012
119	Tetraethyllead	78-00-2	■		12/19/2012
120	Pentalead tetraoxide sulphate	12065-90-6	■		12/19/2012
121	Pentacosaflluorotridecanoic acid	72629-94-8	■		12/19/2012
122	Tricosaflluorododecanoic acid	307-55-1	■		12/19/2012
123	Heptacosaflluorotetradecanoic acid	376-06-7	■		12/19/2012
124	1-bromopropane (n-propyl bromide)	106-94-5	■		12/19/2012
125	Methoxyacetic acid	625-45-6	■		12/19/2012
126	Methyloxirane (Propylene oxide)	75-56-9	■		12/19/2012
127	Trilead dioxide phosphonate	12141-20-7	■		12/19/2012
128	o-aminoazotoluene	97-56-3	■		12/19/2012
129	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	■		12/19/2012
130	4,4'-oxydianiline and its salts	101-80-4	■		12/19/2012
131	Orange lead (lead tetroxide)	1314-41-6	■		12/19/2012
132	Biphenyl-4-ylamine	92-67-1	■		12/19/2012
133	Diisopentylphthalate	605-50-5	■		12/19/2012
134	Fatty acids, C16-18, lead salts	91031-62-8	■		12/19/2012
135	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)	123-77-3	■		12/19/2012
136	4-methyl-m-phenylenediamine (toluene-2,4diamine)	95-80-7	■		12/19/2012
137	Sulfurous acid, lead salt, dibasic	62229-08-7	■		12/19/2012
138	Lead cyanamidate	20837-86-9	■		12/19/2012

### Amendment I

In 19<sup>th</sup> June 2013, the European Chemicals Agency (ECHA) announced 6 new substances identified as potential Substances of Very High Concern (SVHC). As of 19<sup>th</sup> June 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 homologues, which include any of the individual isomers and/or combinations thereof]		■		6/20/2013
144	Cadmium oxide	1306-19-0	■		6/20/2013

### Amendment J

On 10<sup>th</sup> December 2013, the European Chemicals Agency (ECHA) announced 7 new substances identified as potential Substances of Very High Concern (SVHC). As of 16<sup>th</sup> December 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 sulphide	1306-23-6	■		12/16/2013
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminona phthalene-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 6<sup>th</sup> June 2013, the European Chemicals Agency (ECHA) announced 4 new substances identified as potential Substances of Very High Concern (SVHC). As of 6<sup>th</sup> June 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	■		6/16/2014
153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	■		6/16/2014
154	Sodium peroxometaborate	7632-04-4	■		6/16/2014
155	Sodium perborate; perboric acid, sodium salt	11138-47-9 15120-21-5	■		6/16/2014

### Amendment L

On 17<sup>th</sup> December 2014, the European Chemicals Agency (ECHA) announced 6 new substances identified as potential Substances of Very High Concern (SVHC). As of 17<sup>th</sup> December 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 sulphate	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-ditertbutylphenol (UV-320)	3846-71-7	■		12/17/2014



### Amendment M

On 15<sup>th</sup> June 2015, the European Chemicals Agency (ECHA) announced 2 new substances identified as potential Substances of Very High Concern (SVHC). As of 17<sup>th</sup> December 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
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 dihexylphthalate (EC No. 201-559-5)	68515-51-5 68648-93-1	■		06/15/2015
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	-	■		06/15/2015

### Amendment N

On 22<sup>nd</sup> January 2016, the European Chemicals Agency (ECHA) announced 5 new substances identified as potential Substances of Very High Concern (SVHC). As of 17<sup>th</sup> December 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
164	1,3-propanesultone	1120-71-4	■		12/17/2015
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	36437-37-3 38649-9-1	■		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	Nitrobenzene	98-95-3	■		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

This updated status is based on Carclo Optics' understanding of REACH and Carclo Optics' knowledge of the 5 new substance that go into its products as of the date of 22<sup>nd</sup> January 2016 disclosure of REACH compliance.

### Amendment O

On 20<sup>th</sup> June 2016, the European Chemicals Agency (ECHA) announced 1 new substance identified as potential Substances of Very High Concern (SVHC). As of 11<sup>th</sup> July 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 (Benzo[a]phenol)	50-32-8	■		20/06/2016

This updated status is based on Carclo Optics' understanding of REACH and Carclo Optics' knowledge of the 5 new substance that go into its products as of the date of 20<sup>th</sup> June 2016 disclosure of REACH compliance.

### Amendment P

On 12<sup>th</sup> January 2017, the European Chemicals Agency (ECHA) announced 4 new substance identified as potential Substances of Very High Concern (SVHC). As of 13<sup>th</sup> January 2017 this substance was formally added to the Candidate List, as per list below: -

No.	Substance Name	CAS NO.	Not Used	Used	Date of Inclusion
170	p-(1,1-dimethylpropyl)phenol	80-46-6	■		12/01/2017
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts.	-	■		12/01/2017
172	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	-	■		12/01/2017
173	4,4'-isopropylidenediphenol	80-05-7	■		12/01/2017

This updated status is based on Carclo Optics' understanding of REACH and Carclo Optics' knowledge of the 4 new substance that go into its products as of the date of 13<sup>th</sup> January 2017 disclosure of REACH compliance.

### Amendment Q

On 07<sup>th</sup> July 2017, the European Chemicals Agency (ECHA) announced 1 new substance identified as potential Substances of Very High Concern (SVHC). As of 11<sup>th</sup> July 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
174	Perfluorohexane-1-sulphonic acid and its salts	-	■		07/07/2017

This updated status is based on Carclo Optics' understanding of REACH and Carclo Optics' knowledge of the 1 new substance that go into its products as of the date of 07<sup>th</sup> July 2017 disclosure of REACH compliance.

### Amendment R

On 15<sup>th</sup> January 2018, the European Chemicals Agency (ECHA) announced 7 new substances identified as potential Substances of Very High Concern (SVHC). As of 15<sup>th</sup> January 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) with $\geq 0.1\%$ w/w 4-heptylphenol, branched and linear (4-HPbl)	-	■		15/01/2018
176	Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus <sup>TM</sup> ") covering any of its individual anti- and syn- isomers or any combination thereof	-	■		15/01/2018
177	Chrysene	218-01-9 1719-03-5	■		15/01/2018
178	Cadmium nitrate	10022-68-1 10325-94-7	■		15/01/2018
179	Cadmium hydroxide	21041-95-2	■		15/01/2018
180	Cadmium carbonate	513-78-0	■		15/01/2018
181	Benz[a]anthracene	56-55-3 1718-53-2	■		15/01/2018

This updated status is based on Carclo Optics' understanding of REACH and Carclo Optics' knowledge of the 7 new substance that go into its products as of the date of 15<sup>th</sup> January 2018 disclosure of REACH compliance.

For and on behalf of  
Carclo Optics Limited.

Signature:



Neil Debrick  
Senior Quality & Testing Engineer

Revised: 16<sup>th</sup> January 2018