Certificate of Compliance – European Union REACH Regulation EC/1907/2006

pSemi certifies that the product listed below is to the best of our knowledge, compliant with the applicable requirements of the European Union Regulation EC 1907/2006 of the European Parliament Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals.

This pSemi product does not contain the Substances of Very High Concern (SVHC) shown below and listed in Annex IV of the regulation, as measured by weight in the article, pursuant to the European Commission Regulation EC 1907/2006.

Product: PE4151

Description: Low Frequency Passive Mixer with Integrated LO Amplifier

List of Substances of Very High Concern

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
1	4,4'- Diaminodiphenylmethane (MDA)	202-974-4	101-77-9	1000 ppm (0.1% wt)	10/28/2008
2	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	201-329-4	81-15-2	1000 ppm (0.1% wt)	10/28/2008
3	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-84-8	1000 ppm (0.1% wt)	10/28/2008
4	Anthracene	204-371-1	120-12-7	1000 ppm (0.1% wt)	10/28/2008
5	Benzyl butyl phthalate (BBP)	201-622-7	85-68-7	1000 ppm (0.1% wt)	10/28/2008
6	Bis(tributyltin) oxide (TBTO)	200-268-0	56-35-9	1000 ppm (0.1% wt)	10/28/2008
7	Diarsenic pentaoxide	215-116-9	1303-28-2	1000 ppm (0.1% wt)	10/28/2008
8	Diarsenic trioxide	215-481-4	1327-53-3	1000 ppm (0.1% wt)	10/28/2008
9	Dibutyl phthalate (DBP)	201-557-4	84-74-2	1000 ppm (0.1% wt)	10/28/2008
10	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	247-148-4 221-695-9	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	1000 ppm (0.1% wt)	10/28/2008
11	Lead hydrogen arsenate	232-064-2	7784-40-9	1000 ppm (0.1% wt)	10/28/2008

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
12	Sodium dichromate	234-190-3	7789-12-0 10588-01-9	1000 ppm (0.1% wt)	10/28/2008
13	Triethyl arsenate	427-700-2	15606-95-8	1000 ppm (0.1% wt)	10/28/2008
14	2,4-Dinitrotoluene	204-450-0	121-14-2	1000 ppm (0.1% wt)	1/13/2010
15	Anthracene oil	292-602-7	90640-80-5	1000 ppm (0.1% wt)	1/13/2010
16	Anthracene oil, anthracene paste	292-603-2	90640-81-6	1000 ppm (0.1% wt)	1/13/2010
17	Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2	1000 ppm (0.1% wt)	1/13/2010
18	Anthracene oil, anthracene paste, distn. lights	295-278-5	91995-17-4	1000 ppm (0.1% wt)	1/13/2010
19	Anthracene oil, anthracene-low	292-604-8	90640-82-7	1000 ppm (0.1% wt)	1/13/2010
20	Diisobutyl phthalate	201-553-2	84-69-5	1000 ppm (0.1% wt)	1/13/2010
21	Lead chromate	231-846-0	7758-97-6	1000 ppm (0.1% wt)	1/13/2010
22	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8	1000 ppm (0.1% wt)	1/13/2010
23	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2	1000 ppm (0.1% wt)	1/13/2010
24	Pitch, coal tar, high temp.	266-028-2	65996-93-2	1000 ppm (0.1% wt)	1/13/2010
25	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	1000 ppm (0.1% wt)	1/13/2010
26	Acrylamide	201-173-7	79-06-1	1000 ppm (0.1% wt)	3/30/2010
27	Ammonium dichromate	232-143-1	7789-09-5	1000 ppm (0.1% wt)	6/18/2010
28	Boric acid	233-139-2 234-343-4	10043-35-3 11113-50-1	1000 ppm (0.1% wt)	6/18/2010
29	Disodium tetraborate, anhydrous	215-540-4	1303-96-4 1330-43-4 12179-04-3	1000 ppm (0.1% wt)	6/18/2010
30	Potassium chromate	232-140-5	7789-00-6	1000 ppm (0.1% wt)	6/18/2010
31	Potassium dichromate	231-906-6	7778-50-9	1000 ppm (0.1% wt)	6/18/2010
32	Sodium chromate	231-889-5	7775-11-3	1000 ppm (0.1% wt)	6/18/2010
33	Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1	1000 ppm (0.1% wt)	6/18/2010
34	Trichloroethylene	201-167-4	79-01-6	1000 ppm (0.1% wt)	6/18/2010
35	2-Ethoxyethanol	203-804-1	110-80-5	1000 ppm (0.1% wt)	12/15/2010
36	2-Methoxyethanol	203-713-7	109-86-4	1000 ppm (0.1% wt)	12/15/2010
37	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.	231-801-5 236-881-5	7738-94-5 13530-68-2	1000 ppm (0.1% wt)	12/15/2010

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
38	Chromium trioxide	215-607-8	1333-82-0	1000 ppm (0.1% wt)	12/15/2010
39	Cobalt(II) carbonate	208-169-4	513-79-1	1000 ppm (0.1% wt)	12/15/2010
40	Cobalt(II) diacetate	200-755-8	71-48-7	1000 ppm (0.1% wt)	12/15/2010
41	Cobalt(II) dinitrate	233-402-1	10141-05-6	1000 ppm (0.1% wt)	12/15/2010
42	Cobalt(II) sulphate	233-334-2	10124-43-3	1000 ppm (0.1% wt)	12/15/2010
43	1,2,3-trichloropropane	202-486-1	96-18-4	1000 ppm (0.1% wt)	6/20/2011
44	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1	71888-89-6	1000 ppm (0.1% wt)	6/20/2011
45	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6	68515-42-4	1000 ppm (0.1% wt)	6/20/2011
46	1-Methyl-2-pyrrolidone (NMP)	212-828-1	872-50-4	1000 ppm (0.1% wt)	6/20/2011
47	2-Ethoxyethyl acetate	203-839-2	111-15-9	1000 ppm (0.1% wt)	6/20/2011
48	Hydrazine	206-114-9	302-01-2 7803-57-8	1000 ppm (0.1% wt)	6/20/2011
49	Strontium chromate	232-142-6	7789-06-2	1000 ppm (0.1% wt)	6/20/2011
50	Cobalt dichloride	231-589-4	7646-79-9	1000 ppm (0.1% wt)	6/20/2011
51	1,2-Dichloroethane	203-458-1	107-06-2	1000 ppm (0.1% wt)	12/19/2011
52	2,2'-dichloro-4,4'-methylenedianiline	202-918-9	101-14-4	1000 ppm (0.1% wt)	12/19/2011
53	2-Methoxyaniline,o-Anisidine	201-963-1	90-04-0	1000 ppm (0.1% wt)	12/19/2011
54	4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	1000 ppm (0.1% wt)	12/19/2011
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 (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	1000 ppm (0.1% wt)	12/19/2011

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
56	Arsenic acid	231-901-9	7778-39-4	1000 ppm (0.1% wt)	12/19/2011
57	Bis(2-methoxyethyl) ether	203-924-4	111-96-6	1000 ppm (0.1% wt)	12/19/2011
58	Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	1000 ppm (0.1% wt)	12/19/2011
59	Calcium arsenate	231-904-5	7778-44-1	1000 ppm (0.1% wt)	12/19/2011
60	Dichromium tris(chromate)	246-356-2	24613-89-6	1000 ppm (0.1% wt)	12/19/2011
61	Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4	1000 ppm (0.1% wt)	12/19/2011
62	Lead diazide, Lead azide	236-542-1	13424-46-9	1000 ppm (0.1% wt)	12/19/2011
63	Lead dipicrate	229-335-2	6477-64-1	1000 ppm (0.1% wt)	12/19/2011
64	Lead styphnate	239-290-0	15245-44-0	1000 ppm (0.1% wt)	12/19/2011
65	N,N-dimethylacetamide	204-826-4	127-19-5	1000 ppm (0.1% wt)	12/19/2011
66	Pentazinc chromate octahydroxide	256-418-0	49663-84-5	1000 ppm (0.1% wt)	12/19/2011
67	Phenolphthalein	201-004-7	77-09-8	1000 ppm (0.1% wt)	12/19/2011
68	Potassium hydroxyoctaoxodizincatedichromate	234-329-8	11103-86-9	1000 ppm (0.1% wt)	12/19/2011
69	Trilead diarsenate	222-979-5	3687-31-8	1000 ppm (0.1% wt)	12/19/2011
70	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 (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	1000 ppm (0.1% wt)	12/19/2011
71	1,2-bis(2-methoxyethoxy)ethane (TEGDME,triglyme)	203-977-3	112-49-2	1000 ppm (0.1% wt)	6/18/2012
72	1,2-dimethoxyethane,ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	1000 ppm (0.1% wt)	6/18/2012

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
73	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	219-514-3	2451-62-9	1000 ppm (0.1% wt)	6/18/2012
74	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	423-400-0	59653-74-6	1000 ppm (0.1% wt)	6/18/2012
75	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)]	209-218-2	561-41-1	1000 ppm (0.1% wt)	6/18/2012
76	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	202-027-5	90-94-8	1000 ppm (0.1% wt)	6/18/2012
77	[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)]	208-953-6	548-62-9	1000 ppm (0.1% wt)	6/18/2012
78	[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)]	219-943-6	2580-56-5	1000 ppm (0.1% wt)	6/18/2012
79	Diboron trioxide	215-125-8	1303-86-2	1000 ppm (0.1% wt)	6/18/2012
80	Formamide	200-842-0	75-12-7	1000 ppm (0.1% wt)	6/18/2012
81	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2	1000 ppm (0.1% wt)	6/18/2012
82	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1	1000 ppm (0.1% wt)	6/18/2012
83	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)]	229-851-8	6786-83-0	1000 ppm (0.1% wt)	6/18/2012
84	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	1000 ppm (0.1% wt)	12/19/2012
85	1,2-Diethoxyethane	211-076-1	629-14-1	1000 ppm (0.1% wt)	12/19/2012
86	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5	1000 ppm (0.1% wt)	12/19/2012
87	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	1000 ppm (0.1% wt)	12/19/2012

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
88	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	1000 ppm (0.1% wt)	12/19/2012
89	4,4'-oxydianiline and its salts	202-977-0	101-80-4	1000 ppm (0.1% wt)	12/19/2012
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	1000 ppm (0.1% wt)	12/19/2012
91	4-Aminoazobenzene	200-453-6	60-09-3	1000 ppm (0.1% wt)	12/19/2012
92	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7	1000 ppm (0.1% wt)	12/19/2012
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]	-	-	1000 ppm (0.1% wt)	12/19/2012
94	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	1000 ppm (0.1% wt)	12/19/2012
95	[Phthalato(2-)]dioxotrilead	273-688-5	69011-06-9	1000 ppm (0.1% wt)	12/19/2012
96	Acetic acid, lead salt, basic	257-175-3	51404-69-4	1000 ppm (0.1% wt)	12/19/2012
97	Biphenyl-4-ylamine	202-177-1	92-67-1	1000 ppm (0.1% wt)	12/19/2012
98	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	214-604-9	1163-19-5	1000 ppm (0.1% wt)	12/19/2012
99	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]	201-604-9 236-086-3 238-009-9	85-42-7 13149-00-3 14166-21-3	1000 ppm (0.1% wt)	12/19/2012
100	Diazene-1,2-dicarboxamide (C,C`-azodi(formamide)) (ADCA)	204-650-8	123-77-3	1000 ppm (0.1% wt)	12/19/2012
101	Dibutyltin dichloride (DBTC)	211-670-0	683-18-1	1000 ppm (0.1% wt)	12/19/2012
102	Diethyl sulphate	200-589-6	64-67-5	1000 ppm (0.1% wt)	12/19/2012
103	Diisopentylphthalate	210-088-4	605-50-5	1000 ppm (0.1% wt)	12/19/2012
104	Dimethyl sulphate	201-058-1	77-78-1	1000 ppm (0.1% wt)	12/19/2012
105	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	201-861-7	88-85-7	1000 ppm (0.1% wt)	12/19/2012
106	Dioxobis(stearato)trilead	235-702-8	12578-12-0	1000 ppm (0.1% wt)	12/19/2012
107	Fatty acids, C16-18, lead salts	292-966-7	91031-62-8	1000 ppm (0.1% wt)	12/19/2012

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
108	Furan	203-727-3	110-00-9	1000 ppm (0.1% wt)	12/19/2012
109	Henicosafluoroundecanoic acid	218-165-4	2058-94-8	1000 ppm (0.1% wt)	12/19/2012
110	Heptacosafluorotetradecanoic acid	206-803-4	376-06-7	1000 ppm (0.1% wt)	12/19/2012
111	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]	247-094-1 243-072-0 256-356-4 260-566-1	25550-51-0 19438-60-9 48122-14-1 57110-29-9	1000 ppm (0.1% wt)	12/19/2012
112	Lead bis(tetrafluoroborate)	237-486-0	13814-96-5	1000 ppm (0.1% wt)	12/19/2012
113	Lead cyanamidate	244-073-9	20837-86-9	1000 ppm (0.1% wt)	12/19/2012
114	Lead dinitrate	233-245-9	10099-74-8	1000 ppm (0.1% wt)	12/19/2012
115	Lead monoxide (lead oxide)	215-267-0	1317-36-8	1000 ppm (0.1% wt)	12/19/2012
116	Lead oxide sulfate	234-853-7	12036-76-9	1000 ppm (0.1% wt)	12/19/2012
117	Lead titanium trioxide	235-038-9	12060-00-3	1000 ppm (0.1% wt)	12/19/2012
118	Lead titanium zirconium oxide	235-727-4	12626-81-2	1000 ppm (0.1% wt)	12/19/2012
119	Methoxyacetic acid	210-894-6	625-45-6	1000 ppm (0.1% wt)	12/19/2012
120	Methyloxirane (Propylene oxide)	200-879-2	75-56-9	1000 ppm (0.1% wt)	12/19/2012
121	N,N-dimethylformamide	200-679-5	68-12-2	1000 ppm (0.1% wt)	12/19/2012
122	N-methylacetamide	201-182-6	79-16-3	1000 ppm (0.1% wt)	12/19/2012
123	N-pentyl-isopentylphthalate		776297-69-9	1000 ppm (0.1% wt)	12/19/2012
124	o-aminoazotoluene	202-591-2	97-56-3	1000 ppm (0.1% wt)	12/19/2012
125	o-Toluidine	202-429-0	95-53-4	1000 ppm (0.1% wt)	12/19/2012
126	Orange lead (lead tetroxide)	215-235-6	1314-41-6	1000 ppm (0.1% wt)	12/19/2012
127	Pentacosafluorotridecanoic acid	276-745-2	72629-94-8	1000 ppm (0.1% wt)	12/19/2012
128	Pentalead tetraoxide sulphate	235-067-7	12065-90-6	1000 ppm (0.1% wt)	12/19/2012
129	Pyrochlore, antimony lead yellow	232-382-1	8012-00-8	1000 ppm (0.1% wt)	12/19/2012
130	Silicic acid (H2Si2O5), 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	272-271-5	68784-75-8	1000 ppm (0.1% wt)	12/19/2012

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
	number 082-001-00-6 in Regulation (EC) No 1272/2008]				
131	Silicic acid, lead salt	234-363-3	11120-22-2	1000 ppm (0.1% wt)	12/19/2012
132	Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7	1000 ppm (0.1% wt)	12/19/2012
133	Tetraethyllead	201-075-4	78-00-2	1000 ppm (0.1% wt)	12/19/2012
134	Tetralead trioxide sulphate	235-380-9	12202-17-4	1000 ppm (0.1% wt)	12/19/2012
135	Tricosafluorododecanoic acid	206-203-2	307-55-1	1000 ppm (0.1% wt)	12/19/2012
136	Trilead bis(carbonate) dihydroxide	215-290-6	1319-46-6	1000 ppm (0.1% wt)	12/19/2012
137	Trilead dioxide phosphonate	235-252-2	12141-20-7	1000 ppm (0.1% wt)	12/19/2012
138	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]	-	-	1000 ppm (0.1% wt)	6/20/2013
139	Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1	1000 ppm (0.1% wt)	6/20/2013
140	Cadmium	231-152-8	7440-43-9	1000 ppm (0.1% wt)	6/20/2013
141	Cadmium oxide	215-146-2	1306-19-0	1000 ppm (0.1% wt)	6/20/2013
142	Dipentyl phthalate (DPP)	205-017-9	131-18-0	1000 ppm (0.1% wt)	6/20/2013
143	Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1	1000 ppm (0.1% wt)	6/20/2013
144	Cadmium sulphide	215-147-8	1306-23-6	1000 ppm (0.1% wt)	12/16/2013
145	Dihexyl phthalate	201-559-5	84-75-3	1000 ppm (0.1% wt)	12/16/2013
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	209-358-4	573-58-0	1000 ppm (0.1% wt)	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)	217-710-3	1937-37-7	1000 ppm (0.1% wt)	12/16/2013
148	Imidazolidine-2-thione (2-imidazoline-2-thiol)	202-506-9	96-45-7	1000 ppm (0.1% wt)	12/16/2013
149	Lead di(acetate)	206-104-4	301-04-2	1000 ppm (0.1% wt)	12/16/2013
150	Trixylyl phosphate	246-677-8	25155-23-1	1000 ppm (0.1% wt)	12/16/2013

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
151	1,2-Benzenedicarboxylic acid, dihexylester, branched and linear	271-093-5	68515-50-4	1000 ppm (0.1% wt)	6/16/2014
152	Cadmium chloride	233-296-7	10108-64-2	1000 ppm (0.1% wt)	6/16/2014
153	Sodium perborate,perboric acid, sodium salt	239-172-9 234-390-0	-	1000 ppm (0.1% wt)	6/16/2014
154	Sodium peroxometaborate	231-556-4	7632-04-4	1000 ppm (0.1% wt)	6/16/2014
155	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	1000 ppm (0.1% wt)	12/17/2014
156	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	1000 ppm (0.1% wt)	12/17/2014
157	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	1000 ppm (0.1% wt)	12/17/2014
158	Cadmium fluoride	232-222-0	7790-79-6	1000 ppm (0.1% wt)	12/17/2014
159	Cadmium sulphate	233-331-6	10124-36-4 31119-53-6	1000 ppm (0.1% wt)	12/17/2014
160	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)	-	-	1000 ppm (0.1% wt)	12/17/2014
161	Bis (2-ethylhexyl)phthalate (DEHP)	204-211-0	117-81-7	1000 ppm (0.1% wt)	12/17/2014
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)	271-094-0 272-013-1	68515-51-5 68648-93-1	1000 ppm (0.1% wt)	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 stereoisomers of [1] and [2] or any combination thereof]	-	-	1000 ppm (0.1% wt)	6/15/2015
164	1,3-propanesultone	214-317-9	1120-71-4	1000 ppm (0.1% wt)	12/17/2015
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	223-383-8	3864-99-1	1000 ppm (0.1% wt)	12/17/2015
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3	1000 ppm (0.1% wt)	12/17/2015

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
167	Nitrobenzene	202-716-0	98-95-3	1000 ppm (0.1% wt)	12/17/2015
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	206-801-3	375-95-1, 21049-39-8, 4149-60-4	1000 ppm (0.1% wt)	12/17/2015
169	Benzo[def]chrysene (Benzo[a]pyrene)	200-028-5	50-32-8	1000 ppm (0.1% wt)	6/20/2016
170	4,4'-isopropylidenediphenol	201-245-8	80-05-7	1000 ppm (0.1% wt)	1/12/2017
171	4-Heptylphenol, branced and linear	-	-	1000 ppm (0.1% wt)	1/12/2017
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts - Nonadecafluorodecanoic acid, Ammonium nondecafluorodecanoate, Decanoic acid, nonadecafluoro-, sodium salt	206-400-3 221-470-5 -	335-76-2 3108-42-7 3830-45-3	1000 ppm (0.1% wt)	1/12/2017
173	p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6	1000 ppm (0.1% wt)	1/12/2017
174	Perfluorohexane-1-sulphonic acid and its salts	-	-	1000 ppm (0.1% wt)	7/7/2017
175	Benz[a]anthracene	200-280-6	56-55-3, 1718-53-2	1000 ppm (0.1% wt)	1/15/2018
176	Cadmium carbonate	208-168-9	513-78-0	1000 ppm (0.1% wt)	1/15/2018
177	Cadmium hydroxide	244-168-5	21041-95-2	1000 ppm (0.1% wt)	1/15/2018
178	Cadmium nitrate	233-710-6	10022-68-1, 10325-94-7	1000 ppm (0.1% wt)	1/15/2018
179	Chrysene	205-923-4	218-01-9, 1719-03-5	1000 ppm (0.1% wt)	1/15/2018
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	-	-	1000 ppm (0.1% wt)	1/15/2018
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)	-	-	1000 ppm (0.1% wt)	1/15/2018
182	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride trimellitic anhydride; TMA	209-008-0	552-30-7	1000 ppm (0.1% wt)	6/27/2018
183	Benzo[ghi]perylene	205-883-8	191-24-2	1000 ppm (0.1% wt)	6/27/2018
184	Decamethylcyclopentasiloxane	208-764-9	541-02-6	1000 ppm (0.1% wt)	6/27/2018
185	Dicyclohexyl phthalate DCHP	201-545-9	84-61-7	1000 ppm (0.1% wt)	6/27/2018

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
186	Disodium octaborate	234-541-0	12008-41-2	1000 ppm (0.1% wt)	6/27/2018
187	Dodecamethylcyclohexasiloxane	208-762-8	540-97-6	1000 ppm (0.1% wt)	6/27/2018
188	Ethylenediamine EDA	203-468-6	107-15-3	1000 ppm (0.1% wt)	6/27/2018
189	Lead	231-100-4	7439-92-1	1000 ppm (0.1% wt)	6/27/2018
190	Octamethylcyclotetrasiloxane	209-136-7	556-67-2	1000 ppm (0.1% wt)	6/27/2018
191	Terphenyl, hydrogenated	262-967-7	61788-32-7	1000 ppm (0.1% wt)	6/27/2018
192	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	239-139-9	15087-24-8	1000 ppm (0.1% wt)	1/15/2019
193	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	401-720-1	6807-17-6	1000 ppm (0.1% wt)	1/15/2019
194	Benzo[k]fluoranthene	205-916-6	207-08-9	1000 ppm (0.1% wt)	1/15/2019
195	Fluoranthene	205-912-4	206-44-0,	1000 ppm (0.1% wt)	1/15/2019
196	Phenanthrene	201-581-5	206-44-0,	1000 ppm (0.1% wt)	1/15/2019
197	Pyrene	204-927-3	129-00-0, 1718-52-1	1000 ppm (0.1% wt)	1/15/2019
198	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-	-	1000 ppm (0.1% wt)	7/16/2019
199	4-tert-butylphenol	202-679-0	98-54-4	1000 ppm (0.1% wt)	7/16/2019
200	2-methoxyethyl acetate	203-772-9	110-49-6	1000 ppm (0.1% wt)	7/16/2019
201	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides	-	-	1000 ppm (0.1% wt)	7/16/2019
202	Perfluorobutane sulfonic acid (PFBS) and its salts	-	-	1000 ppm (0.1% wt)	1/16/2020
203	Diisohexyl phthalate	276-090-2	71850-09-4	1000 ppm (0.1% wt)	1/16/2020
204	2-methyl-1-(4-methylphenyl)-2-morpholinopropan-1-one	400-600-6	71868-10-5	1000 ppm (0.1% wt)	1/16/2020
205	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	404-360-3	119313-12-1	1000 ppm (0.1% wt)	1/16/2020
206	1-vinylimidazole	214-012-0	1072-63-5	1000 ppm (0.1% wt)	6/26/2020
207	2-methylimidazole	211-765-7	693-98-1	1000 ppm (0.1% wt)	6/26/2020
208	Butyl 4-hydroxybenzoate	202-318-7	94-26-8	1000 ppm (0.1% wt)	6/26/2020
209	Dibutylbis(pentane-2,4-dionato-O,O')tin	245-152-0	22673-19-4	1000 ppm (0.1% wt)	6/26/2020
210	Bis(2-(2-methoxyethoxy)ethyl)ether	205-594-7	143-24-8	1000 ppm (0.1% wt)	1/19/2021
211	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs.,	-	-	1000 ppm (0.1% wt)	1/19/2021

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
	and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety				
212	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-	-	1000 ppm (0.1% wt)	7/8/2021
213	Orthoboric acid, sodium salt	237-560-2	13840-56-7	1000 ppm (0.1% wt)	7/8/2021
214	2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	221-967-7, 253-057-0, 202-480-9	3296-90-0, 36483-57-5, 1522-92-5, 96-13-9	1000 ppm (0.1% wt)	7/8/2021
215	Glutaral	203-856-5	111-30-8	1000 ppm (0.1% wt)	7/8/2021
216	Medium chain chlorinated paraffins (MCCP) (UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17)	-	-	1000 ppm (0.1% wt)	7/8/2021
217	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	-	-	1000 ppm (0.1% wt)	7/8/2021
218	1,4-dioxane	204-661-8	123-91-1	1000 ppm (0.1% wt)	7/8/2021
219	4,4'-(1-methylpropylidene)bisphenol	201-025-1	77-40-7	1000 ppm (0.1% wt)	7/8/2021
220	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	204-327-1	119-47-1	1000 ppm (0.1% wt)	1/17/2022
221	tris(2-methoxyethoxy)vinylsilane	213-934-0	1067-53-4	1000 ppm (0.1% wt)	1/17/2022
222	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	-	-	1000 ppm (0.1% wt)	1/17/2022
223	S-(tricyclo(5.2.1.02,6)deca-3-en-8(or 9)-y l O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	401-850-9	255881-94-8	1000 ppm (0.1% wt)	1/17/2022

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
224	N-(hydroxymethyl)acrylamide	213-103-2	924-42-5	1000 ppm (0.1% wt)	6/10/2022
225	1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene]	253-692-3	37853-59-1	1000 ppm (0.1% wt)	1/17/2023
226	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol	201-236-9	79-94-7	1000 ppm (0.1% wt)	1/17/2023
227	4,4'-sulphonyldiphenol	201-250-5	80-90-1	1000 ppm (0.1% wt)	1/17/2023
228	Barium diboron tetraoxide	237-222-4	13701-59-2	1000 ppm (0.1% wt)	1/17/2023
229	Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	-	-	1000 ppm (0.1% wt)	1/17/2023
230	Isobutyl 4-hydroxybenzoate	224-208-8	4247-02-3	1000 ppm (0.1% wt)	1/17/2023
231	Melamine	203-615-4	108-78-1	1000 ppm (0.1% wt)	1/17/2023
232	Perfluoroheptanoic acid and its salts	-	-	1000 ppm (0.1% wt)	1/17/2023
233	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	473-390-7	-	1000 ppm (0.1% wt)	1/17/2023
234	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	278-355-8	75980-60-8	1000 ppm (0.1% wt)	6/14/2023
235	Bis(4-chlorophenyl) sulphone	201-247-9	80-07-9	1000 ppm (0.1% wt)	6/14/2023
236	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	700-960-7	-	1000 ppm (0.1% wt)	1/23/24
237	Bumetrizole (UV-326)	223-445-4	3896-11-5	1000 ppm (0.1% wt)	1/23/24
238	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	438-340-0	119344-86-4	1000 ppm (0.1% wt)	1/23/24
239	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)	221-573-5	3147-75-9	1000 ppm (0.1% wt)	1/23/24
240	2,4,6-tri-tert-butylphenol	211-989-5	732-26-3	1000 ppm (0.1% wt)	1/23/24
241	Bis(α,α-dimethylbenzyl) peroxide	201-279-3	80-43-3	1000 ppm (0.1% wt)	6/27/24
242	Triphenyl Phosphate	204-112-2	115-86-6	1000 ppm (0.1% wt)	11/7/24
243	6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid	701-118-1	2156592-54-8	1000 ppm (0.1% wt)	1/21/25
244	O,O,O-triphenyl phosphorothioate	209-909-9	597-82-0	1000 ppm (0.1% wt)	1/21/25
245	Octamethyltrisiloxane	203-497-4	107-51-7	1000 ppm (0.1% wt)	1/21/25
246	Perfluamine	206-420-2	338-83-0	1000 ppm (0.1% wt)	1/21/25

Item	Restricted Substance	EC No	CAS No	MCV Threshold	Effective Date
247	Reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	421-820-9	192268-65-8	1000 ppm (0.1% wt)	1/21/25

Signature:

Date: 2/27/2025

George Kong, Director of Quality