



Advanced Power Electronics Corp.

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Certificate of Compliance for REACH

The company has been noted that European Chemicals Agency (ECHA) has published the Substances of Very High Concern (SVHC) for the authorization process according to REACH directive on 27/06/2018.

We declare and warrant that all of the finished products which provide to customer, compliance Europe ECHA Regulation to notification of candidate list substances in articles and communication of information down the supply chain.

Items	Name	EC Number	CAS Number	Date of inclusion
1	4,4'- Diaminodiphenylmethane (MDA)	202-974-4	101-77-9	2008/10/28
2	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	201-329-4	81-15-2	2008/10/28
3	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-84-8	2008/10/28
4	Anthracene	204-371-1	120-12-7	2008/10/28
5	Benzyl butyl phthalate (BBP)	201-622-7	85-68-7	2008/10/28
6	Bis(tributyltin) oxide (TBTO)	200-268-0	56-35-9	2008/10/28
7	Diarsenic pentaoxide	215-116-9	1303-28-2	2008/10/28
8	Diarsenic trioxide	215-481-4	1327-53-3	2008/10/28
9	Dibutyl phthalate (DBP)	201-557-4	84-74-2	2008/10/28
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	2008/10/28
11	Lead hydrogen arsenate	232-064-2	7784-40-9	2008/10/28
12	Sodium dichromate	234-190-3	7789-12-0 10588-01-9	2008/10/28
13	Triethyl arsenate	427-700-2	15606-95-8	2008/10/28
14	Cobalt dichloride	231-589-4	7646-79-9	2011/06/20 2008/10/28
15	Bis (2-ethylhexyl)phthalate (DEHP)	204-211-0	117-81-7	2014/12/17 2008/10/28
16	2,4-Dinitrotoluene	204-450-0	121-14-2	2010/1/13
17	Anthracene oil	292-602-7	90640-80-5	2010/1/13
18	Anthracene oil, anthracene paste	292-603-2	90640-81-6	2010/1/13
19	Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2	2010/1/13
20	Anthracene oil, anthracene paste, distn. lights	295-278-5	91995-17-4	2010/1/13
21	Anthracene oil, anthracene-low	292-604-8	90640-82-7	2010/1/13
22	Diisobutyl phthalate	201-553-2	84-69-5	2010/1/13
23	Lead chromate	231-846-0	7758-97-6	2010/1/13
24	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8	2010/1/13
25	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2	2010/1/13
26	Pitch, coal tar, high temp.	266-028-2	65996-93-2	2010/1/13
27	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	2010/1/13
28	Acrylamide	201-173-7	79-06-1	2010/3/30
29	Ammonium dichromate	232-143-1	7789-09-5	2010/6/18

30	Boric acid	233-139-2 234-343-4	10043-35-3 11113-50-1	2010/6/18
31	Disodium tetraborate, anhydrous	215-540-4	1303-96-4 1330-43-4 12179-04-3	2010/6/18
32	Potassium chromate	232-140-5	7789-00-6	2010/6/18
33	Potassium dichromate	231-906-6	7778-50-9	2010/6/18
34	Sodium chromate	231-889-5	7775-11-3	2010/6/18
35	Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1	2010/6/18
36	Trichloroethylene	201-167-4	79-01-6	2010/6/18
37	2-Ethoxyethanol	203-804-1	110-80-5	2010/12/15
38	2-Methoxyethanol	203-713-7	109-86-4	2010/12/15
39	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	2010/12/15
40	Chromium trioxide	215-607-8	1333-82-0	2010/12/15
41	Cobalt(II) carbonate	208-169-4	513-79-1	2010/12/15
42	Cobalt(II) diacetate	200-755-8	71-48-7	2010/12/15
43	Cobalt(II) dinitrate	233-402-1	10141-05-6	2010/12/15
44	Cobalt(II) sulphate	233-334-2	10124-43-3	2010/12/15
45	1,2,3-trichloropropane	202-486-1	96-18-4	2011/6/20
46	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1	71888-89-6	2011/6/20
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6	68515-42-4	2011/6/20
48	1-Methyl-2-pyrrolidone (NMP)	212-828-1	872-50-4	2011/6/20
49	2-Ethoxyethyl acetate	203-839-2	111-15-9	2011/6/20
50	Hydrazine	206-114-9	302-01-2 7803-57-8	2011/6/20
51	Strontium chromate	232-142-6	7789-06-2	2011/6/20
52	1,2-Dichloroethane	203-458-1	107-06-2	2011/12/19
53	2,2'-dichloro-4,4'-methylenedianiline	202-918-9	101-14-4	2011/12/19
54	2-Methoxyaniline,o-Anisidine	201-963-1	90-04-0	2011/12/19
55	4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	2011/12/19
56	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	2011/12/19
57	Arsenic acid	231-901-9	7778-39-4	2011/12/19
58	Bis(2-methoxyethyl) ether	203-924-4	111-96-6	2011/12/19
59	Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	2011/12/19

60	Calcium arsenate	231-904-5	7778-44-1	2011/12/19
61	Dichromium tris(chromate)	246-356-2	24613-89-6	2011/12/19
62	Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4	2011/12/19
63	Lead diazide, Lead azide	236-542-1	13424-46-9	2011/12/19
64	Lead dipicrate	229-335-2	6477-64-1	2011/12/19
65	Lead styphnate	239-290-0	15245-44-0	2011/12/19
66	N,N-dimethylacetamide	204-826-4	127-19-5	2011/12/19
67	Pentazinc chromate octahydroxide	256-418-0	49663-84-5	2011/12/19
68	Phenolphthalein	201-004-7	77-09-8	2011/12/19
69	Potassium hydroxyoctaoxodizincatedichromate	234-329-8	11103-86-9	2011/12/19
70	Trilead diarsenate	222-979-5	3687-31-8	2011/12/19
71	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight	-	-	2011/12/19
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME, triglyme)	203-977-3	112-49-2	2012/6/18
73	1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	2012/6/18
74	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	219-514-3	2451-62-9	2012/6/18
75	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	2012/6/18
76	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	2012/6/18
77	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	202-027-5	90-94-8	2012/6/18
78	[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	2012/6/18
79	[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	2012/6/18
80	Diboron trioxide	215-125-8	1303-86-2	2012/6/18
81	Formamide	200-842-0	75-12-7	2012/6/18
82	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2	2012/6/18
83	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1	2012/6/18

84	α,α -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)]	229-851-8	6786-83-0	2012/6/18
85	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	2012/12/19
86	1,2-Diethoxyethane	211-076-1	629-14-1	2012/12/19
87	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5	2012/12/19
88	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	2012/12/19
89	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	2012/12/19
90	4,4'-oxydianiline and its salts	202-977-0	101-80-4	2012/12/19
91	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	2012/12/19
92	4-Aminoazobenzene	200-453-6	60-09-3	2012/12/19
93	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7	2012/12/19
94	4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-	2012/12/19
95	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	2012/12/19
96	[Phthalato(2-)]dioxotrilead	273-688-5	69011-06-9	2012/12/19
97	Acetic acid, lead salt, basic	257-175-3	51404-69-4	2012/12/19
98	Biphenyl-4-ylamine	202-177-1	92-67-1	2012/12/19
99	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	214-604-9	1163-19-5	2012/12/19
100	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	2012/12/19
101	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)	204-650-8	123-77-3	2012/12/19
102	Dibutyltin dichloride (DBTC)	211-670-0	683-18-1	2012/12/19
103	Diethyl sulphate	200-589-6	64-67-5	2012/12/19
104	Diisopentylphthalate	210-088-4	605-50-5	2012/12/19
105	Dimethyl sulphate	201-058-1	77-78-1	2012/12/19
106	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	201-861-7	88-85-7	2012/12/19
107	Dioxobis(stearato)trilead	235-702-8	12578-12-0	2012/12/19
108	Fatty acids, C16-18, lead salts	292-966-7	91031-62-8	2012/12/19
109	Furan	203-727-3	110-00-9	2012/12/19
110	Henicosafuoroundecanoic acid	218-165-4	2058-94-8	2012/12/19
111	Heptacosafuorotetradecanoic acid	206-803-4	376-06-7	2012/12/19

112	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	2012/12/19
113	Lead bis(tetrafluoroborate)	237-486-0	13814-96-5	2012/12/19
114	Lead cyanamidate	244-073-9	20837-86-9	2012/12/19
115	Lead dinitrate	233-245-9	10099-74-8	2012/12/19
116	Lead monoxide (lead oxide)	215-267-0	1317-36-8	2012/12/19
117	Lead oxide sulfate	234-853-7	12036-76-9	2012/12/19
118	Lead titanium trioxide	235-038-9	12060-00-3	2012/12/19
119	Lead titanium zirconium oxide	235-727-4	12626-81-2	2012/12/19
120	Methoxyacetic acid	210-894-6	625-45-6	2012/12/19
121	Methyloxirane (Propylene oxide)	200-879-2	75-56-9	2012/12/19
122	N,N-dimethylformamide	200-679-5	68-12-2	2012/12/19
123	N-methylacetamide	201-182-6	79-16-3	2012/12/19
124	N-pentyl-isopentylphthalate	-	776297-69-9	2012/12/19
125	o-aminoazotoluene	202-591-2	97-56-3	2012/12/19
126	o-Toluidine	202-429-0	95-53-4	2012/12/19
127	Orange lead (lead tetroxide)	215-235-6	1314-41-6	2012/12/19
128	Pentacosafuorotridecanoic acid	276-745-2	72629-94-8	2012/12/19
129	Pentalead tetraoxide sulphate	235-067-7	12065-90-6	2012/12/19
130	Pyrochlore, antimony lead yellow	232-382-1	8012-00-8	2012/12/19
131	Silicic acid (H ₂ Si ₂ O ₅), 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 082-001-00-6 in Regulation (EC) No 1272/2008]	272-271-5	68784-75-8	2012/12/19
132	Silicic acid, lead salt	234-363-3	11120-22-2	2012/12/19
133	Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7	2012/12/19
134	Tetraethyllead	201-075-4	78-00-2	2012/12/19
135	Tetralead trioxide sulphate	235-380-9	12202-17-4	2012/12/19
136	Tricosafuorododecanoic acid	206-203-2	307-55-1	2012/12/19
137	Trilead bis(carbonate) dihydroxide	215-290-6	1319-46-6	2012/12/19
138	Trilead dioxide phosphonate	235-252-2	12141-20-7	2012/12/19
139	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]	-	-	2013/6/20
140	Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1	2013/6/20
141	Cadmium	231-152-8	7440-43-9	2013/6/20
142	Cadmium oxide	215-146-2	1306-19-0	2013/6/20
143	Dipentyl phthalate (DPP)	205-017-9	131-18-0	2013/6/20
144	Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1	2013/6/20

145	Cadmium sulphide	215-147-8	1306-23-6	2013/12/16
146	Dihexyl phthalate	201-559-5	84-75-3	2013/12/16
147	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	2013/12/16
148	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	2013/12/16
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	202-506-9	96-45-7	2013/12/16
150	Lead di(acetate)	206-104-4	301-04-2	2013/12/16
151	Trixylyl phosphate	246-677-8	25155-23-1	2013/12/16
152	1,2-Benzenedicarboxylic acid, dihexylester, branched and linear	271-093-5	68515-50-4	2014/6/16
153	Cadmium chloride	233-296-7	10108-64-2	2014/6/16
154	Sodium perborate, perboric acid, sodium salt	239-172-9 234-390-0	-	2014/6/16
155	Sodium peroxometaborate	231-556-4	7632-04-4	2014/6/16
156	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	2014/12/17
157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	2014/12/17
158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	2014/12/17
159	Cadmium fluoride	232-222-0	7790-79-6	2014/12/17
160	Cadmium sulphate	233-331-6	10124-36-4 31119-53-6	2014/12/17
161	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	-	2014/12/17
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559-5)	271-094-0 272-013-1	68515-51-5 68648-93-1	2015/6/15
163	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	-	-	2015/6/15
164	Nitrobenzene	202-716-0	98-95-3	2015/12/17
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	223-383-8	3864-99-1	2015/12/17
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3	2015/12/17
167	1,3-propanesultone	214-317-9	1120-71-4	2015/12/17
168	Perfluorononan-1-oiic-acid and its sodium and ammonium salts	206-801-3	375-95-1 21049-39-8	2015/12/17
169	Benzo[def]chrysene	200-028-5	50-32-8	2016/6/20
170	p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6	12/01/2017

171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts Nonadecafluorodecanoic acid EC no.: 206-400-3 CAS no.: 335-76-2 Ammonium nonadecafluorodecanoate EC no.: 221-470-5 CAS no.: 3108-42-7 Decanoic acid, nonadecafluoro-, sodium salt EC no.: - CAS no.: 3830-45-3	-	-	12/01/2017
172	4-Heptylphenol, branched and linear (4-HPbl)	-	-	12/01/2017
173	4,4'-isopropylidenediphenol (bisphenol A)	201-245-8	80-05-7	12/01/2017
174	Perfluorohexane-1-sulphonic acid and its salts	-	-	07/07/2017
175	Chrysene	205-923-4	218-01-9	ED/01/2018
176	Benz[a]anthracene	200-280-6	56-55-3	ED/01/2018
177	Cadmium nitrate	233-710-6	10325-94-7	ED/01/2018
178	Cadmium hydroxide	244-168-5	21041-95-2	ED/01/2018
179	Cadmium carbonate	208-168-9	513-78-0	ED/01/2018
180	Dechlorane plus (TM)	-	-	ED/01/2018
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]	-	-	ED/01/2018
182	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride; TMA)	209-008-0	552-30-7	27/06/2018
183	Dicyclohexyl phthalate (DCHP)	201-545-9	84-61-7	27/06/2018
184	Terphenyl, hydrogenated	262-967-7	61788-32-7	27/06/2018
185	Octamethylcyclotetrasiloxane (D4)	209-136-7	556-67-2	27/06/2018
186	Lead	231-100-4	7439-92-1	27/06/2018
187	Ethylenediamine (EDA)	203-468-6	107-15-3	27/06/2018
188	Dodecamethylcyclohexasiloxane (D6)	208-762-8	540-97-6	27/06/2018
189	Disodium octaborate	234-541-0	12008-41-2	27/06/2018
190	Decamethylcyclopentasiloxane (D5)	208-764-9	541-02-6	27/06/2018
191	Benzo[ghi]perylene	205-883-8	191-24-2	27/06/2018