

REACH Certificate of Compliance

**Registration, Evaluation, Authorization and Restriction of Chemicals
(REACH*) Legislation from the European Union (EU)**

All CAP-XX products are REACH compliant

Pre-registration and registration of substances in articles: CAP-XX does not supply any products that would be considered an article with a substance intended to be released during normal and reasonably foreseeable conditions of use. CAP-XX, therefore, does not have any plans for pre-registration.

Substances of Very High Concern (SVHC): CAP-XX supercapacitors do not contain any chemicals listed as Substances of Very High Concern in Annex XIV or the Candidate List under Article 57 of European Directive EC 1907/2006 and as amended by European Commission regulations (REACH). Please see the specific list A of SVHC on the following pages.

Restricted use substances: CAP-XX products either do not contain any of the restricted-use substances given in Annex XVII of European Directive EC 1907/2006 and as amended by Commission regulations (REACH), or meet any of the restrictions placed on them. Please see the specific list B if restricted use substances on the following pages.

If you have any questions, please contact CAP-XX at the address above or by email at sales@cap-xx.com.

Jean Pierre Mars

VP Quality and Applications

* REACH is an acronym for the Registration, Evaluation, Authorisation & Restriction of Chemicals Directive (EC 1907/2006). This legislation came into force on June 1, 2007, with the aim of protecting human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. Manufacturers and importers are required to gather information on the properties of all chemical substances in their products to ensure their safe handling, and to register the information in a central database run by the European Chemicals Agency (ECHA) in Helsinki. The Regulation also calls for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified.

A) Substances identified by REACH as being of Very High Concern (as per Annex XIV):

#	Substance Name	CAS #	SVHC Published Date
1	Anthracene	120-12-7	2008-10-28
2	4,4'- Diaminodiphenylmethane	101-77-9	2008-10-28
3	Dibutyl phthalate	84-74-2	2008-10-28
4	Cobalt dichloride	7646-79-9	2008-10-28
5	Diarsenic pentaoxide	1303-28-2	2008-10-28
6	Diarsenic trioxide	1327-53-3	2008-10-28
7	Sodium dichromate, dehydrate	10588-01-9	2008-10-28
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	2008-10-28
9	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	2008-10-28
10	Hexabromocyclododecane (HBCDD)	3194-55-6	2008-10-28
11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	2008-10-28
12	Bis(tributyltin) oxide,hexabutylstannoxane	56-35-9	2008-10-28
13	Lead hydrogen arsenate	7784-40-9	2008-10-28
14	Triethyl arsenate	15606-95-8	2008-10-28
15	Benzyl butyl phthalate	85-68-7	2008-10-28
16	2,4-Dinitrotoluene	121-14-2	2010-1-13
17	Anthracene oil	90640-80-5	2010-1-13
18	Anthracene oil, anthracene paste	90640-81-6	2010-1-13
19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	2010-1-13
20	Anthracene oil, anthracene paste,distn. lights	91995-17-4	2010-1-13
21	Anthracene oil, anthracene-low	90640-82-7	2010-1-13
22	Diisobutyl phthalate	84-69-5	2010-1-13
23	Lead chromate	7758-97-6	2010-1-13
24	Lead chromate molybdate sulphate red (C.I Pigment Red 104)	12656-85-8	2010-1-13
25	Lead sulfochromate yellow (C.I Pigment Yellow 34)	1344-37-2	2010-1-13
26	Pitch, coal tar, high temp.	65996-93-2	2010-1-13
27	Tris(2-chloroethyl)phosphate	115-96-8	2010-1-13
28	Acrylamide	79-06-1	2010-3-30
29	Trichloroethylene	79-01-6	2010-6-18
30	Boric acid	10043-35-3	2010-6-18
31	Disodium tetraborate, anhydrous	1330-43-4	2010-6-18
32	Tetraboron disodium heptaoxide, hydrate	12267-73-1	2010-6-18
33	Sodium chromate	7775-11-3	2010-6-18
34	Potassium chromate	7789-00-6	2010-6-18
35	Ammonium dichromate	7789-09-5	2010-6-18
36	Potassium dichromate	7778-50-9	2010-6-18
37	2-Ethoxyethanol	110-80-5	2010-12-15
38	2-Methoxyethanol	109-86-4	2010-12-15
39	Chromic acid	7738-94-5	2010-12-15
40	Chromium trioxide	1333-82-0	2010-12-15
41	Cobalt(II) carbonate	513-79-1	2010-12-15
42	Cobalt(II) diacetate	71-48-7	2010-12-15
43	Cobalt(II) dinitrate	10141-05-6	2010-12-15
44	Cobalt(II) sulphate	10124-43-3	2010-12-15
45	1,2,3-Trichloropropane	96-18-4	2011-6-20
46	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	2011-6-20
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	2011-6-20
48	1-Methyl-2-pyrrolidone	872-50-4	2011-6-20
49	2-Ethoxyethyl acetate	111-15-9	2011-6-20
50	Hydrazine	302-01-2 / 7803-57-8	2011-6-20
51	Strontium chromate	7789-06-2	2011-6-20
52	Dichromium tris(chromate)	24613-89-6	2011-12-19
53	Potassium hydroxyoctaoxodizincatedi-chromate	11103-86-9	2011-12-19
54	Pentazinc chromate octahydroxide	49663-84-5	2011-12-19
55	Aluminosilicate Refractory Ceramic Fibres (RCF)	-	2011-12-19
56	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)	-	2011-12-19
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	2011-12-19
58	Bis(2-methoxyethyl) phthalate	117-82-8	2011-12-19
59	2-Methoxyaniline; o-Anisidine	90-04-0	2011-12-19
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	2011-12-19
61	1,2-Dichloroethane	107-06-2	2011-12-19
62	Bis(2-methoxyethyl) ether	111-96-6	2011-12-19
63	Arsenic acid	7778-39-4	2011-12-19
64	Calcium arsenate	7778-44-1	2011-12-19
65	Trilead diarsenate	3687-31-8	2011-12-19
66	N,N-dimethylacetamide (DMAC)	127-19-5	2011-12-19
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	2011-12-19
68	Phenolphthalein	77-09-8	2011-12-19
69	Lead azide Lead diazide	13424-46-9	2011-12-19
70	Lead styphnate	15245-44-0	2011-12-19
71	Lead dipicrate	6477-64-1	2011-12-19
72	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)]	6786-83-0	2012-6-18

73	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	2012-6-18
74	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	2012-6-18
75	Diboron trioxide	1303-86-2	2012-6-18
76	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	2012-6-18
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	2012-6-18
78	Lead(II) bis(methanesulfonate)	17570-76-2	2012-6-18
79	Formamide	75-12-7	2012-6-18
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	2012-6-18
81	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	2012-6-18
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	2012-6-18
83	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	2012-6-18
84	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	2012-6-18
85	Pyrochlore, antimony lead yellow	8012-00-8	2012-12-19
86	6-methoxy-m-toluidine (p-cresidine)	120-71-8	2012-12-19
87	Henicosaflluoroundecanoic acid	2058-94-8	2012-12-19
88	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4]	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	2012-12-19
89	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3]	85-42-7, 13149-00-3, 14166-21-3	2012-12-19
90	Dibutyltin dichloride (DBTC)	683-18-1	2012-12-19
91	Lead bis(tetrafluoroborate)	13814-96-5	2012-12-19
92	Lead dinitrate	10099-74-8	2012-12-19
93	Silicic acid, lead salt	11120-22-2	2012-12-19
94	4-Aminoazobenzene	60-09-3	2012-12-19
95	Lead titanium zirconium oxide	12626-81-2	2012-12-19
96	Lead monoxide (lead oxide)	1317-36-8	2012-12-19
97	o-Toluidine	95-53-4	2012-12-19
98	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	2012-12-19
99	Silicic acid (H ₂ SiO ₅), barium salt (1:1), lead-doped	68784-75-8	2012-12-19
100	Trilead bis(carbonate)dihydroxide	1319-46-6	2012-12-19
101	Furan	110-00-9	2012-12-19
102	N,N-dimethylformamide	68-12-2	2012-12-19
103	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	2012-12-19
104	4-Nonylphenol, branched and linear	-	2012-12-19
105	4,4'-methylenedio-toluidine	838-88-0	2012-12-19
106	Diethyl sulphate	64-67-5	2012-12-19
107	Dimethyl sulphate	77-78-1	2012-12-19
108	Lead oxide sulfate	12036-76-9	2012-12-19
109	Lead titanium trioxide	12060-00-3	2012-12-19
110	Acetic acid, lead salt, basic	51404-69-4	2012-12-19
111	[Phthalato(2-)]dioxotrilead	69011-06-9	2012-12-19
112	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	2012-12-19
113	N-methylacetamide	79-16-3	2012-12-19
114	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	2012-12-19
115	1,2-Diethoxyethane	629-14-1	2012-12-19
116	Tetralead trioxide sulphate	12202-17-4	2012-12-19
117	N-pentyl-isopentylphthalate	776297-69-9	2012-12-19
118	Dioxobis(stearato)trilead	12578-12-0	2012-12-19
119	Tetraethyllead	78-00-2	2012-12-19
120	Pentalead tetraoxide sulphate	12065-90-6	2012-12-19
121	Pentacosaflluorotridecanoic acid	72629-94-8	2012-12-19
122	Tricosaflluorododecanoic acid	307-55-1	2012-12-19
123	Heptacosaflluorotetradecanoic acid	376-06-7	2012-12-19
124	1-bromopropane (n-propyl bromide)	106-94-5	2012-12-19
125	Methoxyacetic acid	625-45-6	2012-12-19
126	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	2012-12-19
127	Methyloxirane (Propylene oxide)	75-56-9	2012-12-19
128	Trilead dioxide phosphonate	12141-20-7	2012-12-19
129	o-aminoazotoluene	97-56-3	2012-12-19
130	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	2012-12-19
131	4,4'-oxydianiline and its salts	101-80-4	2012-12-19
132	Orange lead (lead tetroxide)	1314-41-6	2012-12-19
133	Biphenyl-4-ylamine	92-67-1	2012-12-19
134	Diisopentylphthalate	605-50-5	2012-12-19
135	Fatty acids, C16-18, lead salts	91031-62-8	2012-12-19
136	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	2012-12-19
137	Sulfurous acid, lead salt, dibasic	62229-08-7	2012-12-19
138	Lead cyanamidate	20837-86-9	2012-12-19

B) Substances recommended by REACH to have restrictions on use (as per Annex XVII):

#	Name	CAS Number
1	Polychlorinated terphenyls (PCTs)	All
2	Chloro-1-ethylene (monomer vinyl chloride)	75-01-4
3	Liquid substances or mixtures, which are regarded as dangerous according to the definitions in Directive 67/548/EEC and Directive 1999/45/EC.	n/a
4	Tris (2,3 dibromopropyl)phosphate	126-72-7
5	Benzene	71-43-2
6	Asbestos fibres	12001-28-4, 12172-73-5, 77536-67-5, 77536-66-4, 77536-68-6, 12001-29-5, 132207-32-0
7	Tris(aziridinyl)phosphin oxide	545-55-1
8	Polybromobiphenyls & Polybrominatedbiphenyls (PBB)	59536-65-1
9	Soap bark powder & derivatives	68990-67-0 and including: 92-87-5, 552-89-6
10	Ammonium sulphides	12135-76-1, 12124-99-1, 9080-17-5
11	Volatile esters of bromoacetic acids	96-32-2, 105-36-2, 35223-80-4, 18991-98-5
12	2-Naphthylamine	91-59-8
13	Benzadine	92-87-5
14	4-Nitrobiphenyl	92-93-3
15	4-Aminobiphenyl xenylamine	92-67-1
16	Lead carbonates	598-63-0, 1319-46-6
17	Lead sulphates	7446-14-2, 15739-80-7
18	Mercury compounds (including entry 18a)	All, including 7439-97-6
19	Arsenic compounds	All
20	Organostannic compounds	All
21	Di- μ -oxo-di-n-butylstanniohydroxyborane/Dibutyltin hydrogen borate C 8 H 19 BO 3 Sn (DBB)	75113-37-0
22	Pentachlorophenol	87-86-5
23	Cadmium	7440-43-9
27	Nickel	7440-02-0
28	Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as carcinogen category 1A or 1B (Table 3.1) or carcinogen category 1 or 2 (Table 3.2)	n/a
29	Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as germ cell mutagen category 1A or 1B (Table 3.1) or mutagen category 1 or 2 (Table 3.2)	n/a
30	Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as toxic to reproduction category 1A or 1B (Table 3.1) or toxic to reproduction category 1 or 2 (Table 3.2)	n/a
31	Creasotes, tars & distillates	8001-58-9, 61789-28-4, 84650-04-4, 90640-84-9, 65996-91-0, 90640-80-5, 65996-85-2, 8021-39-4, 122384-78-5
32	Chloroform	67-66-3
33	blank	
34	1,1,2-Trichloroethane	79-00-5
35	1,1,2,2-Tetrachloroethane	79-34-5
36	1,1,1,2-Tetrachloroethane	630-20-6
37	Pentachloroethane	76-01-7
38	1,1-Dichloroethane	75-35-4
39	blank	
40	Substances meeting the criteria of flammability in Directive 67/548/EEC and classified as flammable, highly flammable or extremely flammable regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	n/a
41	Hexachloroethane	67-72-1
42	Alkanes, C 10 -C 13 , chloro (shortchain chlorinated paraffins) (SCCPs)	85535-84-8
43	Azocolourants & Azodyes	All
44	Deleted by COMMISSION REGULATION (EU) No 207/2011	-
45	Diphenylether, octabromo derivative	-
46	Nonylphenols	25154-52-3
47	Chromium VI compounds	All
48	Toluene	108-88-3
49	Trichlorobenzene	120-82-1
50	Polycyclic-aromatic hydrocarbons (PAH), (BaP, BeP, BaA, CHR, BbFA, BjFA, BkFA, DBAhA)	50-32-8, 192-97-2, 56-55-3, 218-01-9, 205-99-2, 205-82-3, 207-08-9, 53-70-3
51	Phtalates (DEHP, DBP, BBP)	117-81-7, 84-74-2, 85-68-7
52	Phtalates (DINP, DIDP, DNOP)	28553-12-0, 68515-48-0, 26761-40-0, 68515-49-1, 117-84-0
53	Deleted by COMMISSION REGULATION (EU) No 207/2011	-
54	2-(2-methoxyethoxy)ethanol (DEGME)	111-77-3
55	2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5
56	Methylenediphenyl diisocyanate (MDI)	26447-40-5
57	Cyclohexane	110-82-7
58	Ammonium nitrate (AN)	6484-52-2
59	Dichloromethane	75-09-2
60	Acrylamide	79-06-1
61	Dimethylfumarate (DMF)	624-49-7
62	Phenylmercury compounds	62-38-4, 103-27-5, 13302-00-6, 13864-38-5, 26545-49-3