REACH Certificate of Compliance

Paktron is aware of REACH as a European Community regulation on chemicals. Currently Paktron supports the underlying goals of REACH, which are consistent with our own commitment to promote the responsible manufacturing, use and handling of hazardous materials and substances.

REACH (Substances of Very High Concern):

Article 57 of Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the registration, evaluation, authorization and restriction of chemicals (REACH) defines Substances of Very High Concern (SVHC). At this time member states or European Chemical Agency (ECHA) have approved a candidate list of 181 SVHC. Reach article 33 requires:

- The supplier to inform the recipient if the article (in this case capacitor) supplied contains a substance of very high concern (SVHC) above 0.1% by weight (0.1w percent or 1000ppm).
- Upon request by any consumer provide sufficient information to allow for safe use. Request must be responded to free of charge within 45 days.

Registration of Substances:

After careful review of the EU legislation, it is our current view that Paktron products are to be considered as "articles". Because the legislation requires registration of an article only if it contains a regulated substance that "is intended to be released under normal or reasonably foreseeable conditions of use", our conclusion is that Paktron products constitute non-registerable articles for their intended and anticipated use.

Correspondence with Substances of Very High Concern (SVHC):

Per the candidate list of Substances of Very High Concern (SVHC) first published June 20, 2011 (see attached table for the latest revision), Paktron has reviewed these substances and based on information obtained from our material suppliers certifies that all Paktron's products are compliant per the EU "REACH" requirements of less than 0.1% by weight for each substance.

If new SVHC candidates are published by the European Chemicals Agency (ECHA), and relevant substances are confirmed to exist in Paktron's products that exceed legislation limits, Paktron will provide an updated compliance status. The official list of SVHC candidates can be found at: **http://echa.europa.eu/candidate-list-table**

Paktron has reviewed the European Chemicals Agency substances of very high concern (listed in the appended table) and certifies that all Paktron products are compliant per the EU "REACH" requirements of less than 0.1% by weight for each substance.

SUPPLIER NAME Paktron

NAME : Zach Killoy
(Authorized Agent for Company)

SIGNATURE : _____
(Authorized Agent for Company)

REACH Candidate List of SVHC

	Substance Name	EC Number	CAS Number
1	Pyrochlore, antimony lead yellow	232-382-1	8012-00-8
2	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8
3	Henicosafluoroundecanoic acid	218-165-4	2058-94-8
4	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
5	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
6	Dibutyltin dichloride (DBTC)	211-670-0	683-18-1
7	Lead bis(tetrafluoroborate)	237-486-0	13814-96-5
8	Lead dinitrate	233-245-9	10099-74-8
9	Silicic acid, lead salt	234-363-3	11120-22-2
10	4-Aminoazobenzene	200-453-6	60-09-3
11	Lead titanium zirconium oxide	235-727-4	12626-81-2
12	Lead monoxide (lead oxide)	215-267-0	1317-36-8
13	o-Toluidine	202-429-0	95-53-4
14	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2
15	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 number 082-001-00-6 in Regulation (EC) No 1272/2008]	272-271-5	68784-75-8
16	Trilead bis(carbonate)dihydroxide	215-290-6	1319-46-6
17	Furan	203-727-3	110-00-9
18	N,N-dimethylformamide	200-679-5	68-12-2
19	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-
20	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]	-	-
21	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0
22	Diethyl sulphate	200-589-6	64-67-5
23	Dimethyl sulphate	201-058-1	77-78-1
24	Lead oxide sulfate	234-853-7	12036-76-9
25	Lead titanium trioxide	235-038-9	12060-00-3
26	Acetic acid, lead salt, basic	257-175-3	51404-69-4
27	[Phthalato(2-)]dioxotrilead	273-688-5	69011-06-9
28	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	214-604-9	1163-19-5
29	N-methylacetamide	201-182-6	79-16-3
30	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	201-861-7	88-85-7
31	1,2-Diethoxyethane	211-076-1	629-14-1
32	Tetralead trioxide sulphate	235-380-9	12202-17-4
33	N-pentyl-isopentylphthalate	-	776297-69-9
34	Dioxobis(stearato)trilead	235-702-8	12578-12-0
35	Tetraethyllead	201-075-4	78-00-2
36	Pentalead tetraoxide sulphate	235-067-7	12065-90-6
37	Pentacosafluorotridecanoic acid	276-745-2	72629-94-8
38	Tricosafluorododecanoic acid	206-203-2	307-55-1
39	Heptacosafluorotetradecanoic acid	206-803-4	376-06-7
40	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5
41	Methoxyacetic acid	210-894-6	625-45-6
42	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7
43	Methyloxirane (Propylene oxide)	200-879-2	75-56-9
44	Trilead dioxide phosphonate	235-252-2	12141-20-7
45	o-aminoazotoluene	202-591-2	97-56-3
46	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0
47	4,4'-oxydianiline and its salts	202-977-0	101-80-4
48	Orange lead (lead tetroxide)	215-235-6	1314-41-6
49	Biphenyl-4-ylamine	202-177-1	92-67-1
50	Diisopentylphthalate	210-088-4	605-50-5
51	Fatty acids, C16-18, lead salts	292-966-7	91031-62-8
52	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	204-650-8	123-77-3
53	Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7
54	Lead cyanamidate	244-073-9	20837-86-9
55	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
56	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1
57	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
58	Diboron trioxide	215-125-8	1303-86-2
59	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3	112-49-2
60	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
61	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2
62	Formamide	200-842-0	75-12-7
63	[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
64	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4
65	[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
66	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	219-514-3	2451-62-9
67	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	202-027-5	90-94-8
68	4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9
69	N,N-dimethylacetamide	204-826-4	127-19-5
70	Phenolphthalein	201-004-7	77-09-8
71	Lead diazide, Lead azide	236-542-1	13424-46-9
72	Lead dipicrate	229-335-2	6477-64-1
73	1,2-dichloroethane	203-458-1	107-06-2
74	Calcium arsenate	231-904-5	7778-44-1
75	Dichromium tris(chromate)	246-356-2	24613-89-6
76	2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0
77	Pentazinc chromate octahydroxide	256-418-0	49663-84-5
78	Arsenic acid	231-901-9	7778-39-4
79	Potassium hydroxyoctaoxodizincatedichromate	234-329-8	11103-86-9
80	Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4
81	Lead styphnate	239-290-0	15245-44-0
82	Trilead diarsenate	222-979-5	3687-31-8
83	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		
84	Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8

	Substance Name	EC Number	CAS Number
85	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		
86	Bis(2-methoxyethyl) ether	203-924-4	111-96-6
87	2,2'-dichloro-4,4'-methylenedianiline	202-918-9	101-14-4
88	Cobalt dichloride	231-589-4	7646-79-9
89	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1	71888-89-6
90	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6	68515-42-4
90	Strontium chromate	232-142-6	7789-06-2
92	1-Methyl-2-pyrrolidone	212-828-1	872-50-4
93	1,2,3-Trichloropropane	202-486-1	96-18-4
94	2-Ethoxyethyl acetate	203-839-2	111-15-9
95	Hydrazine	206-114-9	302-01-2, 7803-57-8
96	Cobalt(II) diacetate	200-755-8	71-48-7
97	Cobalt(II) sulphate	233-334-2	10124-43-3
98	2-Ethoxyethanol	203-804-1	110-80-5
99	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
100	2-Methoxyethanol	203-713-7	109-86-4
101	Chromium trioxide	215-607-8	1333-82-0
102	Cobalt(II) carbonate	208-169-4	513-79-1
103	Cobalt(II) dinitrate	233-402-1	10141-05-6
104	Trichloroethylene	201-167-4	79-01-6
105	Potassium dichromate	231-906-6	7778-50-9
106	Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1
107	Ammonium dichromate	232-143-1	7789-09-5
108	Boric acid	233-139-2, 234-343-4	10043-35-3, 11113-50-1
109	Sodium chromate	231-889-5	7775-11-3
110	Disodium tetraborate, anhydrous	215-540-4	1303-96-4, 1330-43-4, 12179-04-3
111	Potassium chromate	232-140-5	7789-00-6
112	Acrylamide	201-173-7	79-06-1
113	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2
114	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8
115	Anthracene oil	292-602-7	90640-80-5
116	2,4-Dinitrotoluene	204-450-0	121-14-2
117	Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2
118	Anthracene oil, anthracene-low	292-604-8	90640-82-7
119	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8
120	Diisobutyl phthalate (DIBP)	201-553-2	84-69-5
121	Lead chromate	231-846-0	7758-97-6
122	Anthracene oil, anthracene paste	292-603-2	90640-81-6
123	Pitch, coal tar, high temp.	266-028-2	65996-93-2
124	Anthracene oil, anthracene paste,distn. lights	295-278-5	91995-17-4
125	Lead hydrogen arsenate	232-064-2	7784-40-9
126	Benzyl butyl phthalate (BBP)	201-622-7	85-68-7
127	Bis (2-ethylhexyl) phthalate (DEHP)	204-211-0	117-81-7
128	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	81-15-2
129	Diarsenic trioxide	215-481-4	1327-53-3
130	Bis(tributyltin)oxide (TBTO)	200-268-0	56-35-9
131	Triethyl arsenate	427-700-2	15606-95-8
132	Diarsenic pentaoxide	215-116-9	1303-28-2
133	Sodium dichromate	234-190-3	7789-12-0, 10588-01-9
134	Dibutyl phthalate (DBP)	201-557-4	84-74-2
135	4,4'- Diaminodiphenylmethane (MDA)	202-974-4	101-77-9
136	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-84-8
137	Anthracene	204-371-1	120-12-7
138	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	247-148-4 and 221-695-9	25637-99-4, 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)
139	Cadmium	231-152-8	7440-43-9
140	Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1
141	Pentadecafluorooctanoic acid(PFOA)	206-397-9	335-67-1
142	Dipentyl phthalate (DPP)	205-017-9	131-18-0
143	4-Nonylphenol		
144	Cadmium oxide	215-146-2	1306-19-0
145	Cadmium sulphide	215-147-8	1306-23-6
146	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
147	Dihexyl phthalate	201-559-5	84-75-3
148	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	202-506-9	96-45-7
149	Trixylyl phosphate	246-677-8	25155-23-1
150	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
151	Lead di(acetate)	206-104-4	301-04-2
152	Cadmium Chloride	233-296-7	10108-64-2
153	Sodium peroxometaborate	231-556-4	7632-04-4
154	Sodium perborate; perboric acid, sodium salt	239-172-9 & 234-390-0	
155	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4
156	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7
157	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1
158	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)		
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1
160	Cadmium fluoride	232-222-0	7790-79-6
161	Cadmium sulphate	233-331-6	10124-36-4, 31119-53-6
162	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
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]		
164	1,3-propanesultone	214-317-9	1120-71-4
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	223-383-8	3864-99-1
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3
167	Nitrobenzene	202-716-0	98-95-3
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	206-801-3	375-95-1, 21049-39-8, 4149-60-4
169	Benzo[def]chrysene	200-028-5	50-32-8

	Substance Name	EC Number	CAS Number
170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	201-245-8	80-05-7
171	4-heptylphenol, branched and linear		
172	nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts: Nonadecafluorodecanoic acid; Ammonium nonadecafluorodecanoate; Decanoic acid, nonadecadecafluoro-, sodium salt	206-400-3 & 221-470-5	335-76-2, 3108-42-7, 3830-45-3
173	p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6
174	Perfluorohexane-1-sulfonic acid and its salts (PFHxS)	-	-
175	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	-	-
176	Chrysene	205-923-4	218-01-9; 1719-03-5
177	Cadmium nitrate	233-710-6	10022-68-1; 10325-94-7
178	Cadmium hydroxide	244-168-5	21041-95-2
179	Cadmium carbonate	208-168-9	513-78-0
180	Benz[a]anthracene	200-280-6	56-55-3; 1718-53-2
181	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™)	-	-