

Micro Commercial Components Corp.

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Certificate of REACH Compliance

Micro Commercial Components Corp. (MCC) is aware of REACH as a European Community regulation on chemicals. Currently MCC 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.

After careful review of the legislation and specifically the definition of an “article” as defined in EC Regulation 1907/2006, Title II, Chapter 1, Article 7.1(a)(b), it is our current view MCC products would be considered as “articles”. In light of the definition in §7.1(b) which 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,” MCC products constitute non-registrable articles for their intended and anticipated use analysed from the third-party report.

Micro Commercial Components Corp. (MCC) hereby certifies that all epoxy encapsulated package devices manufactured by MCC meet the substance restrictions specified in Annex XVII of Regulation (EC) No. 1907/2006 (REACH), do not contain substances on the REACH 224 SVHC candidate list in concentrations greater than 0.1% by weight per article, except Lead*(Pls see note below Table 1 List of Substance of Very High Concern) .

Sincerely,

Micro Commercial Components



Mr. _____
QA Director

Date: Sep.29,2022

Table 1 List of Substance of Very High Concern

The First Batch of SVHC List (Published on Oct 28,2008,total 15)

Item	SVHC	CAS
1	4,4-Diaminodiphenylmethane	101-77-9
2	5-tert-butyl-2,4,6-trinitro-m-xylene	81-15-2
3	Alkane, C10-13, chloro (Short Chain Chlorinated Paffins)	85535-84-8
4	Anthracene	120-12-7
5	Diarsenic pentaoxide	1303-28-2
6	Diarsenic trioxide	1327-53-3
7	Bis(2-ethylhexyphthalate)(DEHP)	117-81-7
8	Bis(tributyltin)oxide	56-35-9
9	Benzyl butyl phthalate(BBP)	85-68-7
10	Cobalt dichloride	7646-79-9
11	Dibutyl phthalate(DBP)	84-74-2
12	Hexabromocyclododecane(HBCDD) and all major diastereoisomers Identified(α -HBCDD, β -HBCDD, γ -HBCDD)	25637-99-4 and 3194-55-6
13	Lead hydrogen arsenate	7784-40-9
14	Sodium dicromate	7789-12-0 10588-01-9
15	Triethyl arsenate	15606-95-8

The Second Batch of SVHC List (Published on Jan 13,2010,total 13)

Item	SVHC	CAS
16	Anthracene oil	90640-80-5
17	Anthracene oil, anthracene paste,distn. Lights	91995-17-4
18	Anthracene oil, anthracene paste,anthracene fraction	91995-15-2
19	Anthracene oil, anthracene-low	90640-82-7
20	Anthracene oil, anthracene paste	90640-81-6
21	Coal tar pitch, high temperature	65996-93-2
22	Tris(2-chloroethyl)phosphate	115-96-8
23	2,4-Dinitrotoluene	121-14-2
24	Diisobutyl phthalate	84-69-5
25	Lead Chromate Molybdate Sulfate red(C.I Pigment Red 104)	12656-85-8
26	Lead Sulfochromate yellow(C.I.Pigment Yellow 34)	1344-37-2
27	Lead Chromate	7758-97-6
28	Acrylamide	79-06-01

The Third Batch of SVHC List (Published on June 18,2010,total 8)

Item	SVHC	CAS
29	Trichloroethylene	79-01-6
30	Boric acid	10043-35-3 11113-50-1
31	Disodium tetraborate, anhydrou	1330-43-4
32	Tetraboron disodium heptaoxide hydrate	12267-73-1
33	Sodium chromate	7775-11-3
34	Potassium chromate	7789-00-6
35	Ammonium dichromate	7789-09-5
36	Potassium dichromate	7778-50-9

The Four Batch of SVHC List (Published on December 15,2010,total 8)

Item	SVHC	CAS
37	Carbalt(II) sulphate	10124-43-3
38	Carbalt(II) dinitrate	10141-05-6
39	Cobalt(II) carbonate	513-79-1
40	Carbalt(II) diacetate	71-48-7
41	2-Methoxyethanol	109-86-4
42	2-Ethoxyethanol	110-80-5
43	Chromium trioxide	1333-82-0
44	Chromic acid Oligomers of chromic acid and dichromic acid, Dichromic acid	7738-94-5 13530-68-2

The Five Batch of SVHC List (Published on June 20,2011,total 7)

Item	SVHC	CAS
45	2-Ethoxyethyl acetate	111-15-9
46	Strontium chromate	7789-6-2
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters(DHNUP)	68515-42-4
48	Hydrazine	302-01-2 7803-57-8
49	1-methyl-2-pyrrolidone	872-50-4
50	1,2,3-Trichloropropane	96-18-4
51	1,2-Benzenedicarboxylic acid,di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6

The Six Batch of SVHC List (Published on December 19,2011,total 20)

Item	SVHC	CAS
52	Dichromium tris(chromate)	24613-89-6
53	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9
54	Pentazinc chromate octahydroxide	49663-84-5
55	Aluminosilicate Refractory Ceramic Fibres (RCF)	-
56	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)	-
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4
58	Bis(2-methoxyethyl) phthalate	117-82-8
59	2-Methoxyaniline o-Anisidine	90-04-0
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9
61	1,2-Dichloroethane	107-06-2
62	Bis(2-methoxyethyl) ether	111-96-6
63	Arsenic acid	7778-39-4
64	Calcium arsenate	7778-44-1
65	Trilead diarsenate	3687-31-8
66	N,N-dimethylacetamide(DMAC)	127-19-5
67	2,2'-dichloro-4,4'-methylenedianiline(MOCA)	101-14-4
68	Phenolphthalein	77-09-8
69	Lead azide Lead diazide	13424-46-9
70	Lead styphnate	15245-44-0
71	Lead dipicrate	6477-64-1

The Seventh Batch of SVHC List (Published on June 18,2012,total 13)

Item	SVHC	CAS
72	1,2-bis(2-methoxyethoxy)ethane(TEGDME;triglyme)	112-49-2
73	1,2-dimethoxyethane;ethylene glycol dimethyl ether(EGDME)	110-71-4
74	Diboron trioxide(Note:Except Glass Package Products)	1303-86-2
75	Formamide	75-12-7
76	Lead(II) bis(methanesulfonate)	17570-76-2
77	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (TGIC)	2451-62-9
78	β -TGIC(1,3,5-tris(2S and 2R)-2,3-epoxypropyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6

The Seventh Batch of SVHC List (Published on June 18,2012,total 13)

Item	SVHC	CAS
79	4,4'-bis(dimethylamino)benzophenone(Michler's ketone)	90-94-8
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline(Michler's base)	101-61-1
81	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride	2580-56-5
82	[4-4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,t-dien-1 -ylidene]dimethylammonium	548-62-9
83	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1
84	α, α	6786-83-0

The Eighth Batch of SVHC List (Published on December 19,2012,total 54)

Item	SVHC	CAS
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5
86	Pentacosafuorotridecanoic acid	72629-94-8
87	Tricosafuorododecanoic acid	307-55-1
88	Henicosafuoroundecanoic acid	2058-94-8
89	Heptacosafuorotetradecanoic acid	376-06-7
90	C,C'-azodi(formamide)	123-77-3
91	Cyclohexane-1,2-dicarboxylic anhydride	85-42-7 13149-00-3 14166-21-3
92	Hexahydromethylphthalic anhydride Hexahydro-4-methylphthalic anhydride Hexahydro-1-methylphthalic anhydride Hexahydro-3-methylphthalic anhydride	25550-51-0 19438-60-9 48122-14-1 57110-29-9
93	4-Nonylphenol, branched and linear	-
94	4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated	-
95	Methoxyacetic acid	625-45-6
96	N,N-dimethylformamide	68-12-2
97	Dibutyltin dichloride	683-18-1
98	Lead monoxide(Note:Except Glass Package Products)	1317-36-8
99	Lead tetroxide	1314-41-6
100	Lead bis(tetrafluoroborate)	13814-96-5

The Eighth Batch of SVHC List (Published on December 19,2012,total 54)

Item	SVHC	CAS
101	Trilead bis(carbonate)dihydroxide	1319-46-6
102	Lead titanium trioxide	12060-00-3
103	Lead Titanium Zirconium Oxide	12626-81-2
104	Silicic acid, lead salt	11120-22-2
105	Silicic acid, barium salt, lead-doped	68784-75-8
106	1-Bromopropane	106-94-5
107	Propylene oxide	75-56-9
108	1,2-Benzenedicarboxylic acid,dipentylester, branched and linear	84777-06-0
109	Diisopentylphthalate (DIPP)	605-50-5
110	N-pentyl-isopentylphthalate	776297-69-9
111	1,2-Diethoxyethane	629-14-1
112	Acetic acid, lead salt, basic	51404-69-4
113	Lead oxide sulphate	12036-76-9
114	[Phthalato(2-)]dioxotrilead	69011-06-9
115	Dioxobis(stearato)trilead	12578-12-0
116	Fatty acids, C16-18, lead salts	91031-62-8
117	Lead cyanamidate	20837-86-9
118	Lead dinitrate	10099-74-8
119	Pentalead tetraoxide sulphate	12065-90-6
120	Pyrochlore, antimony lead yellow	8012-00-8
121	Sulfurous acid, lead salt, dibasic	62229-08-7
122	Tetraethyllead	78-00-2
123	Tetralead trioxide sulphate	12202-17-4
124	Trilead dioxide phosphonate	12141-20-7
125	Furan	110-00-9
126	Diethyl sulphate	64-67-5
127	Dimethyl sulphate	77-78-1

The Eighth Batch of SVHC List (Published on December 19,2012,total 54)

Item	SVHC	CAS
128	3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2
129	6-sec-butyl-2,4-dinitrophenol	88-85-7
130	4,4'-methylenedi-o-toluidine	838-88-0
131	4,4'-oxydianiline and its salts	101-80-4
132	4-aminoazobenzene	60-09-3
133	4-methl- <i>m</i> -phenylenediamine(toluene-2,4-diamine)	95-80-7
134	6-methoxy- <i>m</i> -toluidine(p-cresidine)	120-71-8
135	Biphenyl-4-ylamine	92-67-1
136	<i>o</i> -aminoazotoluene	97-56-3
137	<i>o</i> -toluidine	95-53-4
138	N-methylacetamide	79-16-3

The Ninth Batch of SVHC List (Published on June 20,2013,total 6)

Item	SVHC	CAS
139	Cadmium	7440-43-9
140	Cadmium oxide	1306-19-0
141	Ammonium pentadecafluorooctanoate(AP)	3825-26-1
142	Pentadecafluorooctanoic acid(P A)	335-67-1
143	Dipentyl phthalate(DPP)	131-18-0
144	4-Nonylphenol,branched and linear,ethoxylated	-

The Tenth Batch of SVHC List (Published on December 16,2013,total 7)

Item	SVHC	CAS
145	Cadmium sulphide	1306-23-6
146	Dihexyl phthalate	84-75-3
147	3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)(C.I. Direct Red 28)	573-58-0
148	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)aphthalene-2,7-disulphonate(C.I. Direct Black 38)	1937-37-7
149	Imidazolidine-2-thione; 2-imidazoline-2-thiol	96-45-7
150	Lead di(acetate)	301-04-2
151	Trixylyl phosphate	25155-23-1

List of The Eleventh Batch of SVHC(Published on June 16,2014,total 4)

Item	SVHC	CAS
152	Cadmium chloride	10108-64-2
153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
154	Sodium peroxometaborate	7632-04-4
155	Sodium perborate; perboric acid, sodium salt	-

List of The Twelfth Batch of SVHC(Published on December 17,2014,total 6)

Item	SVHC	CAS
156	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7
157	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol(UV-328)	25973-55-1
158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate(D T)	15571-58-1
159	Cadmium fluoride	7790-79-6
160	Cadmium sulphate	10124-36-4 31119-53-6
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 D T and M T)	-

List of The Thirteenth Batch of SVHC(Published on June 15,2015,total 2)

Item	SVHC	CAS
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 (C No. 201-559-5)	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 isomers of [1] and [2] or any combination thereof]	-

List of The Fourteenth Batch of SVHC(Published on December 17,2015,total 5)

Item	SVHC	CAS
164	1,3-propanesultone	1120-71-4
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol(UV-327)	3864-99-1
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol(UV-350)	36437-37-3
167	Nitrobenzene	98-95-3
168	Perfluorononan-1-oic acid	375-95-1 21049-39-8 4149-60-4

List of The Fifteenth Batch of SVHC(Published on June 20,2016,total 1)

Item	SVHC	CAS
169	Benzo[def]chrysene(Be nzo[a]pyrene)	50-32-8

List of The Sixteenth Batch of SVHC(Published on December 19,2016,total 4)

Item	SVHC	CAS
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7
171	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]	-
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7 335-76-2 3830-45-3
173	p-(1,1-dimethylpropyl)phenol	80-46-6

List of The Seventeenth Batch of SVHC(Published on July 6 ,2017,total 1)

Item	SVHC	CAS
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	355-46-4

List of The Eighteenth Batch of SVHC(Published on January 15 ,2017,total 7)

Item	SVHC	CAS
175	Dechlorane Plus(TM) and reaction products of 1,3,4-thiadiazolidine-2,5-dithione	-
176	benz[a]anthracene	200-280-6
177	cadmium nitrate	233-710-6
178	cadmium carbonate	208-168-9
179	cadmium hydroxide	244-168-5
180	chrysene	205-923-4
181	formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear]	-

List of The Nineteenth Batch of SVHC(Published on June 27 ,2018,total 10)

Item	SVHC	CAS
182	Octamethylcyclotetrasiloxane (D4)	556-67-2
183	Decamethylcyclopentasiloxane (D5)	541-02-6
184	Dodecamethylcyclohexasiloxane (D6)	540-97-6
185	Lead (Note:Some products contain lead due to process problems , and we have active disclosure on our Datasheet)	7439-92-1
186	Disodium octaborate	12008-41-2
187	Benzo[ghi]perylene	191-24-2
188	Terphenyl hydrogenated	61788-32-7
189	Ethylenediamine (EDA)	107-15-3
190	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7
191	Dicyclohexyl phthalate (DCHP)	84-61-7

List of The Twentieth Batch of SVHC(Published on January 15 ,2019,total 6)

Item	SVHC	CAS
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6
193	Benzo[k]fluoranthene	207-08-9
194	Fluoranthene	206-44-0
195	Phenanthrene	85-01-8
196	Pyrene	129-00-0
197	1,7,7-trimethyl-3-(phenylmethylene)-bicyclo-[2.2.1]heptan-2-one	15087-24-8

List of The Twenty-first Batch of SVHC(Published on July 16 ,2019,total 4)

Item	SVHC	CAS
198	2-methoxyethyl acetate	110-49-6
199	Tris(4-nonylphenyl,branched and linear) phosphite(TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear(4-NP)	-
200	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, its salts and its acyl halides(covering any of their individual isomers and combinations thereof)	-
201	4-tert-butylphenol	98-54-4

List of The Twenty-second Batch of SVHC(Published on January 16 ,2020,total 4)

Item	SVHC	CAS
202	Diisohexyl phthalate	71850-09-4
203	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1
204	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5
205	Perfluorobutane sulfonic acid (PFBS) and its salts	-

List of The Twenty-third Batch of SVHC(Published on June 25 ,2020,total 4)

Item	SVHC	CAS
207	1-Vinylimidazole	1072-63-5
207	2-Methylimidazole	693-98-1
208	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4
209	Butyl 4-hydroxybenzoate	94-26-8

List of The Twenty-fourth Batch of SVHC(Published on January 19 ,2021,total 2)

Item	SVHC	CAS
210	Bis(2-(2-methoxyethoxy)ethyl) ether -	143-24-8
211	Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	-

List of The Twenty-fifth Batch of SVHC(Published on April 23 ,2021,total 8)

Item	SVHC	CAS
212	1,4-dioxane	123-91-1
213	2,2-bis(bromomethyl)-1,3-propanediol(BMP); Tbnpa; 2,3-dibromo-1-propanol(2,3-dbpa)	56-35-9
214	2-(4-tert-butylbenzyl) propanol and its stereoisomers	-
215	Bisphenol B (BPb)	77-40-7
216	Glutaraldehyde	111-30-8
217	Medium chain chlorinated paraffins (MCCP) (uvcb substance, consisting of more than 80% linear chloroalkanes with carbon chain length between C14 and C17)	-
218	Sodium borate	13840-56-7
219	Alkylphenols,whose carbon chain(C12-based,straight or branched) is mainly in the para position, including any single isomer or combination(PDDP)	-

List of The Twenty-sixth Batch of SVHC(Published on September 3 ,2021,total 5)

Item	SVHC	CAS
220	(±)-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)	-
221	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)	119-47-1
222	S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8
223	tris(2-methoxyethoxy)vinylsilane	1067-53-4

List of The Twenty-seventh Batch of SVHC(Published on Jun 10 ,2022,total 1)

Item	SVHC	CAS
224	N-(hydroxymethyl)acrylamide	924-42-5

Note:
Lead*(EC number 231-100-4, CAS number 7439-92-1) is used in some solder type products. In such cases the lead is RoHS exempted with 7a (lead in high melting temperature type die attach solders). It shall be noted that, in the REACH Regulation, substances called SVHC are specified as candidate substances for authorization based on Article 59(1), and are not regarded as banned substances. If present, Lead is declared in the table 2 List of packages containing lead.

Table 2 List of packages containing lead

Devices Type	Detail Packages list
Axial Plastic Devices	R-1,R-3,R-6,A-405,DO-41,DO-15,DO-201AD,DO-201AE, T-18,LEADED BUTTON,PRESSFIT
SMD Plastic Devices	DO-218AB,DPAK,D2-PAK,LMBS-1,MBS-1,MELF,HSMA,HSMB,HSMC,RA, SRA,SDB-1,SMAE,SMA,SMB,SMC,SOD-123FL,SOD-123HT, SMAL,SMBF,SMG,SMPA,TO-262,TO-262L,SMA-FL,SMAG,SMBG,SMCG, RA BUTTON,SRA BUTTON,TO-277A,TO-277B,SDBL-1,MBLS-1,DO-218AB, SOD-323F,SOD-123HE,SOD-123HE1,SOD-323HE, TBS, TBSL, TBL , TO-277, SOD-323FH,TOLL,DFN3333,DFN5060,SME,SMG
THRO-HOLE Plastic Devices	TO-126,TO-220AB,,TO-220AC,ITO-220AB,ITO-220AC,TO-220AB(H) , ITO-220,TO-220,TO-220F,TO-247,TO-247AB,TO-247AC, TO-247AD, TO-3P,TO-220,BUTTON,TO-18,TO-39,TO-3,TO-66,TO-262,TO-262L, RB-5,WOM,WOL,BR-6,BR-8D,KBP,KBPL,KBPC,KBPM,KBU,KBJ,KBJL, PB-3,PB-6,PB-10,GBU,GBJ,GBJL,GBL,GBP,GBPC,GBPC-W,GBPC-H,RS-1, RS-4L,RS-4M,RS-6,RS-6M,DBL-1,TO-251,TO-251S,D3K,RS-15M,RS-20M, RS-25M,MB-35(W),MP-50(W),MT, DB-1,MB-1,KBPR,AK, MT-35A, JB, JA, D3K,TSB-5,AK
MODULE	FJ,F1,F2,F3,F4,D1,D2,D3,D4,L1,L2,M1,M2,M3,M4,M5,T1,T2,D1N, C1,C2,E1,E2,E1A,E2A,W1,W2,W3,W4