

BeRex REACH Statement

European Union(EU) Regulation (EC) No. 1907/2006, REACH

The Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) is an EU initiative aimed to improve the protection of human health and the environment through safe usage of chemical substances contained within preparations and articles. With respect to the REACH initiative we offer the following information regarding BeRex's integrated circuit products

1. Article 7 – Registration

With regard to Article 7(1) of the REACH regulation, articles produced by BeRex do not contain substances intended to be released under normal or reasonably foreseeable conditions of use and do not contain any Substances of Very High concern (SVHC) that exceed 1 ton per year. As such, BeRex is not required to notify ECHA under Article 7(1).

2. Article 33 (1) – Communication of Substance Information

Article 33(1) requires a supplier to inform its customers if an article contains a substance(s) on the Substances of Very High Concern (SVHC) Candidate List in excess of 0.1% weight by weight of that article. **On Jul. 08, 2021**, ECHA increased the number of substances on the SVHC List to **219 substances**. BeRex continues to evaluate supplier and material composition declarations and through internal material review. SVHC are not present above the 0.1% weight in any article of BeRex's products.

3. Article 67 Substance Restrictions and Article 56 Authorization

Under Articles 67 and 56, substances listed in Annex XVII and Annex XIV are restricted for use by application or require an authorization prior to use. BeRex to the best of its knowledge and belief have determined that there are no known Annex XVII restricted substances or Annex XIV substances subject to authorization contained in BeRex products.

Name : Jae O, Lee

Position : QA General manager of BeRex Corp.

Date : Sep. 18, 2021



Appendix

219-Substances of Very High Concern (SVHCs) in the Candidate List – issued on Jul. 08, 2021

No.	Substance Name	CAS Number
1	Cobalt dichloride	7646-79-9
2	Diarsenic pentaoxide	1303-28-2
3	Diarsenic trioxide	1327-53-3
4	Lead hydrogen arsenate	7784-40-9
5	Triethyl arsenate	15606-95-8
6	Sodium dichromate, dihydrate	7789-12-0
7	Bis (tributyltin)oxide (TBTO)	56-35-9
8	Anthracene	120-12-7
9	4,4'-Diaminodiphenylmethane (MDA)	101-77-9
10	Dibutyl phthalate (DBP)	84-74-2
11	5- <i>tert</i> -Butyl-2,4,6-trinitro- <i>m</i> -xylene (musk xylene)	81-15-2
12	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7
13	Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8
14	Benzyl butyl phthalate (BBP)	85-68-7
15	Short chain chlorinated parafins (C10-13)	85535-84-8
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 temp.	65996-93-2
22	Acrylamide	79-06-1
23	2,4-Dinitrotoluene	121-14-2
24	Diisobutyl phthalate (DIBP)	84-69-5
25	Lead chromate	7758-97-6
26	Lead chromate molybdate sulphate red (C.I. Pigment red 104)	12656-85-8
27	Lead sulfochromate yellow (C.I. Pigment yellow 34)	1344-37-2
28	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8
29	Trichloroethylene	79-01-6
30	Boric acid	10043-35-3 11113-50-1
31	Disodium tetraborate, anhydrous	1330-43-4 12179-04-3 1303-96-4
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
37	Cobalt(II) sulphate	10124-43-3
38	Cobalt(II) dinitrate	10141-05-6
39	Cobalt(II) carbonate	513-79-1
40	Cobalt(II) diacetate	71-48-7
41	2-Methoxyethanol	109-86-4
42	2-Ethoxyethanol	110-80-5

43	Chromium trioxide	1333-82-0
44	Acids generated from chromium trioxide and their oligomers: Chromic acid Dichromic acid Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2
45	2-Ethoxyethyl acetate (2-EEA)	111-15-9
46	Strontium chromate	7789-06-2
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4
48	Hydrazine	7803-57-8 302-01-2
49	1-Methyl-2-pyrrolidone (NMP)	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
52	Dichromium tris(chromate)	24613-89-6
53	Potassium hydroxyoctaoxidizincatedi-chromate	11103-86-9
54	Pentazinc chromate octahydroxide	49663-84-5
55	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4
56	Aluminosilicate refractory ceramic fibres (RCF) **	--
57	Zirconia aluminosilicate refractory ceramic fibres (Zr- RCF) **	--
58	Bis(2-methoxyethyl)phthalate(DMEP)	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	4,4'-Methylenebis(2-chloroaniline) (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
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	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	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
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 (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
82	{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
83	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
84	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
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	4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	--
91	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	--
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7, 13149-00-3, 14166-21-3
94	Hexahydromethylphthalic anhydride (MHHPA-1) Hexahydro-4-methylphthalic anhydride (MHHPA-2) Hexahydro-1-methylphthalic anhydride (MHHPA-3) Hexahydro-3-methylphthalic anhydride (MHHPA-4)	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9
95	Methoxy acetic acid	625-45-6
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (PIPP)	84777-06-0
97	Diisopentyl phthalate (DIPP)	605-50-5
98	<i>n</i> -Pentyl- <i>iso</i> -pentyl phthalate (PIPP)	776297-69-9
99	1,2-Diethoxyethane	629-14-1
100	N,N-Dimethylformamide; Dimethyl formamide (DMFA)	200-679-5
101	Dibutyltin dichloride (DBT)	211-670-0
102	Acetic acid, lead salt, basic	257-175-3
103	Basic lead carbonate (Trilead bis(carbonate) dihydroxide)	215-290-6
104	Lead oxide sulfate (Basic lead sulfate)	234-853-7
105	[Phthalato(2-)]dioxotrilead (Dibasic lead phthalate)	273-688-5
106	Dioxobis(stearato)trilead	235-702-8
107	Fatty acids, C16-18, lead salts	292-966-7
108	Lead bis(tetrafluoroborate)	237-486-0
109	Lead cyanamate	244-073-9
110	Lead dinitrate	10099-74-8
111	Lead oxide (Lead monoxide)	1317-36-8
112	Lead tetroxide (Orange lead)	1314-41-6
113	Lead titanium trioxide	12060-00-3
114	Lead titanium zirconium oxide	12626-81-2
115	Pentalead tetraoxide sulphate	12065-90-6
116	Pyrochlore, antimony lead yellow	8012-00-8
117	Silicic acid, barium salt, lead-doped	68784-75-8
118	Silicic acid, lead salt	11120-22-2
119	Sulfurous acid, lead salt, dibasic	62229-08-7
120	Tetraethyllead	78-00-2
121	Tetralead trioxide sulphate	12202-17-4
122	Trilead dioxide phosphonate	12141-20-7
123	Furan	110-00-9
124	Propylene oxide; 1,2-Epoxypropane; Methyloxirane	75-56-9
125	Diethyl sulphate	64-67-5
126	Dimethyl sulphate	77-78-1
127	3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2
128	Dinoseb	88-85-7
129	4,4'-Methylenedi- <i>o</i> -toluidine	838-88-0
130	4,4'-Oxydianiline and its salts	101-80-4
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3

132	4-Methyl- <i>m</i> -phenylenediamine (2,4-Toluene-diamine)	95-80-7
133	6-Methoxy- <i>m</i> -toluidine (<i>p</i> -cresidine)	120-71-8
134	Biphenyl-4-ylamine ; 4-Aminobiphenyl	92-67-1
135	<i>o</i> -Aminoazotoluene	97-56-3
136	<i>o</i> -Toluidine; 2-Aminotoluene	95-53-4
137	N-Methylacetamide	79-16-3
138	1-Bromopropane; <i>n</i> -Propyl bromide	106-94-5
139	Cadmium	7440-43-9
140	Cadmium oxide	1306-19-0
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1
142	Ammonium pentadecafluorootanoate (APFO)	3825-26-1
143	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]	--
144	Dipentyl phthalate (DPP)	131-18-0
145	Cadmium sulphide	1306-23-6
146	Lead di(acetate)	301-04-2
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)	1937-37-7
148	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4- aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0
149	Trixylyl phosphate	25155-23-1
150	Dihexyl phthalate (DnHP)	84-75-3
151	Imidazolidine-2-thione; 2-Imidazoline-2-thiol	96-45-7
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
153	Cadmium chloride	10108-64-2
154	Sodium perborate; Perboric acid, sodium salt	--
155	Sodium peroxometaborate	7632-04-4
156	2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1
157	2-Benzotriazol-2-yl-4,6-di- <i>tert</i> -butylphenol (UV-320)	3846-71-7
158	2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia- 4-stannatetradecanoate (DOTE)	15571-58-1
159	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)	--
160	Cadmium fluoride	232-222-0
161	Cadmium sulphate	233-331-6
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	271-094-0 272-013-1
163	5- <i>sec</i> -Butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5- methyl-1,3-dioxane [1], 5- <i>sec</i> -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	Nitrobenzene	202-716-0
165	2,4-Di- <i>tert</i> -butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1
166	2-(2H-Benzotriazol-2-yl)-4-(<i>tert</i> -butyl)-6-(<i>sec</i> - butyl)phenol (UV-350)	36437-37-3
167	1,3-Propanesultone	1120-71-4
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8
170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2 3830-45-3 3108-42-7

172	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]	--
173	p-(1,1-Dimethylpropyl)phenol	80-46-6
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	--
175	Benz[a]anthracene	56-55-3
176	Cadmium nitrate	10325-94-7
177	Cadmium hydroxide	21041-95-2
178	Cadmium carbonate	513-78-0
179	Chrysene	218-01-9
180	Dodecachloropentacyclo[12.2.1.16.9.02,13.05,10]octade ca-7,15-diene ("Dechlorane Plus™") covering any of its individual anti- and syn-isomers or any combination thereof	--
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]	--
182	Octamethylcyclotetrasiloxane (D4)	556-67-2
183	Decamethylcyclopentasiloxane (D5)	541-02-6
184	Dodecamethylcyclohexasiloxane (D6)	540-97-6
185	Lead	7439-92-1
186	Disodium octaborate	12008-41-2
187	Benzo[g,h,i]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
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
198	2,3,3,3-tetrafluoro-2(heptafluoropropoxy) propionic acid, it salts and its acyl halides covering any of their individual isomers and combinations thereof	
199	2-methoxyethyl acetate	110-49-6
200	4-tert-butylphenol	98-54-4
201	Tris(4-nonylphenyl, branched and linear) phosphite(TNPP) with ≥0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-
202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1
203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5
204	Diisohexyl phthalate	71850-09-4
205	Perfluorobutane sulfonic acid (PFBS) and its salts	
206	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 (Butylparaben)	94-26-8
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 dioctyltin dilaurate; stannane, dioctyl-, bis(coco acyloxy) derivs. EC No.: - CAS No.: - Diocetyl tin dilaurate EC No.: 222-883-3 CAS No.: 3648-18-8 Stannane, dioctyl-, bis(coco acyloxy) derivs. EC No.: 293-901-5 CAS No.: 91648-39-4	-
212	1,4-dioxane	123-91-1
213	2,2-bis(bromomethyl)propane-1,3-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) - 3-bromo-2,2-bis(bromomethyl)-1- propanol (TBNPA) - 2,2-dimethylpropan-1-ol, tribromo derivative (TBNPA) - 2,2-bis(bromomethyl)propane-1,3- diol (BMP) - 2,3-dibromo-1-propanol (2,3-DBPA)	1522-92-5 36483-57-5 3296-90-0 96-13-9
214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	75166-31-3

	- (2R)-3-(4-tert-butylphenyl)-2-methylpropanal - 2-(4-tert-butylbenzyl)propionaldehyde - (2S)-3-(4-tert-butylphenyl)-2-methylpropanal	80-54-6 75166-30-2
215	4,4'-(1-methylpropylidene)bisphenol	77-40-7
216	glutaral	111-30-8
217	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 - Alkanes, C14-16, chloro - Alkanes, C14-17, chloro - di-, tri- and tetrachlorotetradecane - Tetradecane, chloro derivs.	1372804-76-6 85535-85-9 198840-65-2
218	orthoboric acid, sodium salt - boric acid (H3BO3), sodium salt, hydrate - Boric acid (H3BO3), disodium salt - Trisodium orthoborate - Boric acid, sodium salt - Orthoboric acid, sodium salt - Boric acid (H3BO3), sodium salt (1:1)	25747-83-5 22454-04-2 14312-40-4 1333-73-9 13840-56-7 14890-53-0
219	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) - Phenol, 4-dodecyl, branched - 4-isododecylphenol - Phenol, 4-isododecyl- - Phenol, dodecyl-, branched - Phenol, (tetrapropenyl) derivatives - Phenol, tetrapropylene-	210555-94-5 27459-10-5 27147-75-7 121158-58-5 74499-35-7 57427-55-1

Note :

This list is provided as a reference; the official Candidate List of SVHC for Authorization is posted on the ECHA website:

<http://echa.europa.eu/web/guest/candidate-list-table>