



SUPPLIER REACH SVHC Disclosure Form

We herewith inform about the latest update on the REACH regulations. Our products including (but not limited to) components, semi-finished products, finished products, raw materials and packaging materials in compliance with REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL and the regulations governing of REACH ANNEX XVII.

We represent that the information provided herein.

No.	Substance of Very High Concern (SVHC)	CAS No.	Declaration (ppm-mg/kg)
1	Anthracene	120-12-7	None
2	4,4'- Diaminodiphenylmethane	101-77-9	None
3	Dibutyl phthalate	84-74-2	None
4	Cobalt dichloride	7546-79-9	None
5	Diarsenic pentaoxide	1303-28-2	None
6	Diarsenic trioxide	1327-53-3	None
7	Sodium dichromate, dihydrate	7789-12-0	None
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	None
9	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	None
10	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β -HBCDD, γ -HBCDD)	25637-99-4 and 3194-55-6(134237-51-7, 134237-50-6, 134237-52-8)	None
11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	None
12	Bis(tributyltin)oxide	56-35-9	None
13	Lead hydrogen arsenate	7784-40-9	None
14	Triethyl arsenate	15606-95-8	None
15	Benzyl butyl phthalate	85-68-7	None
16	Anthracene oil	90640-80-5	None
17	Anthracene oil, anthracene paste, distn. lights *	91995-17-4	None
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	None
19	Anthracene oil, anthracene-low	90640-82-7	None
20	Anthracene oil, anthracene paste	90640-81-6	None
21	Coal tar pitch, high temperature	65996-93-2	None
22	Acrylamide	1979/6/1	None
23	2,4-Dinitrotoluene	121-14-2	None
24	Diisobutyl phthalate	84-69-5	None
25	Lead chromate	7758-97-6	None
26	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	12656-85-8	None
27	Lead sulfochromate yellow (C.I. Pigment Yellow 34)***	1344-37-2	None
28	Tris(2-chloroethyl)phosphate	115-96-8	None
29	Trichloroethylene	1979/1/6	None
30	Boric acid	10043-35-3 11113-50-1	None
31	Disodium tetraborate, anhydrous	1303-96-4	None



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		1330-43-4 12179-04-3	
32	Tetraboron disodium heptaoxide, hydrate	12267-73-1	None
33	Sodium chromate	7775/11/3	None
34	Potassium chromate	7789-00-6	None
35	Ammonium dichromate	7789/9/5	None
36	Potassium dichromate	7778-50-9	None
37	Cobalt(II) sulphate	233-334-2	None
38	Cobalt(II) dinitrate	233-402-1	None
39	Cobalt(II) carbonate	208-169-4	None
40	Cobalt(II) diacetate	200-755-8	None
41	2-Methoxyethanol	203-713-7	None
42	2-Ethoxyethanol	203-804-1	None
43	Chromium trioxide	215-607-8	None
44	Acids generated from chromium trioxide and their oligomers:	231-801-5 236-881-5	None
45	(2-ethoxyethyl acetate)	111-15-9	None
46	(strontium chromate)	7789/6/2	None
47	(1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters)	68515-42-4	None
48	(Hydrazine)	7803-57-8	None
49	(1-methyl-2-pyrrolidone)	872-50-4	None
50	(1,2,3-trichloropropane)	96-18-4	None
51	(1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich)	71888-89-6	None
52	Zirconia Aluminosilicate Refractory Ceramic Fibres	-	None
53	Calcium arsenate	7778-44-1	None
54	Bis(2-methoxyethyl) ether	111-96-6	None
55	Aluminosilicate Refractory Ceramic Fibres	-	None
56	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	None
57	Lead dipicrate	6477-64-1	None
58	N,N-dimethylacetamide	127-19-5	None
59	Arsenic acid	7778-39-4	None
60	2-Methoxyaniline; o-Anisidine	90-04-0	None
61	Trilead diarsenate	3687-31-8	None
62	1,2-dichloroethane	107-06-2	None
63	Pentazinc chromate octahydroxide	49663-84-5	None
64	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	None
65	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	None
66	Bis(2-methoxyethyl) phthalate	117-82-8	None
67	Lead diazide, Lead azide	13424-46-9	None
68	Lead styphnate	15245-44-0	None
69	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	None
70	Phenolphthalein	1977/9/8	None
71	Dichromium tris(chromate)	24613-89-6	None



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72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	None
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	None
74	Diboron trioxide	1303-86-2	None
75	Formamide	1975/12/7	None
76	Lead(II) bis(methanesulfonate)	17570-76-2	None
77	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6 (1H,3H,5H)-trione (TGIC)	2451-62-9	None
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	None
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	None
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	None
81	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl] methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	None
82	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3) [with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	None
83	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with \geq 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	None
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)]	6786-83-0	None
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	None
86	Pentacosafuorotridecanoic acid	72629-94-8	None
87	Tricosafuorododecanoic acid	307-55-1	None
88	Henicosafuoroundecanoic acid	2058-94-8	None
89	Heptacosafuorotetradecanoic acid	376-06-7	None
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	-	None
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	-	None
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	None
93	Cyclohexane-1,2-dicarboxylic anhydride (HHPA),	85-42-7, 13149-00-3,	None



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	cis-cyclohexane-1,2-dicarboxylic anhydride,trans-cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	14166-21-3	
94	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	None
95	Methoxy acetic acid	625-45-6	None
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	None
97	Diisopentylphthalate	605-50-5	None
98	N-pentyl-isopentylphthalate	776297-69-9	None
99	1,2-Diethoxyethane	629-14-1	None
100	N,N-dimethylformamide; dimethyl formamide	68-12-2	None
101	Dibutyltin dichloride (DBTC)	683-18-1	None
102	Acetic acid, lead salt, basic	51404-69-4	None
103	Trilead bis(carbonate)dihydroxide (basic lead carbonate)	1319-46-6	None
104	Lead oxide sulfate	12036-76-9	None
105	[Phthalato(2-)]dioxotrilead	69011-06-9	None
106	Dioxobis(stearato)trilead	12578-12-0	None
107	Fatty acids, C16-18, lead salts	91031-62-8	None
108	Lead cyanamidate	20837-86-9	None
109	Lead dinitrate	10099-74-8	None
110	Lead oxide (lead monoxide)	1317-36-8	None
111	Lead tetroxide (orange lead)	1314-41-6	None
112	Pentalead tetraoxide sulphate	12065-90-6	None
113	Silicic acid, lead salt	11120-22-2	None
114	Sulfurous acid, lead salt, dibasic	62229-08-7	None
115	Tetraethyllead	78-00-2	None
116	Tetralead trioxide sulphate	12202-17-4	None
117	Lead bis(tetrafluoroborate)	13814-96-5	None
118	Lead titanium trioxide	12060-00-3	None
119	Lead Titanium Zirconium Oxide	12626-81-2	None
120	Pyrochlore, antimony lead yellow	8012-00-8	None
121	Trilead dioxide phosphonate	12141-20-7	None
122	Silicic acid, barium salt, lead-doped	68784-75-8	None
123	Furan	110-00-9	None
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	None
125	Diethyl sulphate	64-67-5	None
126	Dimethyl sulphate	77-78-1	None
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	None
128	Dinoseb	88-85-7	None
129	4,4'-methylenedi-o-toluidine	838-88-0	None
130	4,4'-oxydianiline and its salts	101-80-4	None
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	None



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132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	None
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	None
134	Biphenyl-4-ylamine	92-67-1	None
135	o-aminoazotoluene	97-56-3	None
136	o-Toluidine; 2-Aminotoluene	95-53-4	None
137	N-methylacetamide	79-16-3	None
138	1-bromopropane	106-94-5	None
139	Cadmium	7440-43-9	<100ppm
140	Cadmium oxide	1306-19-0	None
141	Ammonium pentadecafluorooctanoate	3825-26-1	None
142	Pentadecafluorooctanoic acid	335-67-1	None
143	Dipentyl phthalate	131-18-0	None
144	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]	-	None
145	Cadmium sulphide	1306-23-6	None
146	Diethyl phthalate	84-75-3	None
147	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	None
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)	1937-37-7	None
149	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	None
150	Lead di(acetate)	301-04-2	None
151	Triethyl phosphate	25155-23-1	None
152	Cadmium chloride	10108-64-2	None
153	1,2-Benzenedicarboxylic acid, diethyl ester, branched and linear	68515-50-4	None
154	Sodium peroxometaborate	7632-04-4	None
155	Sodium perborate; perboric acid, sodium salt	-	None
156	Cadmium fluoride	7790-79-6	None
157	Cadmium sulphate	10124-36-4;31119-53-6	None
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	None
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	None
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate	15571-58-1	None
161	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl	-	None



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	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)		
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	68515-51-5 68648-93-1	None
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]	-	None
164	Nitrobenzene	98-95-3	None
165	2,4-Di- <i>tert</i> -butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	None
166	2-(2H-Benzotriazol-2-yl)-4-(<i>tert</i> -butyl)-6-(<i>sec</i> -butyl)phenol (UV-350)	36437-37-3	None
167	1,3-Propanesultone	1120-71-4	None
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	None
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	None
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	None
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]	-	None
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts Ammonium nonadecafluorodecanoate Decanoic acid, nonadecafluoro-, sodium salt	335-76-2 3108-42-7 3830-45-3	None
173	p-(1,1-dimethylpropyl)phenol	80-46-6	None
174	Perfluorohexane-1-sulphonic acid and its salts	-	None
175	Chrysene	218-01-9	None
176	Benz[a]anthracene	56-55-3	None
177	Cadmium nitrate	10325-94-7	None
178	Cadmium hydroxide	21041-95-2	None
179	Cadmium carbonate	513-78-0	None
180	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"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	-	None
181	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear	-	None



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	(RP-HP) [with $\geq 0.1\%$ w/w 4-heptylphenol, branched and linear]		
182	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride; TMA)	552-30-7	None
183	Benzo[ghi]perylene	191-24-2	None
184	Decamethylcyclopentasiloxane (D5)	541-02-6	None
185	Dicyclohexyl phthalate (DCHP)	84-61-7	None
186	Disodium octaborate	12008-41-2	None
187	Dodecamethylcyclohexasiloxane (D6)	540-97-6	None
188	Ethylenediamine (EDA)	107-15-3	None
189	Lead	7439-92-1	Note1.
190	Octamethylcyclotetrasiloxane (D4)	556-67-2	None
191	Terphenyl, hydrogenated	61788-32-7	None
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	None
193	Benzo[k]fluoranthene	207-08-9	None
194	Fluoranthene	206-44-0	None
195	Phenanthrene	85-01-8	None
196	Pyrene	129-00-0	None
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	None
198	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	-	None
199	4-tert-butylphenol	98-54-4	None
200	2-methoxyethyl acetate	110-49-6	None
201	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	None
202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	None
203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	None
204	Diisohexyl phthalate	71850-09-4	None
205	Perfluorobutane sulfonic acid (PFBS) and its salts	-	None

The latest **205** substances subject to analysis per the REACH Regulation were **last updated on Jan.16, 2020**.

Please refer to the following for the most current candidate list of substances: <http://echa.europa.eu/candidate-list-table>.

Additional information on the European Union's REACH regulation can be found here:

<https://echa.europa.eu/regulations/reach/understanding-reach>



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Note1. : COMMISSION REGULATION (EU) 2015/628 of 22 April 2015 amending Annex XVII of Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals ('REACH') regarding lead and its compounds.

In Annex XVII of Regulation (EC) No 1907/2006, column 2_8.(k) iv of entry 63 is amended as: Guaranteed according to Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (OJ L 174, 1.7.2011, p. 88).'

The material copper alloy of our products contains SHVC lead >1000ppm, please refer to below table.

Material name	Contains SHVC	Concentration (ppm)	Exemptions that may apply
C3604 brass	lead	18000~37000	◆(EU)2018/739 : 6(a)-I Lead as an alloying element in steel for machining purposes containing up to 0.35 % lead by weight and in batch hot dip galvanized steel components containing up to 0.2 % lead by weight. ◆(EU)2018/740 : 6(b) Lead as an alloying element in aluminum containing up to 0.4 % lead by weight. ◆(EU)2018/741 : 6(c) Copper alloy containing up to 4 % lead by weight.
C17300 beryllium copper	lead	2000~4000	
C5441 Phosphor bronze	lead	35000~40000	

Signature: *Apollo Chen*

Title: QA Manager

Date : Jan.31.2020