



## REACH SVHC Declaration

Registration, Evaluation, Authorisation and restriction of Chemicals  
168 Substances of Very High Concern (SVHC) on ECHA Candidate List

January 12, 2016

Dear Valued Customers,

Kester is a Downstream User as defined by the requirements of the European Union (EU) Regulation – Registration, Evaluation, Authorisation and restriction of Chemicals (REACH). Kester solder products are defined in the REACH regulations as mixtures consisting of two or more individual substances. Mixtures do not require registration under Article 7.1 of REACH. The individual raw material substances that are mixed together to make up the solder product would be registered separately. Therefore Kester will ensure that all individual raw material substances that are purchased from upstream suppliers will follow through with final REACH registration.

Kester products are further processed by industrial users at temperatures that exceed 217°C (Celsius) during soldering. Volatile substances evaporate at the temperature range during the soldering process and are no longer present in the finished product.

Therefore as a mixture that is further processed by industrial users, Kester solder products are not classified as articles that would be subject to the 0.1% weight (w/w) threshold of any substance of Very High Concern (SVHC) on the attached European Chemicals Agency (ECHA) candidate list.

Kester issues Safety Data Sheets (SDSs) for our solder products that conform to the United Nations Globally Harmonized System (GHS) and follow the criteria for classification of mixtures in accordance with Regulation (EC) No. 1272/2008 Classification, Labeling and Packaging (CLP)

For Additional information on this subject contact:

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A handwritten signature in blue ink that reads "Kevin A. Cappelletti".

Kevin A. Cappelletti, CHMM, ASP  
Product Compliance /  
Environmental Health and Safety

<b>REACH European Chemicals Agency (ECHA) Candidate List</b>			
<b>Item</b>	<b>Substance name</b>	<b>CAS number</b>	<b>EC number</b>
<b>2008.10.28 European Chemicals Agency (ECHA) Candidate List</b>			
1	Anthracene	120-12-7	204-371-1
2	4,4'- Diaminodiphenylmethane	101-77-9	202-974-4
3	Dibutyl phthalate	84-74-2	201-557-4
4	Cobalt dichloride	7646-79-9	231-589-4
5	Diarsenic pentaoxide	1303-28-2	215-116-9
6	Diarsenic trioxide	1327-53-3	215-481-4
7	Sodium dichromate, dihydrate	7789-12-0	
8	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4
9	Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0
10	Hexabromocyclododecane (HBCDD)	25637-99-4	247-148-4
11	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5
12	Bis(tributyltin)oxide	56-35-9	200-268-0
13	Lead hydrogen arsenate	7784-40-9	232-064-2
14	Triethyl arsenate	15606-95-8	427-700-2
15	Benzyl butyl phthalate	85-68-7	201-622-7
<b>2010.03.30 European Chemicals Agency (ECHA) Candidate List</b>			
16	Anthracene oil	90640-80-5	292-602-7
17	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	295-278-5
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9
19	Anthracene oil, anthracene-low	90640-82-7	292-604-8
20	Anthracene oil, anthracene paste	90640-81-6	292-603-2
21	Pitch, coal tar, high-temp	65996-93-2	266-028-2
22	Diisobutyl phthalate(DIBP)	84-69-5	201-553-2
23	2,4-Dinitrotoluene	121-14-2	204-450-0
24	Tris(2-chloroethyl) phosphate	115-96-8	204-118-5
25	Lead chromate	7758-97-6	231-846-0
26	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	235-759-9
27	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7
28	Acrylamide	79-06-1	201-173-7
<b>2010.06.18 European Chemicals Agency (ECHA) Candidate List</b>			
29	Sodium chromate	11/3/7775	231-889-5
30	Ammonium dichromate	9/5/7789	232-143-1
31	Potassium dichromate	7778-50-9	231-906-6
32	Potassium chromate	7789-00-6	232-140-5
33	Boric acid	10043-35-3;	234-343-4;
		11113-50-1	233-139-2
34	Disodium tetraborate, anhydrous	1303-96-4; 1330-43-4	215-540-4

		12179-04-3	
35	Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3
36	Trichloroethylene	79-01-6	201-167-4
<b>2010.12.15 European Chemicals Agency (ECHA) Candidate List</b>			
37	Cobalt(II) sulphate	10124-43-3	233-334-2
38	Cobalt(II) dinitrate	10141-05-6	233-402-1
39	Cobalt(II) carbonate	513-79-1	208-169-4
40	Cobalt(II) diacetate	71-48-7	200-755-8
41	2-Methoxyethanol	109-86-4	203-713-7
42	2-Ethoxyethanol	110-80-5	203-804-1
43	Chromium trioxide	1333-82-0	215-607-8
44	Acids generated from chromium trioxide and their oligomers:	7738-94-5	231-801-5
	Chromic acid, Dichromic acid, Oligomers of chromic acid; dichromic acid	13530-68-2	236-881-5
<b>2011.06.20 European Chemicals Agency (ECHA) Candidate List</b>			
45	2-ethoxyethyl acetate	111-15-9	203-839-2
46	Strontium chromate	6/2/7789	232-142-6
47	1,2-Benzenedicarboxylic acid, di-C7-11- branched and linear alkyl esters)	68515-42-4	271-084-6
48	Hydrazine	7803-57-8; 302-01-2	206-114-9
49	1-methyl-2-pyrrolidone	872-50-4	212-828-1
50	1,2,3-trichloropropane	96-18-4	202-486-1
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1
<b>2011.12.19 European Chemicals Agency (ECHA) Candidate List</b>			
52	Calcium arsenate	7778-44-1	231-904-5
53	Bis(2-methoxyethyl) ether	111-96-6	203-924-4
54	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	234-329-8
55	Lead dipicrate	6477-64-1	229-335-2
56	N,N-dimethylacetamide	127-19-5	204-826-4
57	Arsenic acid	7778-39-4	231-901-9
58	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1
59	Trilead diarsenate	3687-31-8	222-979-5
60	1,2-dichloroethane	107-06-2	203-458-1
61	Pentazinc chromate octahydroxide	49663-84-5	256-418-0
62	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1
63	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6
64	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2
65	Lead diazide, Lead azide	13424-46-9	236-542-1
66	Phenolphthalein	77-09-8	201-004-7
67	Dichromium tris(chromate)	24613-89-6	246-356-2
68	Lead styphnate	15245-44-0	239-290-0
69	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9

70	Aluminosilicate, Refractory Ceramic Fibres (RCF)	No. 650-017-00-8	
71	Zirconia Aluminosilicate, Refractory Ceramic Fibres (Zr-RCF)	No. 650-017-00-8	
<b>2012.06.18 European Chemicals Agency (ECHA) Candidate List</b>			
72	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [ <i>with</i> $\geq 0.1\%$ of <i>Michler's ketone</i> (EC No. 202-027-5) or <i>Michler's base</i> (EC No. 202-959-2)]	6786-83-0	229-851-8
73	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2
74	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione ( $\beta$ -TGIC)	59653-74-6	423-400-0
75	Diboron trioxide	1303-86-2	215-125-8
76	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3
77	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [ <i>with</i> $\geq 0.1\%$ of <i>Michler's ketone</i> (EC No. 202-027-5) or <i>Michler's base</i> (EC No. 202-959-2)]	561-41-1	209-218-2
78	Lead(II) bis(methanesulfonate)	17570-76-2	401-750-5
79	Formamide	75-12-7	200-842-0
80	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [ <i>with</i> $\geq 0.1\%$ of <i>Michler's ketone</i> (EC No. 202-027-5) or <i>Michler's base</i> (EC No. 202-959-2)]	548-62-9	208-953-6
81	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26) [ <i>with</i> $\geq 0.1\%$ of <i>Michler's ketone</i> (EC No. 202-027-5) or <i>Michler's base</i> (EC No. 202-959-2)]	2580-56-5	219-943-6
83	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	219-514-3
84	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	202-027-5
<b>2012.12.19 European Chemicals Agency (ECHA) Candidate List</b>			
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	214-604-9
86	Pentacosafuorotridecanoic acid	72629-94-8	276-745-2
87	Tricosafuorododecanoic acid	307-55-1	206-203-2
88	Henicosafuoroundecanoic acid	2058-94-8	218-165-4
89	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	-	-
90	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	-	-
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8
93	Hexahydro-2-benzofuran-1,3-dione (HHPA), cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7, 13149-00-3, 14166-21-3	201-604-9, 236-086-3, 238-009-9

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	247-094-1, 243-072-0, 256-356-4, 260-566-1
95	Methoxy acetic acid	625-45-6	210-894-6
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2
97	Diisopentylphthalate	605-50-5	210-088-4
98	N-pentyl-isopentylphthalate	776297-69-9	-
99	1,2-Diethoxyethane	629-14-1	211-076-1
100	N,N-dimethylformamide; dimethyl formamide	68-12-2	200-679-5
101	Dibutyltin dichloride (DBT)	683-18-1	211-670-0
102	Acetic acid, lead salt, basic	51404-69-4	257-175-3
103	Trilead bis(carbonate)dihydroxide (basic lead carbonate)	1319-46-6	215-290-6
104	Lead oxide sulfate	12036-76-9	234-853-7
105	[Phthalato(2-)]dioxotrilead	69011-06-9	273-688-5
106	Dioxobis(stearato)trilead	12578-12-0	235-702-8
107	Fatty acids, C16-18, lead salts	91031-62-8	292-966-7
108	Lead bis(tetrafluoroborate)	13814-96-5	237-486-0
109	Lead cyanamidate	20837-86-9	244-073-9
110	Lead dinitrate	10099-74-8	233-245-9
111	Lead oxide (lead monoxide)	1317-36-8	215-267-0
112	Lead tetroxide (orange lead)	1314-41-6	215-235-6
113	Lead titanium trioxide	12060-00-3	235-038-9
114	Lead Titanium Zirconium Oxide	12626-81-2	235-727-4
115	Pentalead tetraoxide sulphate	12065-90-6	235-067-7
116	Pyrochlore, antimony lead yellow	8012-00-8	232-382-1
117	Silicic acid, barium salt, lead-doped	68784-75-8	272-271-5
118	Silicic acid, lead salt	11120-22-2	234-363-3
119	Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1
120	Tetraethyllead	78-00-2	201-075-4
121	Tetralead trioxide sulphate	12202-17-4	235-380-9
122	Trilead dioxide phosphonate	12141-20-7	235-252-2
123	Furan	110-00-9	203-727-3
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2
125	Diethyl sulphate	64-67-5	200-589-6
126	Dimethyl sulphate	77-78-1	201-058-1
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7
128	Dinoseb	88-85-7	201-861-7
129	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8
130	4,4'-oxydianiline and its salts	101-80-4	202-977-0
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	200-453-6

132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	202-453-1
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1
134	Biphenyl-4-ylamine	92-67-1	202-177-1
135	o-aminoazotoluene	97-56-3	202-591-2
136	o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0
137	N-methylacetamide	79-16-3	201-182-6
138	1-bromopropane	106-94-5	203-445-0
<b>2013.06.20 European Chemicals Agency (ECHA) Candidate List</b>			
139	Cadmium	7440-43-9	231-152-8
140	Ammonium pentadecafluorootanoate (APFO)	3825-26-1	223-320-4
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9
142	Dipentyl phthalate (DPP)	131-18-0	205-017-9
143	Cadmium oxide	1306-19-0	215-146-2
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]		
<b>2013.12.16 European Chemicals Agency (ECHA) Candidate List</b>			
145	Cadmium sulphide	1306-23-6	215-147-8
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)	1937-37-7	217-710-3
147	Dihexyl phthalate	84-75-3	201-559-5
148	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	202-506-9
149	Trixylyl phosphate	25155-23-1	246-677-8
150	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	209-358-4
151	Lead di(acetate)	301-04-2	206-104-4
<b>2014.06.16 European Chemicals Agency (ECHA) Candidate List</b>			
152	Cadmium chloride	10108-64-2	233-296-7
153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5
154	Sodium peroxometaborate	4/4/7632	231-556-4
155	Sodium perborate; perboric acid, sodium salt		239-172-9; 234-390-0
<b>2014.12.17 European Chemicals Agency (ECHA) Candidate List</b>			
156	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8
157	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6
158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-	15571-58-1	239-622-4

	stannatetradecanoate (DOTE)		
159	Cadmium fluoride	7790-79-6	232-222-0
160	Cadmium sulphate	10124-36-4	233-331-6
		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 DOTE and MOTE)		
<b>2015.06.15 European Chemicals Agency (ECHA) Candidate List</b>			
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	271-094-0; 272-013-1
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]	-	-
<b>2015.12.17 European Chemicals Agency (ECHA) Candidate List</b>			
164	1,3-propanesultone	1120-71-4	214-317-9
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1
167	Nitrobenzene	98-95-3	202-716-0
168	Perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptafluorononanoic acid and its sodium and ammonium salts	375-95-1 4149-60-4 21049-39-8	206-801-3