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January 5, 2015

Dear Customer,

EU REACH Regulation Compliance Letter

RJ570Z, RJ580Z, RJ581Z

This statement is in response to your request whether our Product(s) contain(s) Substance of Very High Concern (SVHC) in view of Regulation 1907/2006/EC (REACH).

We hereby certify that no substances on **161 SVHC candidates** that ECHA published are present in the above identified Products of Samsung Total Petrochemicals Co., Ltd. at levels above 0.1wt%.

We do not test the Products for these compounds, but to the best of our knowledge they are not contained more than 0.1wt%. We believe this information to be reasonably accurate and reliable as of this date provided, however, that it shall be your responsibility to make your own assessment and determination on the suitability of the Products for your particular application and use.

Should you have any question regarding the content of this letter, please do not hesitate to contact me.

Please find the contact point below:

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Sincerely,

A handwritten signature in blue ink, appearing to read "Kihyun Wang".

Kihyun Wang
Technical Service & Application Team Leader

※ Candidate List of Substances of Very High Concern (SVHC) for authorization

No.	Substance Name	EC Number	CAS Number	Date of inclusion
1	Bis(2-ethylhexyl) phthalate (DEHP)	204-211-0	117-81-7	2014/12/17; 2008/10/28
2	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	2014-12-17
3	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	2014-12-17
4	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)	-	-	2014-12-17
5	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	2014-12-17
6	Cadmium fluoride	232-222-0	7790-79-6	2014-12-17
7	Cadmium sulphate	233-331-6	10124-36-4, 31119-53-6	2014-12-17
8	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4	2014-06-16
9	Sodium perborate; perboric acid, sodium salt	239-172-9; 234-390-0	-	2014-06-16
10	Sodium peroxometaborate	231-556-4	7632-04-4	2014-06-16
11	Cadmium chloride	233-296-7	10108-64-2	2014-06-16
12	Cadmium sulphide	215-147-8	1306-23-6	2013-12-16
13	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	2013-12-16
14	Dihexyl phthalate	201-559-5	84-75-3	2013-12-16
15	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	202-506-9	96-45-7	2013-12-16
16	Trixylyl phosphate	246-677-8	25155-23-1	2013-12-16
17	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	2013-12-16
18	Lead di(acetate)	206-104-4	301-04-2	2013-12-16
19	Cadmium	231-152-8	7440-43-9	2013-06-20
20	Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1	2013-06-20
21	Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1	2013-06-20
22	Dipentyl phthalate (DPP)	205-017-9	131-18-0	2013-06-20
23	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]	-	-	2013-06-20

24	Cadmium oxide	215-146-2	1306-19-0	2013-06-20
25	Pyrochlore, antimony lead yellow	232-382-1	8012-00-8	2012-12-19
26	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	2012-12-19
27	Henicosafuoroundecanoic acid	218-165-4	2058-94-8	2012-12-19
28	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	2012-12-19
29	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	2012-12-19
30	Dibutyltin dichloride (DBTC)	211-670-0	683-18-1	2012-12-19
31	Lead bis(tetrafluoroborate)	237-486-0	13814-96-5	2012-12-19
32	Lead dinitrate	233-245-9	10099-74-8	2012-12-19
33	Silicic acid, lead salt	234-363-3	11120-22-2	2012-12-19
34	4-Aminoazobenzene	200-453-6	60-09-3	2012-12-19
35	Lead titanium zirconium oxide	235-727-4	12626-81-2	2012-12-19
36	Lead monoxide (lead oxide)	215-267-0	1317-36-8	2012-12-19
37	o-Toluidine	202-429-0	95-53-4	2012-12-19
38	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	2012-12-19
39	Silicic acid (H ₂ SiO ₅), 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	2012-12-19
40	Trilead bis(carbonate)dihydroxide	215-290-6	1319-46-6	2012-12-19
41	Furan	203-727-3	110-00-9	2012-12-19
42	N,N-dimethylformamide	200-679-5	68-12-2	2012-12-19
43	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	2012-12-19
44	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]	-	-	2012-12-19
45	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	2012-12-19
46	Diethyl sulphate	200-589-6	64-67-5	2012-12-19
47	Dimethyl sulphate	201-058-1	77-78-1	2012-12-19

48	Lead oxide sulfate	234-853-7	12036-76-9	2012-12-19
49	Lead titanium trioxide	235-038-9	12060-00-3	2012-12-19
50	Acetic acid, lead salt, basic	257-175-3	51404-69-4	2012-12-19
51	[Phthalato(2-)]dioxotrilead	273-688-5	69011-06-9	2012-12-19
52	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	214-604-9	1163-19-5	2012-12-19
53	N-methylacetamide	201-182-6	79-16-3	2012-12-19
54	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	201-861-7	88-85-7	2012-12-19
55	1,2-Diethoxyethane	211-076-1	629-14-1	2012-12-19
56	Tetralead trioxide sulphate	235-380-9	12202-17-4	2012-12-19
57	N-pentyl-isopentylphthalate		776297-69-9	2012-12-19
58	Dioxobis(stearato)trilead	235-702-8	12578-12-0	2012-12-19
59	Tetraethyllead	201-075-4	78-00-2	2012-12-19
60	Pentalead tetraoxide sulphate	235-067-7	12065-90-6	2012-12-19
61	Pentacosfluorotridecanoic acid	276-745-2	72629-94-8	2012-12-19
62	Tricosfluorododecanoic acid	206-203-2	307-55-1	2012-12-19
63	Heptacosfluorotetradecanoic acid	206-803-4	376-06-7	2012-12-19
64	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5	2012-12-19
65	Methoxyacetic acid	210-894-6	625-45-6	2012-12-19
66	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7	2012-12-19
67	Methyloxirane (Propylene oxide)	200-879-2	75-56-9	2012-12-19
68	Trilead dioxide phosphonate	235-252-2	12141-20-7	2012-12-19
69	o-aminoazotoluene	202-591-2	97-56-3	2012-12-19
70	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	2012-12-19
71	4,4'-oxydianiline and its salts	202-977-0	101-80-4	2012-12-19
72	Orange lead (lead tetroxide)	215-235-6	1314-41-6	2012-12-19
73	Biphenyl-4-ylamine	202-177-1	92-67-1	2012-12-19
74	Diisopentylphthalate	210-088-4	605-50-5	2012-12-19
75	Fatty acids, C16-18, lead salts	292-966-7	91031-62-8	2012-12-19
76	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	204-650-8	123-77-3	2012-12-19
77	Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7	2012-12-19
78	Lead cyanamidate	244-073-9	20837-86-9	2012-12-19
79	α,α -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [<i>with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)</i>]	229-851-8	6786-83-0	2012-06-18
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1	2012-06-18
81	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	2012-06-18
82	Diboron trioxide	215-125-8	1303-86-2	2012-06-18
83	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3	112-49-2	2012-06-18
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [<i>with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202- 959-2)</i>]	209-218-2	561-41-1	2012-06-18
85	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2	2012-06-18

86	Formamide	200-842-0	75-12-7	2012-06-18
87	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) <i>[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]</i>	208-953-6	548-62-9	2012-06-18
88	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	2012-06-18
89	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) <i>[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]</i>	219-943-6	2580-56-5	2012-06-18
90	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	219-514-3	2451-62-9	2012-06-18
91	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	202-027-5	90-94-8	2012-06-18
92	4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	2011-12-19
93	N,N-dimethylacetamide	204-826-4	127-19-5	2011-12-19
94	Phenolphthalein	201-004-7	77-09-8	2011-12-19
95	Lead diazide, Lead azide	236-542-1	13424-46-9	2011-12-19
96	Lead dipicrate	229-335-2	6477-64-1	2011-12-19
97	1,2-dichloroethane	203-458-1	107-06-2	2011-12-19
98	Calcium arsenate	231-904-5	7778-44-1	2011-12-19
99	Dichromium tris(chromate)	246-356-2	24613-89-6	2011-12-19
100	2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0	2011-12-19
101	Pentazinc chromate octahydroxide	256-418-0	49663-84-5	2011-12-19
102	Arsenic acid	231-901-9	7778-39-4	2011-12-19
103	Potassium hydroxyoctaoxodizincatedichromate	234-329-8	11103-86-9	2011-12-19
104	Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4	2011-12-19
105	Lead styphnate	239-290-0	15245-44-0	2011-12-19
106	Trilead diarsenate	222-979-5	3687-31-8	2011-12-19
107	Zirconia Aluminosilicate Refractory Ceramic Fibres <i>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</i>	-	-	2011-12-19
108	Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	2011-12-19

109	Aluminosilicate Refractory Ceramic Fibres <i>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</i>	-	-	2011-12-19
110	Bis(2-methoxyethyl) ether	203-924-4	111-96-6	2011-12-19
111	2,2'-dichloro-4,4'-methylenedianiline	202-918-9	101-14-4	2011-12-19
112	Cobalt dichloride	231-589-4	7646-79-9	2011/06/20 - 2008/10/28
113	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1	71888-89-6	2011-06-20
114	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6	68515-42-4	2011-06-20
115	Strontium chromate	232-142-6	7789-06-2	2011-06-20
116	1-Methyl-2-pyrrolidone	212-828-1	872-50-4	2011-06-20
117	1,2,3-Trichloropropane	202-486-1	96-18-4	2011-06-20
118	2-Ethoxyethyl acetate	203-839-2	111-15-9	2011-06-20
119	Hydrazine	206-114-9	302-01-2, 7803-57-8	2011-06-20
120	Cobalt(II) diacetate	200-755-8	71-48-7	2010-12-15
121	Cobalt(II) sulphate	233-334-2	10124-43-3	2010-12-15
122	2-Ethoxyethanol	203-804-1	110-80-5	2010-12-15
123	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	2010-12-15
124	2-Methoxyethanol	203-713-7	109-86-4	2010-12-15
125	Chromium trioxide	215-607-8	1333-82-0	2010-12-15
126	Cobalt(II) carbonate	208-169-4	513-79-1	2010-12-15
127	Cobalt(II) dinitrate	233-402-1	10141-05-6	2010-12-15
128	Trichloroethylene	201-167-4	79-01-6	2010-06-18
129	Potassium dichromate	231-906-6	7778-50-9	2010-06-18
130	Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1	2010-06-18
131	Ammonium dichromate	232-143-1	2151163	2010-06-18
132	Boric acid	233-139-2, 234-343-4	10043-35-3, 11113-50-1	2010-06-18
133	Sodium chromate	231-889-5	7775-11-3	2010-06-18
134	Disodium tetraborate, anhydrous	215-540-4	1303-96-4, 1330-43-4, 12179-04-3	2010-06-18
135	Potassium chromate	232-140-5	7789-00-6	2010-06-18

136	Acrylamide	201-173-7	79-06-1	2010-03-30
137	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2	2010-01-13
138	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8	2010-01-13
139	Anthracene oil	292-602-7	90640-80-5	2010-01-13
140	2,4-Dinitrotoluene	204-450-0	121-14-2	2010-01-13
141	Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2	2010-01-13
142	Anthracene oil, anthracene-low	292-604-8	90640-82-7	2010-01-13
143	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	2010-01-13
144	Diisobutyl phthalate	201-553-2	84-69-5	2010-01-13
145	Lead chromate	231-846-0	7758-97-6	2010-01-13
146	Anthracene oil, anthracene paste	292-603-2	90640-81-6	2010-01-13
147	Pitch, coal tar, high temp.	266-028-2	65996-93-2	2010-01-13
148	Anthracene oil, anthracene paste, distn. lights	295-278-5	91995-17-4	2010-01-13
149	Lead hydrogen arsenate	232-064-2	7784-40-9	2008-10-28
150	Benzyl butyl phthalate (BBP)	201-622-7	85-68-7	2008-10-28
151	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	81-15-2	2008-10-28
152	Diarsenic trioxide	215-481-4	1327-53-3	2008-10-28
153	Bis(tributyltin)oxide (TBTO)	200-268-0	56-35-9	2008-10-28
154	Triethyl arsenate	427-700-2	15606-95-8	2008-10-28
155	Diarsenic pentaoxide	215-116-9	1303-28-2	2008-10-28
156	Sodium dichromate	234-190-3	7789-12-0, 10588-01-9	2008-10-28
157	Dibutyl phthalate (DBP)	201-557-4	84-74-2	2008-10-28
158	4,4'- Diaminodiphenylmethane (MDA)	202-974-4	101-77-9	2008-10-28
159	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-84-8	2008-10-28
160	Anthracene	204-371-1	120-12-7	2008-10-28
161	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	247-148-4, 221-695-9	25637-99-4, 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	2008-10-28