

REACH DECLARATION

The European Union (EU) Regulation (EC) 1907/2006 Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) went into effect on June 1, 2007. REACH applies to the manufacture, placing on the market or use of "substances of very high concern" (SVHCs) on their own, in preparations or in articles. As a manufacturer of articles, Renesas-IDT will maintain compliance with current and future amendments to Annex XIV and Annex XVII.

Pursuant to Article 33(1) of the REACH regulation, suppliers of articles containing SVHCs in concentrations above 0.1% weight by weight (w/w) on the candidate list must provide their customers with sufficient information to ensure the safe use of the articles.

Renesas Electronics products and packaging materials are in compliance with the requirements set forth in the Candidate List of Substances of Very High Concern (SVHCs) identified by the European Chemicals Agency (ECHA). The entire list of 205 substances of SVHCs is provided in Appendix A. Notwithstanding the foregoing, the 2 listed substances below:

- i. 4,4'-isopropylidene-diphenol (Bisphenol A, CAS No. 80-05-07), is an exclusion on the above statement for the BGA products that use the core material listed in Appendix B which contain Bisphenol A and the content is declared in Appendix C.
- ii. Lead (Pb, CAS No. 7439-92-1) is exclusion on the above statement for products listed in Appendix D which contain above a concentration of 0.1%

This information concerning the substances contained in products and packaging is based on information provided by third parties. Renesas Electronics does not routinely conduct destructive testing or chemical analysis of incoming material, and does not warranty and guarantee the accuracy of the information. Renesas Electronics does, however, possess a reasonable belief that the information herein is representative and accurate.

Signature:  _____

Date: 02-27-2020

Name: LS Koay

Title: Sr. QA Manager

APPENDIX A: REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
101-77-9	202-974-4	4,4'-Methyldianilin MDA	Not Used or Added		
56-35-9	200-268-0	Bis(tributyltin) oxide	Not Used or Added		
85-68-7	201-622-7	Benzylbutylphthalate (BBP)	Not Used or Added		
120-12-7	204-371-1	Anthracene	Not Used or Added		
15606-95-8	427-700-2	triethyl arsenate	Not Used or Added		
25637-99-4	247-148-4 221-695-9	Hexabromocyclododecane,1,3,5,7,9,11- Hexabromocyclododecane (HBCDD)	Not Used or Added		
	(134237-50-6)	Alpha-hexabromocyclododecane	Not Used or Added		
	(134237-51-7)	Beta-hexabromocyclododecane	Not Used or Added		
	(134237-52-8)	Gamma-hexabromocyclododecane	Not Used or Added		
294-62-2	206-33-9	Cyclododecane	Not Used or Added		
81-15-2	201-329-4	Musk xylene	Not Used or Added		
85535-84-8	287-476-5	Alkanes, C10-13, Chloro (Short chain chlorinated paraffins)	Not Used or Added		
7646-79-9	231-589-4	Cobalt (2+) dichloride	Not Used or Added		
10588-01-9	234-190-3	sodium dichromate (anhydrous)	Not Used or Added		
7789-12-0	234-190-3	sodium dichromate (dihydrate)	Not Used or Added		
117-81-7	204-211-0	Di(2-ethylhexyl)phthalate DEHP	Not Used or Added		
7784-40-9	232-064-2	lead hydrogen arsenate	Not Used or Added		
1303-28-2	215-116-9	Diarsenic pentoxide	Not Used or Added		
1327-53-3	215-481-4	Diarsenic trioxide	Not Used or Added		
84-74-2	201-557-4	Dibutylphthalate	Not Used or Added		
121-14-2	204-450-0	2,4-Dinitrotoluene	Not Used or Added		
90640-80-5	292-602-7	Anthracene oil	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
91995-17-4	295-278-5	Anthracene oil, anthracene paste, distrn. Lights	Not Used or Added		
91995-15-2	295-275-9	Anthracene oil, anthracene paste, anthracene fraction	Not Used or Added		
90640-82-7	292-604-8	Anthracene oil, anthracene-low	Not Used or Added		
90640-81-6	292-603-2	Anthracene oil, anthracene paste	Not Used or Added		
84-69-5	201-553-2	Diisobutyl phthalate	Not Used or Added		
	(650-017-00-8)	Aluminosilicate, Refractory Ceramic Fibers	Not Used or Added		
	(650-017-00-8)	Zirconia Aluminosilicate, Refractory Ceramic Fibers	Not Used or Added		
7758-97-6	231-846-0	Lead chromate	Not Used or Added		
12656-85-8	235-759-9	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	Not Used or Added		
1344-37-2	215-693-7	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	Not Used or Added		
79-06-1	201-173-7	Acrylamide	Not Used or Added		
115-96-8	204-118-5	Tris(2-chloroethyl)phosphate	Not Used or Added		
65996-93-2	266-028-2	Coal tar pitch, high temperatures	Not Used or Added		
	(033-005-001)	Arsenic acid and its salts	Not Used or Added		
79-01-6	201-167-4	Trichloroethylene	Not Used or Added		
10043-35-3 11113-50-1	233-139-2 234-343-4	Boric Acid	Not Used or Added		
1330-43-4 12179-04-3 1303-96-4	215-540-4	Disodium tetraborate, anhydrous	Not Used or Added		
12267-73-1	235-541-3	Tetraboron disodium heptaoxide, hydrate	Not Used or Added		
7775-11-3	231-889-5	Sodium chromate	Not Used or Added		
7789-00-6	232-140-5	Potassium chromate	Not Used or Added		
7789-09-5	232-143-1	Ammonium dichromate	Not Used or Added		
7778-50-9	231-906-6	Potassium dichromate	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
10124-43-3	233-334-2	Cobalt(II) sulphate	Not Used or Added		
10141-05-6	233-402-1	Cobalt(II) dinitrate	Not Used or Added		
513-79-1	208-169-4	Cobalt(II) carbonate	Not Used or Added		
71-48-7	200-755-8	Cobalt(II) diacetate	Not Used or Added		
109-86-4	203-713-7	2-Methoxyethanol	Not Used or Added		
110-80-5	203-804-1	2-Ethoxyethanol	Not Used or Added		
108-70-3	203-608-6	1,3,5 Trichlorobenzene	Not Used or Added		
87-61-6	201-757-1	1,2,3 Trichlorobenzene	Not Used or Added		
120-82-1	204-428-0	1,2,4 Trichlorobenzene	Not Used or Added		
1333-82-0	215-607-8	Chromium trioxide	Not Used or Added		
		Acids generated from chromium trioxide and their oligomers	Not Used or Added		
		Group containing:			
7738-94-5	231-801-5	Chromic acid			
13530-68-2	236-881-5	Dichromic acid			
		Oligomers of chromic acid and dichromic acid			
111-15-9	203-839-2	2-Ethoxyethyl Acetate	Not Used or Added		
7789-06-2	232-142-6	Strontium Chromate	Not Used or Added		
68515-42-4	271-084-6	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	Not Used or Added		
302-01-2 7803-57-8	206-114-9	Hydrazine	Not Used or Added		
872-50-4	212-828-1	1-Methyl-2-Pyrrolidone	Not Used or Added		
96-18-4	202-486-1	1,2,3-Trichloropropane	Not Used or Added		
71888-89-6	276-158-1	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
6477-64-1	229-335-2	Lead dipicrate	Not Used or Added		
15245-44-0	239-290-0	Lead styphnate	Not Used or Added		
13424-46-9	236-542-1	Lead diazide	Not Used or Added		
77-09-8	201-004-7	Phenolphthalein	Not Used or Added		
101-14-4	202-918-9	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	Not Used or Added		
127-19-5	204-826-4	N,N-dimethylacetamide (DMAC)	Not Used or Added		
3687-31-8	222-979-5	trilead diarsenate	Not Used or Added		
7778-44-1	231-904-5	calcium arsenate	Not Used or Added		
7778-39-4	231-901-9	arsenic acid	Not Used or Added		
111-96-6	203-924-4	bis(2-methoxyethyl) ether	Not Used or Added		
107-06-2	203-458-1	1,2-Dichloroethane	Not Used or Added		
140-66-9	205-426-2	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	Not Used or Added		
90-04-0	201-963-1	2-Methoxyaniline; o-Anisidine	Not Used or Added		
117-82-8	204-212-6	Bis(2-methoxyethyl) phthalate	Not Used or Added		
25214-70-4	500-036-1	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	Not Used or Added		
-	-	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)	Not Used or Added		
-	-	Aluminosilicate Refractory Ceramic Fibres (RCF)	Not Used or Added		
49663-84-5	256-418-0	Pentazinc chromate octahydroxide	Not Used or Added		
11103-86-9	234-329-8	Potassium hydroxyoctaoxodizincatedichromate	Not Used or Added		
24613-89-6	246-356-2	Dichromium tris(chromate)	Not Used or Added		
112-49-2	203-977-3	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	Not Used or Added		
110-71-4	203-794-9	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
561-41-1	209-218-2	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	Not Used or Added		
90-94-8	202-027-5	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	Not Used or Added		
548-62-9	208-953-6	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	Not Used or Added		
2580-56-5	219-943-6	[4-[[4-anilino-1-naphthyl](4-(dimethylamino)phenyl)methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)	Not Used or Added		
1303-86-2	215-125-8	Diboron trioxide	Not Used or Added		
75-12-7	200-842-0	Formamide	Not Used or Added		
17570-76-2	401-750-5	Lead(II) bis(methanesulfonate)	Not Used or Added		
101-61-1	202-959-2	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	Not Used or Added		
2451-62-9	219-514-3	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	Not Used or Added		
6786-83-0	229-851-8	α,α -Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	Not Used or Added		
59653-74-6	423-400-0	β -TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	Not Used or Added		
1163-19-5	214-604-9	Bis(pentabromophenyl) ether (DecaBDE)	Not Used or Added		
72629-94-8	276-745-2	Pentacosafuorotridecanoic acid	Not Used or Added		
307-55-1	206-203-2	Tricosafuorododecanoic acid	Not Used or Added		
2058-94-8	218-165-4	Henicosafuoroundecanoic acid	Not Used or Added		
376-06-7	206-803-4	Heptacosafuorotetradecanoic acid	Not Used or Added		
-	-	4-(1,1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
-	-	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	Not Used or Added		
123-77-3	204-650-8	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide))	Not Used or Added		
85-42-7, 13149-00-3, 14166-21-3	201-604-9, 236-086-3, 238-009-9	Hexahydro-2-benzofuran-1,3-dione (HHPA), cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	Not Used or Added		
25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	Not Used or Added		
625-45-6	210-894-6	Methoxy acetic acid	Not Used or Added		
84777-06-0	284-032-2	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	Not Used or Added		
605-50-5	210-088-4	Diisopentylphthalate	Not Used or Added		
776297-69-9	-	N-pentyl-isopentylphthalate	Not Used or Added		
629-14-1	211-076-1	1,2-Diethoxyethane	Not Used or Added		
68-12-2	200-679-5	N,N-dimethylformamide; dimethyl formamide	Not Used or Added		
683-18-1	211-670-0	Dibutyltin dichloride (DBT)	Not Used or Added		
51404-69-4	257-175-3	Acetic acid, lead salt, basic	Not Used or Added		
1319-46-6	215-290-6	Trilead bis(carbonate)dihydroxide (basic lead carbonate)	Not Used or Added		
12036-76-9	234-853-7	Lead oxide sulfate	Not Used or Added		
69011-06-9	273-688-5	[Phthalato(2-)]dioxotrilead	Not Used or Added		
12578-12-0	235-702-8	Dioxobis(stearato)trilead	Not Used or Added		
91031-62-8	292-966-7	Fatty acids, C16-18, lead salts	Not Used or Added		
13814-96-5	237-486-0	Lead bis(tetrafluoroborate)	Not Used or Added		
20837-86-9	244-073-9	Lead cyanamidate	Not Used or Added		
10099-74-8	233-245-9	Lead dinitrate	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
1317-36-8	215-267-0	Lead oxide (lead monoxide)	Not Used or Added		
1314-41-6	215-235-6	Lead tetroxide (orange lead)	Not Used or Added		
12060-00-3	235-038-9	Lead titanium trioxide	Not Used or Added		
12626-81-2	235-727-4	Lead Titanium Zirconium Oxide	Not Used or Added		
12065-90-6	235-067-7	Pentalead tetraoxide sulphate	Not Used or Added		
8012-00-8	232-382-1	Pyrochlore, antimony lead yellow	Not Used or Added		
68784-75-8	272-271-5	Silicic acid, barium salt, lead-doped	Not Used or Added		
11120-22-2	234-363-3	Silicic acid, lead salt	Not Used or Added		
62229-08-7	263-467-1	Sulfurous acid, lead salt, dibasic	Not Used or Added		
78-00-2	201-075-4	Tetraethyllead	Not Used or Added		
12202-17-4	235-380-9	Tetralead trioxide sulphate	Not Used or Added		
12141-20-7	235-252-2	Trilead dioxide phosphonate	Not Used or Added		
110-00-9	203-727-3	Furan	Not Used or Added		
75-56-9	200-879-2	Propylene oxide; 1,2-epoxypropane; methyloxirane	Not Used or Added		
64-67-5	200-589-6	Diethyl sulphate	Not Used or Added		
77-78-1	201-058-1	Dimethyl sulphate	Not Used or Added		
143860-04-2	421-150-7	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	Not Used or Added		
88-85-7	201-861-7	Dinoseb	Not Used or Added		
838-88-0	212-658-8	4,4'-methylenedi-o-toluidine	Not Used or Added		
101-80-4	202-977-0	4,4'-oxydianiline and its salts	Not Used or Added		
60-09-3	200-453-6	4-Aminoazobenzene; 4-Phenylazoaniline	Not Used or Added		
95-80-7	202-453-1	4-methyl-m-phenylenediamine (2,4-toluene- diamine)	Not Used or Added		
120-71-8	204-419-1	6-methoxy-m-toluidine (p-cresidine)	Not Used or Added		
92-67-1	202-177-1	Biphenyl-4-ylamine	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
97-56-3	202-591-2	o-aminoazotoluene	Not Used or Added		
95-53-4	202-429-0	o-Toluidine; 2-Aminotoluene	Not Used or Added		
79-16-3	201-182-6	N-methylacetamide	Not Used or Added		
106-94-5	203-445-0	1-bromopropane	Not Used or Added		
3864-99-1	223-383-8	2,4-di-tert-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	Not Used or Added		
335-67-1	206-397-9	Pentadecafluorooctanoic acid (PFOA)	Not Used or Added		
1306-19-0	215-146-6	Cadmium Oxide	Not Used or Added		
3846-71-7	223-346-6	2-benzotriazol-2-yl-4, 6-di-tert-butylphenol (UV-320)	Not Used or Added		
25973-55-1	247-384-8	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	Not Used or Added		
3825-26-1	223-320-4	Ammoniumpentadecafluorootanoate (APFO)	Not Used or Added		
36437-37-3	253-037-1	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	Not Used or Added		
7440-43-9	231-152-8	Cadmium	Not Used or Added		
-	-	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 - degined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	Not Used or Added		
131-18-0	205-017-9	Depentyl phthalate (DPP)	Not Used or Added		
1306-23-6	215-147-8	Cadmium Sulphide	Not Used or Added		
84-75-3	201-559-5	Dihexyl Phthalate	Not Used or Added		
573-58-0	209-358-4	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	Not Used or Added		
31937-37-7	-	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)	Not Used or Added		
96-45-7	202-506-9	Imidazolidine-2-thione; 2-imidazoline-2-thiol	Not Used or Added		
301-04-2	206-104-4	Lead di(acetate)	Not Used or Added		
25155-23-1	246-677-8	Trixylyl phosphate	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

CAS#	EC Number (CLP Index #)	MG	Usage	If used, containing product part #	Concentration PPM
68515-50-4	271-093-5	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	Not Used or Added		
10108-64-2	233-296-7	Cadmium chloride	Not Used or Added		
-	239-172-9; 234-390-0	Sodium perborate; perboric acid, sodium salt	Not Used or Added		
7632-04-4	231-556-4	Sodium peroxometaborate	Not Used or Added		
15571-58-1	239-622-4	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	Not Used or Added		
-	-	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-tannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oethylthio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (Reaction mass of DOTE and MOTE3)	Not Used or Added		
7790-79-6	232-222-0	Cadmium fluoride	Not Used or Added		
10124-36-4 31119-53-6	233-331-6	Cadmium sulphate	Not Used or Added		
3846-71-7	223-346-6	2-benzotriazol-2-yl-4, 6-di-tert-butylphenol (UV-328)	Not Used or Added		
25973-55-1	247-384-8	2-(2H-benzotriazol-2-yl)-4, 6-ditertpentylphenol (UV-328)	Not Used or Added		
68515-51-5, 68648-93-1/		1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters	Not Used or Added		
271-094-0, 272-013-1		1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with 30.3% of dihexyl phthalate (EC No. 201-559-5)	Not Used or Added		
vPvB		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]	Not Used or Added		
1120-71-4	214-317-9	1,3-Propanesultone	Not Used or Added		
3864-99-1	223-383-8	2,4-Ditert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	Not Used or Added		
36437-37-3	253-037-1	2-a(2H-Benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	Not Used or Added		
84-61-7	201-545-9	Dicyclohexyl phthalate	Not Used or Added		
13048-33-4	235-921-9	Hexamethylene diacrylate (Hexane-1, 6-diol diacrylate)	Not Used or Added		
98-95-3	202-716-0	Nitrobenzene	Not Used or Added		
375-95-1; 21049-39-8; 4149-60-4	206-801-3	Perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-Heptafluorooctanoic acid and its sodium and ammonium salts)	Not Used or Added		

APPENDIX A (continued): REACH SVHCs

SCHC #	Date of Inclusion	CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
	20/06/2016	50-32-8	200-028-5	Benzo[def]chrysene (Benzo[a]pyrene)	Not Used or Added		
	12/01/2017	80-05-7	201-245-8	4,4'-isopropylidenediphenol (bisphenol A)	Substrate Core Material (impurity in dielectric layer) – Not intentionally added	Appendix B	Appendix C
	12/01/2017	-	-	4-Heptylphenol, branched and linear	Not Used or Added		
	12/01/2017	-	-	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts (Nonadecafluorodecanoic acid; Ammonium nonadecafluorodecanoate; Decanoic acid, nonadecafluoro-, sodium si)	Not used or added		
	12/01/2017	80-46-6	201-280-9	p-(1,1-dimethylpropyl)phenol	Not used or added		
	07/07/2017	-	-	Perfluorohexane-1-sulphonic acid and its salts	Not used or added		
	01/15/2018	-	-	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 (4-HPbl))	Not used or added		
	01/15/2018	-	-	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)	Not used or added		
	01/15/2018	218-01-9, 1719-03-5	205-923-4	Chrysene	Not added or used		
	01/15/2018	10022-68-1, 10325-94-7	233-710-6	Cadmium Nitrate	Not used or added		
	01/15/2018	21041-95-2	244-168-5	Cadmium Hydroxide	Not used or added		
	01/15/2018	513-78-0	208-168-9	Cadmium Carbonate	Not used or added		
	01/15/2018	56-55-3, 1718-53-2	200-280-6	Benz[a]anthracene	Not used or added		
	04/13/2018	552-30-7	209-008-0	benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride)(TMA)	Not used or added		
	04/17/2018	81-64-7	201-545-9	Dicyclohexyl phthalate (DCHP)	Not used or added		
	06/27/18	556-67-2	209-136-7	Octamethylcyclotetrasiloxane (D4)	Not used or added		
	06/27/18	541-02-6	208-764-9	Decamethylcyclopentasiloxane (D5)	Not used or added		
	06/27/18	540-97-6	208-762-8	Dodecamethylcyclohexasiloxane (D6)	Not used or added		

	Date of Inclusion	CAS#	EC Number (CLP Index #)	Substance	Usage	If used, containing product part #	Concentration PPM
	06/27/18	7439-92-1	231-100-4	Lead		Ref. Appendix D	>0.1%
	06/27/18	12008-41-2	234-541-0	Disodium octaborate	Not used or added		
	06/27/18	191-24-2	205-883-8	Benzo[ghi]perylene	Not used or added		
	06/27/18	61788-32-7	262-967-7	Terphenyl hydrogenated	Not used or added		
	06/27/18	107-15-3	203-468-6	Ethylenediamine (EDA)	Not used or added		
	06/27/18	552-30-7	209-008-0	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	Not used or added		
	06/27/18	84-61-7	201-545-9	Dicyclohexyl phthalate (DCHP)	Not used or added		
	01/15/19	15087-24-8	239-139-9	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor; 3-BC)	Not used or added		
	01/15/19	6807-17-6	401-720-1	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	Not used or added		
	01/15/19	207-08-9	205-916-6	Benzo[k]fluoranthene	Not used or added		
	01/15/19	206-44-0; 93951-69-0	205-912-4	Fluoranthene	Not used or added		
	01/15/19	85-01-8	201-581-5	Phenanthrene	Not used or added		
	01/15/19	129-00-0; 1718-52-1	204-927-3	Pyrene	Not used or added		
	07/16/19	110-49-6	203-772-9	2-methoxyethyl acetate	Not used or added		
	07/16/19	-	-	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP)	Not used or added		
	07/16/19	-	-	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	Not used or added		
	07/16/19	98-54-4	202-679-0	4-tert-butylphenol	Not used or added		
	01/16/20	71850-09-4	276-090-2	Diisohexyl phthalate	Not used or added		
	01/16/20	119313-12-1	404-360-3	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	Not used or added		
	01/16/20	71868-10-5	400-600-6	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	Not used or added		
	01/16/20	-	-	Perfluorobutane sulfonic acid (PFBS) and its salts	Not used or added		

APPENDIX B: BGA Package Core & Prepreg Materials

MGC's Core Resin Type	MGC's Prepreg Resin Type
BT-CCLs: CCL-HL832 CCL-HL832EX CCL-HL832HS CCL-832NX(Type A)	BT-Prepregs: GHPL-830 GHPL-830EX GHPL-830HS GHPL-830NX(Type A)

APPENDIX C: BPA Statement

1. Based on 3rd Party Lab SGS Standard RSTS-CHEM-239-1 Test Method, sample size: 2mm x 2mm:
 - a. MGC core/PP type material as specified in Appendix B contain BPA<0.3wt%
 - b. BGA Substrate materials which use MGC core/PP type material as specified in Appendix B contain BPA <0.1wt%
 - c. BGA Finish Product which used MGC core/PP type material as specified in Appendix B contain BPA <0.1wt%
2. Based on MGC internal test method, Sample size: powder
 - a. MGC core/PP type material as specified in Appendix B contain BPA<1wt%
 - b. BGA Substrate materials which use MGC core/PP type material as specified in Appendix B contain BPA >0.1wt%
 - c. BGA Finish Product cannot be tested by MGC internal test method.
3. Based on above Renesas-IDT adopted SGS 3rd Party Lab Standard RSTS-CHEM-239-1 and the result in above item 1.

[illegible]