

Declaration letter of EU REACH_SVHC

The REACH (Registration, Evaluation and Authorisation of Chemicals) regulation

We hereby declare and guarantee that any product/part provided will be complied with EU REACH Regulation with below schedule.

And we will take all appropriate actions to comply with the below requirements:

1. Item

TR-PET, BL-PET, BL-PET NO BOTTOM PLATE, V-CHIP



2. REACH_SVHC List

Please check to attached File (REACH_SVCHC LIST)

3. Requirements

- 3-1. There is no intended release during normal or reasonably foreseeable conditions of use of our product/part supplied
- 3-2. Our product/part doesn't contain any SVHC (Substances of Very High Concern) substances above 0.1% by weight of the whole product/part.
- 3-3. We will provide enough information of SVHC substances within 21 days if requested.

4. Supplier's information

Company / Manufacture Name	SAMWHA Electric Co.,LTD.
Company stamp	
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Signature	
Reply date (YYYY/MM/DD)	December 23, 2016



SAMWHA ELECTRIC Co., Ltd.

REACH_SVHC LIST

DATE	No	Substances	CAS No.	EC No.	Reason
2008-10	1	Lead hydrogen arsenate	7784-40-9	232-064-2	Carcinogenic toxic for reproduction
	2	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	Toxic for reproduction
	3	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	204-211-0	Toxic for reproduction
	4	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	vPvB
	5	Diarsenic trioxide	1327-53-3	215-481-4	Carcinogenic
	6	Bis(tributyltin)oxide (TBTO)	56-35-9	200-268-0	PBT
	7	Triethyl arsenate	15606-95-8	427-700-2	Carcinogenic
	8	Diarsenic pentaoxide	1303-28-2	215-116-9	Carcinogenic
	9	Sodium dichromate	7789-12-0 10588-01-9	234-190-3	Carcinogenic mutagenic toxic for reproduction
	10	Dibutyl phthalate (DBP)	84-74-2	201-557-4	Toxic for reproduction
	11	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	202-974-4	Carcinogenic
	12	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	PBT and vPvB
	2010-01	13	Anthracene	120-12-7	204-371-1
14		Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified : Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4 3194-55-6	247-148-4 221-695-9	PBT
15		Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7	Carcinogenic toxic for reproduction
16		Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	235-759-9	Carcinogenic toxic for reproduction
17		Anthracene oil	90640-80-5	292-602-7	Carcinogenic1 PBT and vPvB
18		2,4-Dinitrotoluene	121-14-2	204-450-0	Carcinogenic
2010-03	19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	Carcinogenic2 mutagenic3 PBT and vPvB
	20	Anthracene oil, anthracene-low	90640-82-7	292-604-8	Carcinogenic2 mutagenic3 PBT, vPvB
	21	Tris(2-chloroethyl)phosphate	115-96-8	204-118-5	Toxic for reproduction
	22	Diisobutyl phthalate	84-69-5	201-553-2	Toxic for reproduction
	23	Lead chromate	7758-97-6	231-846-0	Carcinogenic toxic for reproduction
	24	Anthracene oil, anthracene paste	90640-81-6	292-603-2	Carcinogenic2 mutagenic3 PBT, vPvB
	25	Pitch, coal tar, high temp.	65996-93-2	266-028-2	Carcinogenic PBT, vPvB
	26	Anthracene oil, anthracene paste, distn. lights	91995-17-4	295-278-5	Carcinogenic2 mutagenic3 PBT, vPvB
	27	Acrylamide	79-06-1	201-173-7	Carcinogenic, mutagenic
	2010-06	28	Trichloroethylene	79-01-6	201-167-4
29		Potassium dichromate	7778-50-9	231-906-6	Carcinogenic, mutagenic, toxic for reproduction
30		Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3	Toxic for reproduction
31		Ammonium dichromate	7789-09-5	232-143-1	Carcinogenic, mutagenic, toxic for reproduction
32		Boric acid	10043-35-3 11113-50-1	233-139-2 234-343-4	Toxic for reproduction
33		Sodium chromate	7775-11-3	231-889-5	Carcinogenic, mutagenic, toxic for reproduction
34		Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	215-540-4	Toxic for reproduction
35		Potassium chromate	7789-00-6	232-140-5	Carcinogenic, mutagenic
2010-12	36	Cobalt(II) diacetate	71-48-7	200-755-8	Carcinogenic, toxic for reproduction
	37	Cobalt(II) sulphate	10124-43-3	233-334-2	Carcinogenic toxic for reproduction
	38	2-Ethoxyethanol	110-80-5	203-804-1	Toxic for reproduction
	39	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.	7738-94-5 13530-68-2	231-801-5 236-881-5	Carcinogenic
	40	2-Methoxyethanol	109-86-4	203-713-7	Toxic for reproduction
	41	Chromium trioxide	1333-82-0	215-607-8	Carcinogenic, mutagenic
	42	Cobalt(II) carbonate	513-79-1	208-169-4	Carcinogenic toxic for reproduction
	43	Cobalt(II) dinitrate	10141-05-6	233-402-1	Carcinogenic toxic for reproduction



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	No	Substances	CAS No.	EC No.	Reason
2011-06	44	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	Toxic for reproduction
	45	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	Toxic for reproduction
	46	Strontium chromate	7789-06-2	232-142-6	Carcinogenic
	47	1-Methyl-2-pyrrolidone	872-50-4	212-828-1	Toxic for reproduction
	48	1,2,3-Trichloropropane	96-18-4	202-486-1	Carcinogenic toxic for reproduction
	49	2-Ethoxyethyl acetate	111-15-9	203-839-2	Toxic for reproduction
	50	Hydrazine	302-01-2 7803-57-8	206-114-9	Carcinogenic
51	Cobalt dichloride	7646-79-9	231-589-4	Carcinogenic toxic for reproduction	
2011-12	52	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	Equivalent level of concern having probable serious effects to the environment
	53	N,N-dimethylacetamide	127-19-5	204-826-4	Toxic for reproduction
	54	Phenolphthalein	77-09-8	201-004-7	Carcinogenic
	55	Lead diazide, Lead azide	13424-46-9	236-542-1	Toxic for reproduction
	56	Lead dipicrate	6477-64-1	229-335-2	Toxic for reproduction
	57	1,2-dichloroethane	107-06-2	203-458-1	Carcinogenic
	58	Calcium arsenate	7778-44-1	231-904-5	Carcinogenic
	59	Dichromium tris(chromate)	24613-89-6	246-356-2	Carcinogenic
	60	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	Carcinogenic
	61	Pentazinc chromate octahydroxide	49663-84-5	256-418-0	Carcinogenic
	62	Arsenic acid	7778-39-4	231-901-9	Carcinogenic
	63	Potassium hydroxyoctaoxidizincatedichromate	11103-86-9	234-329-8	Carcinogenic
	64	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	Carcinogenic
	65	Lead styphnate	15245-44-0	239-290-0	Toxic for reproduction
	66	Trilead diarsenate	3687-31-8	222-979-5	Carcinogenic toxic for reproduction
	67	Zirconia Aluminosilicate Refractory Ceramic Fibres	-	-	Carcinogenic
68	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	Toxic for reproduction	
69	Aluminosilicate Refractory Ceramic Fibres	-	-	Carcinogenic	
70	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	Toxic for reproduction	
71	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	Carcinogenic	
2012-06	72	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	229-851-8	Carcinogenic
	73	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	Carcinogenic
	74	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	423-400-0	Mutagenic
	75	Diboron trioxide	1303-86-2	215-125-8	Toxic for reproduction
	76	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	Toxic for reproduction
	77	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	209-218-2	Carcinogenic
	78	Lead(II) bis(methanesulfonate)	17570-76-2	401-750-5	Toxic for reproduction
	79	Formamide	75-12-7	200-842-0	Toxic for reproduction
	80	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammoniumchloride (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	208-953-6	Carcinogenic
	81	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	Toxic for reproduction
82	[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	219-943-6	Carcinogenic	
83	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	219-514-3	Mutagenic	
84	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	202-027-5	Carcinogenic	
2012-12	85	Pyrochlore, antimony lead yellow	8012-00-8	232-382-1	Toxic for reproduction
	86	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	Carcinogenic
	87	Henicosafuoroundecanoic acid	2058-94-8	218-165-4	vPvB
	88	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]	25550-51-0 19438-60-9 48122-14-1 57110-29-9	247-094-1 243-072-0 256-356-4 260-566-1	Equivalent level of concern having probable serious effects to human health
	89	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]	85-42-7 13149-00-3 14166-21-3	201-604-9 236-086-3 238-009-9	Equivalent level of concern having probable serious effects to human health



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No	Substances	CAS No.	EC No.	Reason	
2012-12	90	Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	Toxic for reproduction
	91	Lead bis(tetrafluoroborate)	13814-96-5	237-486-0	Toxic for reproduction
	92	Lead dinitrate	10099-74-8	233-245-9	Toxic for reproduction
	93	Silicic acid, lead salt	11120-22-2	234-363-3	Toxic for reproduction
	94	4-Aminoazobenzene	60-09-3	200-453-6	Carcinogenic
	95	Lead titanium zirconium oxide	12626-81-2	235-727-4	Toxic for reproduction
	96	Lead monoxide (lead oxide)	1317-36-8	215-267-0	Toxic for reproduction
	97	o-Toluidine	95-53-4	202-429-0	Carcinogenic
	98	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	Toxic for reproduction
	99	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped	68784-75-8	272-271-5	Toxic for reproduction
	100	Trilead bis(carbonate)dihydroxide	1319-46-6	215-290-6	Toxic for reproduction
	101	Furan	110-00-9	203-727-3	Carcinogenic
	102	N,N-dimethylformamide	68-12-2	200-679-5	Toxic for reproduction
	103	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	Equivalent level of concern having probable serious effects to the environment
	104	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]	-	-	Equivalent level of concern having probable serious effects to the environment
	105	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	Carcinogenic
	106	Diethyl sulphate	64-67-5	200-589-6	Carcinogenic
	107	Dimethyl sulphate	77-78-1	201-058-1	Carcinogenic
	108	Lead oxide sulfate	12036-76-9	234-853-7	Toxic for reproduction
	109	Lead titanium trioxide	12060-00-3	235-038-9	Toxic for reproduction
	110	Acetic acid, lead salt, basic	51404-69-4	257-175-3	Toxic for reproduction
	111	[Phthalato(2-)]dioxotrilead	69011-06-9	273-688-5	Toxic for reproduction
	112	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9	PBT
	113	N-methylacetamide	79-16-3	201-182-6	Toxic for reproduction
	114	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7	Toxic for reproduction
	115	1,2-Diethoxyethane	629-14-1	211-076-1	Toxic for reproduction
	116	Tetralead trioxide sulphate	12202-17-4	235-380-9	Toxic for reproduction
	117	N-pentyl-isopentylphthalate	776297-69-9	-	Toxic for reproduction
	118	Dioxobis(stearato)trilead	12578-12-0	235-702-8	Toxic for reproduction
	119	Tetraethyllead	78-00-2	201-075-4	Toxic for reproduction
	120	Pentalead tetraoxide sulphate	12065-90-6	235-067-7	Toxic for reproduction
	121	Pentacosaflluorotridecanoic acid	72629-94-8	276-745-2	vPvB
	122	Tricosaflluorododecanoic acid	307-55-1	206-203-2	vPvB
	123	Heptacosaflluorotetradecanoic acid	376-06-7	206-803-4	vPvB
	124	1-bromopropane (n-propyl bromide)	106-94-5	203-445-0	Toxic for reproduction
125	Methoxyacetic acid	625-45-6	210-894-6	Toxic for reproduction	
126	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1	Carcinogenic	
127	Methyloxirane (Propylene oxide)	75-56-9	200-879-2	Carcinogenic	
128	Trilead dioxide phosphonate	12141-20-7	235-252-2	Toxic for reproduction	
129	o-aminoazotoluene	97-56-3	202-591-2	Carcinogenic	
130	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	Toxic for reproduction	
131	4,4'-oxydianiline and its salts	101-80-4	202-977-0	Carcinogenic	
132	Orange lead (lead tetroxide)	1314-41-6	215-235-6	Toxic for reproduction	
133	Biphenyl-4-ylamine	92-67-1	202-177-1	Carcinogenic	
134	Diisopentylphthalate	605-50-5	210-088-4	Toxic for reproduction	
135	Fatty acids, C16-18, lead salts	91031-62-8	292-966-7	Toxic for reproduction	
136	Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	Equivalent level of concern having probable serious effects to human health	
137	Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1	Toxic for reproduction	
138	Lead cyanamidate	20837-86-9	244-073-9	Toxic for reproduction	
2013-06	139	Cadmium	7440-43-9	231-152-8	Carcinogenic
	140	Ammonium pentadecafluorooctanoate(APFO)	3825-26-1	223-320-4	Toxic for reproduction
	141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	Toxic for reproduction
	142	Dipentyl phthalate (DPP)	131-18-0	205-017-9	Toxic for reproduction
	143	4-Nonylphenol, branched and linear,ethoxylated	-	-	Equivalent level of concern having probable serious effects to the environment
2013-12	144	Cadmium oxide	1306-19-0	215-146-2	Carcinogenic
	145	Cadmium sulphide	1306-23-6	215-147-8	Carcinogenic
	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	Carcinogenic
	147	Dihexyl phthalate	84-75-3	201-559-5	Toxic for reproduction
	148	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	202-506-9	Toxic for reproduction
	149	Trixylyl phosphate	25155-23-1	246-677-8	Toxic for reproduction
	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	Carcinogenic
	151	Lead di(acetate)	301-04-2	206-104-4	Toxic for reproduction



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2014-06	152	Sodium peroxometaborate	7632-04-4	231-556-4	Toxic for Reproduction
	153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	Toxic for Reproduction
	154	Cadmium chloride	10108-64-2	233-296-7	CMR
	155	Sodium perborate; Perboric acid, sodium salt	-	239-172-9 234-390-0	Toxic for Reproduction
2014-12	156	Cadmium fluoride	7790-79-6	232-222-0	Carcinogenic Mutagenic Toxic for reproduction
	157	Cadmium sulphate	10124-36-4; 311	233-331-6	Carcinogenic Mutagenic Toxic for reproduction
	158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	PBT vPvB
	159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	PBT vPvB
	160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	Toxic for reproduction
	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)	-	-	Toxic for reproduction
2015-06	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 (EC No. 201-559-5)	271-094-0 272-013-1	271-094-0 272-013-1	Toxic for reproduction
	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]	-	-	vPvB
2015-12	164	Nitrobenzene	98-95-3	202-716-0	Toxic for reproduction
	165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	vPvB
	166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1	vPvB
	167	1,3-propanesultone	1120-71-4	214-317-9	Carcinogenic
	168	Perfluorononan-1-oic-acid and its sodium and ammonium saltspropanesultone	375-95-1 21049-39-8 4149-60-4	206-801-3	Toxic for reproduction PBT
2016-06	169	Benzo[def]chrysene	50-32-8	200-028-5	Carcinogenic Mutagenic Toxic for reproduction PBT vPvB

