



# Eastern Electronics Co., Ltd.

NO.4 SHIN-LONG ROAD, KWEI-SHAN INDUSTRIAL AREA  
TEL: (03) 3611141-4 TAO-YUAN, TAIWAN, REPUBLIC OF CHINA

## Certificate of Compliance for REACH

To minimize the environmental impact and take more responsibility to the earth we live, Eastern Electronics Co., Ltd. hereby confirms, based on the feedback from our suppliers that our products shipping to the EU territory comply with the restriction of SVHC (Substances of Very High Concern) in (EC) 1907/2006 (REACH -- Registration, Evaluation, Authorization, and Restriction of Chemicals) regulated by the European Union.

### Content of Compliance

223 substances listed in SVHC < 0.1 % by weight (1000 ppm)

(For more information about SVHC candidate list, please refer to the following pages)



### Applicable products

DCDC-USB(RS)

Signature : 

Print Name/Title : Amy-Tsai / QA Supervisor

Date : 2022/3/18

<b>Prüfbericht - Nr.: 0114076876d 001</b>		<b>Seite 1 von 11</b>
<i>Test Report No.:</i>		<i>Page 1 of 11</i>
<b>Auftraggeber:</b>	Eastern Electronics Co., Ltd.	
<i>Client:</i>	No.4, Shin-Long Road, Taoyuan Dist., Taoyuan City 33068, Taiwan, R.O.C.	
<b>Gegenstand der Prüfung:</b>	1 PCB board, green	
<i>Test Item:</i>		
<b>Bezeichnung:</b>	DC-DC converter / DCDC-USB(RS)	
<i>Identification:</i>		
<b>Anlieferungszustand:</b>	apparent good	<b>Eingangsdatum:</b> 2018-04-25
<i>Delivery condition:</i>		<i>Date of Receipt:</i>
<b>Prüfört:</b>	TÜV Rheinland Hong Kong Ltd.	
<i>Testing location:</i>		
<b>Prüfgrundlage:</b>	Customer Requirement:	
<i>Test specification:</i>	Risk Assessment of Articles: Screening of substances of very high concern (SVHC) subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 ,(EU) No 895/2014 and (EU) No. 2017/999 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA), according to the EU Court of Justice rules on SVHCs in articles (Guidance on requirements for substances in articles, June 2017)	
<b>Prüfergebnis:</b>	The test results are the measurements, stated in the test report.	
<i>Test result:</i>		
<b>geprüft: tested by:</b>	<b>kontrolliert: checked by:</b>	
		
2018-05-09 Fanny Lin	2018-05-09 Carl Chang	
/Project Coordinator	/Department Manager	
<b>Datum</b>	<b>Name/Stellung</b>	<b>Unterschrift</b>
<i>Date</i>	<i>Name/Position</i>	<i>Signature</i>
<b>Datum</b>	<b>Name/Stellung</b>	<b>Unterschrift</b>
<i>Date</i>	<i>Name/Position</i>	<i>Signature</i>
<b>Sonstiges/ Other Aspects:</b>		
Test period: 2018-04-25 – 2018-05-09		
<b>Abkürzungen:</b>	ok / P = entspricht Prüfgrundlage fail / F = entspricht nicht Prüfgrundlage n.a. / N = nicht anwendbar	<b>Abbreviations:</b> ok / P = passed fail / F = failed n.a. / N = not applicable
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p><i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>		



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Screening of substances of very high concern (SVHC) subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013, (EU) No 895/2014 and (EU) No. 2017/999 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA), according to the EU Court of Justice rules on SVHCs in articles.

**Product Classification:**

With reference to Corrigendum to Regulation (EC) no.1907/2006 and ECHA, this product is classified as:

<input checked="" type="checkbox"/>	Article
<input type="checkbox"/>	Article with an integral substance/ mixture
<input type="checkbox"/>	Combinations of an article (functioning as a container or a carrier material) and a substance/ mixture
<input type="checkbox"/>	Substance/ mixture

**Conclusion:**

Conclusion			
Product Location	Acc. to authorisation list (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013, (EU) No 895/2014 and (EU) No. 2017/999 (Annex XIV of EC No 1907/2006) and candidate list by ECHA, and the EU Court of Justice rules on SVHCs in articles, the detected SVHC concentration in components level is	Obligation of Importer(*) (For article)	Detected Substance (if any)
Main unit	< 0.1%	Not necessary	--

(For article)

(\*) To communicate information down the supply chain according to article. 33 of REACH. **OR**

1. Notification to ECHA, if the quantities of SVHC in the produced/imported articles are above 1 ton in total per year per company.
2. Provide sufficient information to ensure safe use of the article and, as a minimum, include the name of the substance, to their customers and on request to consumers within 45 days of the receipt of this request.



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**Test results****1. Screening of SVHCs subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 and (EU) No. 2017/999 (Annex XIV of EC No 1907/2006) and SVHCs in candidate list by European Chemical Agency (ECHA), and the EU Court of Justice rules on SVHCs in articles**

Test Method: 1) A representative test portion is prepared by cryogenic milling.  
2) Test portion is digested with acid and assisted with microwave, the elements are analysed by ICP-OES.  
3) Test portion is extracted by organic solvent, semi-quantitative analysis by GC-MS / UV-Vis  
4) Test portion is extracted by organic solvent, the extraction solution is analyzed by Headspace-GC/MS / LC-DAD-MS / LC-MS/MS.

Sample Material Lab.-No.	DC-DC converter / DCDC-USB(RS) PCB board/green TCL180425-07
Result (%)	n.d.

Abbreviation: n.d. = Not Detected (< Reporting Limit)  
RL = Reporting Limit  
% = Percentage

**Test sample**

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## Remark:

(\*1) The reporting limit for each individual SVHC subject to authorisation according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013, (EU) No 895/2014 and (EU) No 2017/999 (Annex XIV of EC No 1907/2006):

	Substances	CAS No.	Reporting Limit
1	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	0.01%
2	Benzyl butyl phthalate (BBP)	85-68-7	0.01%
3	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	0.01%
4	Dibutyl phthalate (DBP)	84-74-2	0.01%
5	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4 / 3194-55-6 / 134237-50-6 / 134237-51-7 / 134237-52-8	0.01%
6	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	0.01%
7	2,4-Dinitrotoluene (2,4-DNT)	121-14-2	0.01%
8	Diisobutyl phthalate (DIBP)	84-69-5	0.01%
9	Tris(2-chloroethyl)phosphate	115-96-8	0.01%
10	Diarsenic pentaoxide (*3)	1303-28-2	0.01%
11	Diarsenic trioxide (*3)	1327-53-3	0.01%
12	Lead chromate (*3)(*4)	7758-97-6	0.01%
13	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) (*3)(*4)	12656-85-8	0.01%
14	Lead sulfochromate yellow (C.I. Pigment Yellow 34) (*3)	1344-37-2	0.01%
15	Trichloroethylene	79-01-6	0.01%
16	Chromium trioxide (*4)	1333-82-0	0.01%
17	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. (*4)	7738-94-5 / 13530-68-2	0.01%
18	Sodium dichromate (*3)	7789-12-0 / 10588-01-9	0.01%
19	Potassium dichromate (*4)	7778-50-9	0.01%
20	Ammonium dichromate (*4)	7789-09-5	0.01%
21	Potassium chromate (*4)	7789-00-6	0.01%
22	Sodium chromate (*4)	7775-11-3	0.01%
23	Formaldehyde, oligomeric reaction products with aniline (technical MDA) (*11)	25214-70-4	0.01%
24	1,2-Dichloroethane	107-06-2	0.01%
25	Bis(2-methoxyethyl) ether	111-96-6	0.01%
26	Arsenic acid (*3)	7778-39-4	0.01%
27	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	0.01%
28	Dichromium tris(chromate) (*4)	24613-89-6	0.01%
29	Strontium chromate (*4)	7789-06-2	0.01%
30	Potassium hydroxyoctaoxodizincatedichromate (*4)	11103-86-9	0.01%
31	Pentazinc chromate octahydroxide (*4)	49663-84-5	0.01%

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	Substances	CAS No.	Reporting Limit
32	1-bromopropane (n-propyl bromide)	106-94-5	0.01%
33	Diisopentylphthalate	605-50-5	0.01%
34	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	0.01%
35	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	0.01%
36	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.01%
37	Bis(2-methoxyethyl) phthalate	117-82-8	0.01%
38	Dipentyl phthalate (DPP)	131-18-0	0.01%
39	N-pentyl-isopentylphthalate	776297-69-9	0.01%
40	Anthracene oil <sup>(*7)</sup>	90640-80-5	0.01% <sup>(*8)</sup>
41	Pitch, coal tar, high temperature <sup>(*7)</sup>	65996-93-2	0.01%
42	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (OPEO) [covering well-defined substances and UVCB substances, polymers and homologues]	-	0.01%
43	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]	-	0.01%

(\*2) The reporting limit for each individual SVHC in Candidate List by ECHA:

	Substances	CAS No.	Reporting Limit
44	Anthracene	120-12-7	0.01%
45	Bis(tributyltin) oxide (TBTO) <sup>(*3) (*5)</sup>	56-35-9	0.01%
46	Triethyl arsenate <sup>(*3)</sup>	15606-95-8	0.01%
47	Lead hydrogen arsenate <sup>(*3)</sup>	7784-40-9	0.01%
48	Cobalt dichloride <sup>(*3)</sup>	7646-79-9	0.01%
49	Acrylamide	79-06-1	0.01%
50	Anthracene oil, anthracene paste, distn. lights <sup>(*7)</sup>	91995-17-4	0.01% <sup>(*8)</sup>
51	Anthracene oil, anthracene paste, anthracene fraction <sup>(*7)</sup>	91995-15-2	
52	Anthracene oil, anthracene-low <sup>(*7)</sup>	90640-82-7	
53	Anthracene oil, anthracene paste <sup>(*7)</sup>	90640-81-6	
54	Boric acid <sup>(*3) (*6)</sup>	10043-35-3 / 11113-50-1	0.01%
55	Disodium tetraborate, anhydrous <sup>(*3) (*6)</sup>	1303-96-4 / 1330-43-4 / 12179-04-3	0.01%
56	Tetraboron disodium heptaoxide, hydrate <sup>(*3) (*6)</sup>	12267-73-1	0.01%
57	2-Methoxyethanol	109-86-4	0.01%
58	2-Ethoxyethanol	110-80-5	0.01%

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	Substances	CAS No.	Reporting Limit
59	Cobalt(II) sulphate <sup>(*3)</sup>	10124-43-3	0.01%
60	Cobalt(II) dinitrate <sup>(*3)</sup>	10141-05-6	0.01%
61	Cobalt(II) carbonate <sup>(*3)</sup>	513-79-1	0.01%
62	Cobalt(II) diacetate <sup>(*3)</sup>	71-48-7	0.01%
63	Alkanes C10-C13, chloro (Short Chain Chlorinated Paraffins) (SCCP)	85535-84-8	0.01%
64	2-Ethoxyethyl acetate	111-15-9	0.01%
65	Hydrazine	302-01-2 / 7803-57-8	0.01%
66	1-Methyl-2-pyrrolidone (NMP)	872-50-4	0.01%
67	1,2,3-Trichloropropane	96-18-4	0.01%
68	Aluminosilicate Refractory Ceramic Fibres (RCF) <sup>(*9)</sup>	-	0.01%
69	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) <sup>(*9)</sup>	-	0.01%
70	2-Methoxyaniline, o-Anisidine	90-04-0	0.01%
71	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	0.01%
72	Calcium arsenate <sup>(*3)</sup>	7778-44-1	0.01%
73	Trilead diarsenate <sup>(*3)</sup>	3687-31-8	0.01%
74	N,N-dimethylacetamide (DMAC)	127-19-5	0.01%
75	Phenolphthalein	77-09-8	0.01%
76	Lead dipicrate <sup>(*3)</sup>	6477-64-1	0.01%
77	Lead diazide, Lead azide <sup>(*3)</sup>	13424-46-9	0.01%
78	Lead styphnate <sup>(*3)</sup>	15245-44-0	0.01%
79	1,2-bis(2-methoxyethoxy)ethane (TEGDME, triglyme)	112-49-2	0.01%
80	1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME)	110-71-4	0.01%
81	Diboron trioxide <sup>(*3) (*6)</sup>	1303-86-2	0.01%
82	Formamide	75-12-7	0.01%
83	Lead(II) bis(methanesulfonate) <sup>(*3)</sup>	17570-76-2	0.01%
84	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	0.01%
85	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	0.01%
86	4,4'-bis(dimethylamino)benzophenone (Michler's ketone), MK	90-94-8	
87	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base), RMK	101-61-1	0.01%



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	Substances	CAS No.	Reporting Limit
88	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl] methylene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] <sup>(*10)</sup>	2580-56-5	0.01%
89	[4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] <sup>(*10)</sup>	548-62-9	
90	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] <sup>(*10)</sup>	561-41-1	
91	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino) naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] <sup>(*10)</sup>	6786-83-0	
92	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	1163-19-5	0.01%
93	Pentacosafuorotridecanoic acid	72629-94-8	0.01%
94	Tricosafuorododecanoic acid	307-55-1	0.01%
95	Henicosafuoroundecanoic acid	2058-94-8	0.01%
96	Heptacosafuorotetradecanoic acid	376-06-7	0.01%
97	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA) <sup>(*12)</sup>	123-77-3	0.05%
98	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	0.01%
99	Hexahydromethylphthalic anhydride (MHHPA) [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	0.01%
100	N,N-dimethylformamide	68-12-2	0.01%
101	1,2-Diethoxyethane	629-14-1	0.01%
102	Diethyl sulphate	64-67-5	0.01%



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	Substances	CAS No.	Reporting Limit
103	Methoxyacetic acid (MAA)	625-45-6	0.01%
104	Dimethyl sulphate	77-78-1	0.01%
105	N-methylacetamide	79-16-3	0.01%
106	Furan	110-00-9	0.01%
107	Methyloxirane (Propylene oxide)	75-56-9	0.01%
108	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	0.01%
109	Dibutyltin dichloride (DBTC) <sup>(*)3)</sup>	683-18-1	0.01%
110	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	0.01%
111	4,4'-methylenedi-o-toluidine	838-88-0	0.01%
112	4,4'-oxydianiline and its salts	101-80-4	0.01%
113	4-Aminoazobenzene	60-09-3	0.01%
114	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	0.01%
115	6-methoxy-m-toluidine (p-cresidine)	120-71-8	0.01%
116	Biphenyl-4-ylamine	92-67-1	0.01%
117	o-aminoazotoluene	97-56-3	0.01%
118	o-Toluidine	95-53-4	0.01%
119	Acetic acid, lead salt, basic <sup>(*)3)</sup>	51404-69-4	0.01%
120	Trilead bis(carbonate) dihydroxide <sup>(*)3)</sup>	1319-46-6	0.01%
121	Lead oxide sulfate <sup>(*)3)</sup>	12036-76-9	0.01%
122	[Phthalato(2-)]dioxotrilead <sup>(*)3)</sup>	69011-06-9	0.01%
123	Dioxobis(stearato)trilead <sup>(*)3)</sup>	12578-12-0	0.01%
124	Fatty acids, C16-18, lead salts <sup>(*)3)</sup>	91031-62-8	0.01%
125	Lead bis(tetrafluoroborate) <sup>(*)3)</sup>	13814-96-5	0.01%
126	Lead cyanamidate <sup>(*)3)</sup>	20837-86-9	0.01%
127	Lead dinitrate <sup>(*)3)</sup>	10099-74-8	0.01%
128	Lead monoxide (lead oxide) <sup>(*)3)</sup>	1317-36-8	0.01%
129	Orange lead (lead tetroxide) <sup>(*)3)</sup>	1314-41-6	0.01%
130	Lead titanium trioxide <sup>(*)3)</sup>	12060-00-3	0.01%
131	Lead titanium zirconium oxide <sup>(*)3)</sup>	12626-81-2	0.01%
132	Pyrochlore, antimony lead yellow <sup>(*)3)</sup>	8012-00-8	0.01%
133	Pentalead tetraoxide sulphate <sup>(*)3)</sup>	12065-90-6	0.01%
134	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), 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] <sup>(*)3)</sup>	68784-75-8	0.01%

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	Substances	CAS No.	Reporting Limit
135	Silicic acid, lead salt <sup>(*)3</sup>	11120-22-2	0.01%
136	Sulfurous acid, lead salt, dibasic <sup>(*)3</sup>	62229-08-7	0.01%
137	Tetraethyllead <sup>(*)3</sup>	78-00-2	0.01%
138	Tetralead trioxide sulphate <sup>(*)3</sup>	12202-17-4	0.01%
139	Trilead dioxide phosphonate <sup>(*)3</sup>	12141-20-7	0.01%
140	Ammonium pentadecafluorooctanoate (APFO) <sup>(*)13</sup>	3825-26-1	0.01%
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	0.01%
142	Cadmium <sup>(*)3</sup>	7440-43-9	0.01%
143	Cadmium oxide <sup>(*)3</sup>	1306-19-0	0.01%
144	4-Nonylphenol, branched and linear, ethoxylated (NPEO) [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]	-	0.01%
145	Dihexyl phthalate	84-75-3	0.01%
146	Trixylyl phosphate	25155-23-1	0.01%
147	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	0.01%
148	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	0.01%
149	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	0.01%
150	Lead di(acetate) <sup>(*)3</sup>	301-04-2	0.01%
151	Cadmium sulphide <sup>(*)3</sup>	1306-23-6	0.01%
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	0.01%
153	Cadmium chloride <sup>(*)3</sup>	10108-64-2	0.01%
154	Sodium perborate, perboric acid, sodium salt <sup>(*)3</sup> <sup>(*)6</sup>	-	0.01%
155	Sodium peroxometaborate <sup>(*)3</sup> <sup>(*)6</sup>	7632-04-4	0.01%
156	Cadmium fluoride <sup>(*)3</sup>	7790-79-6	0.01%
157	Cadmium sulphate <sup>(*)3</sup>	10124-36-4 / 31119-53-6	0.01%
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.01%
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.01%
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) <sup>(*)14</sup>	15571-58-1	0.01%

Test Report No. : 0114076876d 001  
Customer : Eastern Electronics Co., Ltd.

2018-05-09

	Substances	CAS No.	Reporting Limit
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) <sup>(*15)</sup>	-	0.01%
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 / 68648-93-1	0.01%
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]	-	0.01%
164	1,3-propanesultone	1120-71-4	0.01%
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	0.01%
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	0.01%
167	Nitrobenzene	98-95-3	0.01%
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	0.01%
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	0.01%
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	0.01%
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2 3830-45-3 3108-42-7	0.01%
172	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]	-	0.01%
173	p-(1,1-dimethylpropyl)phenol	80-46-6	0.01%
174	Perfluorohexane-1-sulfonic acid and its salts (PFHxS)	-	0.01%
175	Chrysene	218-01-9	0.01%
176	Benz[a]anthracene	56-55-3	0.01%
177	Cadmium nitrate <sup>(*3)</sup>	10325-94-7	0.01%
178	Cadmium hydroxide <sup>(*3)</sup>	21041-95-2	0.01%
179	Cadmium carbonate <sup>(*3)</sup>	513-78-0	0.01%



Test Report No. : 0114076876d 001  
Customer : Eastern Electronics Co., Ltd.

2018-05-09

	Substances	CAS No.	Reporting Limit
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]	-	0.01%
181	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]	-	0.01%

- (\*3) The substances are tested and calculated in terms of its respective elements (e.g. As, Pb, Co, B, Cd, Sn).
- (\*4) The substances are tested and calculated in terms of Cr (VI).
- (\*5) The substance is tested and calculated in terms of Tributyl tin.
- (\*6) The substances are confirmed and tested in terms of Boric acid when Boron is detected in the sample.
- (\*7) The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents.
- (\*8) Individual concentrations to the constituent of UVCB with an amount of < 0.01% were not considered by the calculation of the sum.
- (\*9) The test results are based on microscopic and chemical evaluation.
- (\*10) The substances are quantified in terms of Michler's ketone and Michler's base by LC-MS, as Michler's ketone or Michler's base was found exceeds 0.01%.
- (\*11) The content oligomer is determined by Py-GC/MS.
- (\*12) The content of diazene-1,2-dicarboxamide is analyzed in terms of its breakdown product.
- (\*13) The substance is tested in terms of pentadecafluorooctanoate.
- (\*14) The substance is tested and calculated in terms of Dioctyl tin.
- (\*15) The substance is tested and calculated in terms of Monoctyl tin and Dioctyl tin.

--- End of Test-Report ---



# CHEMICAL ANALYSIS TEST REPORT(REACH)

Company : Eastern Electronics Co., Ltd.  
Address : No.4, Shin-Long Road, Taoyuan Dist., Taoyuan City 33068, Taiwan  
R.O.C.  
Product Name : DCDC-USB(RS)  
Date Received : AUG 14, 2019  
Date Tested : AUG 23, 2019

## TESTING LABORATORY IS ACCREDITED BY:

IECQ ISO/IEC 17025 certificate of independent test laboratory approval  
Certificate No. : IECQ-L DEKRA 16.0002

## WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

## **NOTE :**

1. This report will be invalid if reproduced in part or altered in any way.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used otherwise.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.

Signed and on behalf of

*Wenston Lin*

Wenston Lin  
Manager



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## 1. GENERAL INFORMATION

### 1.1 DESCRIPTION OF SAMPLE AND CONCLUSION

Product Name : DCDC-USB(RS)

This test results meet the acceptance criteria of the latest SVHC candidate list from (EC) No. 1907/2006 REACH Regulation

Legal requirement relevant to the article	Conclusion	
Article 33(Communication of SVHC information)	<input checked="" type="checkbox"/>	Comply(Article contains<0.1% candidate list SVHC)
	<input type="checkbox"/>	Warning(Article contains>0.1% candidate list SVHC and prepare tool for SVHC communication)

## 2.CHEMICAL ANALYSIS TEST (REACH)

### 2.1TEST CONDITIONS AND RESULTS

Description of test part : DCDC-USB(RS)

The published date of REACH 19th all 10 SVHC candidate list was 2018/6/27

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
182	Octamethylcyclotetrasiloxane (D4) (CAS NO. : 556-67-2)	EPA 3550C	GC-MS	mg/kg	100	N.D.
183	Decamethylcyclopentasiloxane (D5) (CAS NO. : 541-02-6)				100	N.D.
184	Dodecamethylcyclohexasiloxane (D6) (CAS NO. : 540-97-6)				100	N.D.
185	Lead (CAS NO. : 7439-92-1)	EPA 3052	ICP-OES	mg/kg	10	54
186	Disodium octaborate (CAS NO. : 12008-41-2)				10	N.D.
187	Benzo[ghi]perylene (CAS NO. : 191-24-2)	EPA 3540C	GC-MS	mg/kg	100	N.D.
188	Terphenyl hydrogenated (CAS NO. : 61788-32-7)				100	N.D.
189	Ethylenediamine (EDA) (CAS NO. : 107-15-3)				20	N.D.
190	Benzene-1,2,4-tricarboxylic acid 1,2anhydride (trimellitic anhydride) (TMA) (CAS NO. : 552-30-7)				100	N.D.
191	Dicyclohexyl phthalate (DCHP) (CAS NO. : 84-61-7)				20	N.D.



Description of test part : DCDC-USB(RS)

The published date of REACH 20th all 6 SVHC candidate list was 2019/1/15

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane (CAS NO. : 6807-17-6)	Reference: EPA 3540C	GC-MS	mg/kg	100	N.D.
193	Benzo[k]fluoranthene (CAS NO. : 207-08-9)				100	N.D.
194	Fluoranthene (CAS NO. : 206-44-0 93951-69-0)				100	N.D.
195	Phenanthrene (CAS NO. : 85-01-8)				100	N.D.
196	Pyrene (CAS NO. : 129-00-0 1718-52-1)				100	N.D.
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (CAS NO. : 15087-24-8)	Reference: EPA 3550C	GC-MS	mg/kg	100	N.D.

Description of test part : DCDC-USB(RS)

The published date of REACH 21th all 4 SVHC candidate list was 2019/7/16

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
198	2-methoxyethyl acetate (CAS NO. : 110-49-6)	Reference: EPA 3550C	GC-MS	mg/kg	100	N.D.
199	Tris (4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP) (CAS NO. : -)				100	N.D.
200	2,3,3,3-tetrafluoro-2-(heptafluoro propoxy) propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof) (CAS NO. : -)				100	N.D.
201	4-tert-butylphenol (CAS NO. : 98-54-4)				100	N.D.

**Note :**

1. MDL = Method Detection Limit.
2. mg/kg = ppm.
3. N.D. = Not Detected. (The result is below the MDL.)
4. Negative = Undetectable.
5. GC-MS = Gas Chromatograph-Mass Spectrometer.
6. GC-MS/MS = Gas Chromatograph-tandem mass spectrometer.
7. GC-FID = Gas Chromatograph-flame ionization detector.
8. LC-MS/MS = Liquid Chromatograph-tandem mass spectrometer.
9. OM = Optical Microscope .
10. XRF = X-ray Fluorescence Spectrometer
11. FTIR = Fourier-Transform Infrared Spectrometer
12. ICP-OES = Inductively Coupled Plasma-Optical Emission Spectrometer.
13. UV-VIS = Ultraviolet-Visible Spectrophotometer.

# CHEMICAL ANALYSIS TEST REPORT (REACH 22<sup>th</sup>-26<sup>th</sup>)

Company : Eastern Electronics Co., Ltd.  
Address : No.4, Shin-Long Road, Taoyuan Dist., Taoyuan City 33068, Taiwan  
R.O.C.  
Product Name : DCDC-USB(RS)  
Date Received : MAR 02, 2022  
Date Tested : MAR 09, 2022

## TESTING LABORATORY IS ACCREDITED BY:

IECQ ISO/IEC 17025 certificate of independent test laboratory approval  
Certificate No. : IECQ-L DEKRA 16.0002

## WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

	Name	Signature	Date
Test Engineer	Xiaohu Chen	<i>Xiaohu Chen</i>	Mar 18, 2022
Manager	Wenston Lin	<i>Wenston Lin</i>	Mar 18, 2022

## **NOTE :**

1. This report will be invalid if reproduced in part or altered in any way.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used otherwise.
3. This report is ONLY valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.



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## 1. GENERAL INFORMATION

### 1.1 DESCRIPTION OF SAMPLE

Product Name : DCDC-USB(RS)

This test results meet the acceptance criteria of the latest SVHC candidate list from (EC) No. 1907/2006 REACH Regulation

Legal requirement relevant to the article	Conclusion	
Article 33(Communication of SVHC information)	<input checked="" type="checkbox"/>	Comply(Article contains<0.1% candidate list SVHC)
	<input type="checkbox"/>	Warning(Article contains>0.1% candidate list SVHC and prepare tool for SVHC communication)

## 2. CHEMICAL ANALYSIS TEST (REACH)

### 2.1 TEST CONDITIONS AND RESULTS

Description of test part : DCDC-USB(RS)

The published date of REACH 22th all 4 SVHC candidate list was 2020/1/16

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone (CAS NO. : 119313-12-1)	Reference: EPA 3550C	GC-MS	mg/kg	100	N.D.
203	2-methyl-1-(4-methylthiophenyl)-2-morpholino propan-1-one (CAS NO. : 71868-10-5)				100	N.D.
204	Diisohexyl phthalate (CAS NO. : 71850-09-4)				100	N.D.
205	Perfluorobutane sulfonic acid (PFBS) and its salts (CAS NO. : -)				100	N.D.

Description of test part : DCDC-USB(RS)

The published date of REACH 23th all 4 SVHC candidate list was 2020/6/25

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
206	1-vinylimidazole (CAS NO. :1072-63-5)	Reference: EPA 3550C	LC-MS	mg/kg	50	N.D.
207	2-methylimidazole (CAS NO. :693-98-1)				50	N.D.
208	Dibutylbis(pentane-2,4-dionato- O,O')tin (CAS NO. :22673-19-4)	Reference: EPA 3540C	GC-MS	mg/kg	100	N.D.
209	Butyl 4-hydroxybenzoate (CAS NO. :94-26-8)				20	N.D.

Description of test part : DCDC-USB(RS)

The published date of REACH 24th all 2 SVHC candidate list was 2021/1/19

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
210	Bis(2-(2-methoxyethoxy)ethyl) ether (CAS NO. :143-24-8)	Reference: EPA 3550C	GC-MS	mg/kg	10	N.D.
211	Dioctyltin dilaurate, stannane, dioctyl-,bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety (CAS NO. :-)	Reference: EPA 3540C	GC-MS	mg/kg	20	N.D.



Description of test part : DCDC-USB(RS)

The published date of REACH 25th all 8 SVHC candidate list was 2021/7/8

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
212	1,4-dioxane (CAS NO. : 123-91-1)	Reference: EPA 3550C	GC-MS	mg/kg	10	N.D.
213	(1)2,2-bis(bromomethyl)propane 1,3-diol (BMP) (CAS NO. : 3296-90-0) (2)2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA) (CAS NO. : 36483-57-5 1522-92-5) (3)2,3-dibromo-1-propanol (2,3-DBPA) (CAS NO. : 96-13-9)	Reference: EPA 3540C	GC-MS	mg/kg	10	N.D.
214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers (1)(2R)-3-(4-tert-butylphenyl)-2-methylpropanal (2)2-(4-tert-butylbenzyl)propionaldehyde; (3)(2S)-3-(4-tert-butylphenyl)-2-methylpropanal (CAS NO. : 75166-31-3; 80-54-6; 75166-30-2)	Reference: EPA 3550C	LC-MS	mg/kg	50	N.D.
215	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B) (CAS NO. : 77-40-7)	Reference: EPA 3540C	GC-MS	mg/kg	10	N.D.
216	Glutaral (CAS NO. : 111-30-8)	Reference: EPA 3540C	GC-MS	mg/kg	10	N.D.
217	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17] (1)Alkanes, C14-17, chloro; (2)di-, tri- and tetrachlorotetradecane; (3)Alkanes, C14-16, chloro; (4)Tetradecane, chloro derivs (CAS NO. : 85535-85-9; 1372804-76-6 ; 198840-65-2)	Reference: EPA 3550C	GC-FID	mg/kg	50	N.D.

Description of test part : DCDC-USB(RS)

The published date of REACH 25th all 8 SVHC candidate list was 2021/7/8

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
218	Orthoboric acid, sodium salt (1)boric acid (H3BO3), sodium salt, hydrate; (2)Boric acid (H3BO3), disodium salt; (3)Trisodium orthoborate; (4)Boric acid, sodium salt; (5)orthoboric acid, sodium salt; (6)Boric acid (H3BO3), sodium salt (1:1) (CAS NO. : 25747-83-5; 22454-04-02; 14312-40-4 ; 1333-73-9; 13840-56-7 ; 14890-53-0.)	Reference: EPA 3050B	ICP-OES	mg/kg	10	N.D.
219	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) (1)Phenol, 4-dodecyl, branched; (2)4-isododecylphenol; (3)Phenol, 4-isododecyl-; (4)Phenol, dodecyl-, branched; (5)Phenol, (tetrapropenyl) derivatives; (6)Phenol, tetrapropylene- (CAS NO. : 210555-94-5; 27459-10-5; 27147-75-7; 121158-58-5 ; 74499-35-7 ; 57427-55-1)	Reference: EPA 3550C	GC-MS	mg/kg	50	N.D.

Description of test part : DCDC-USB(RS)

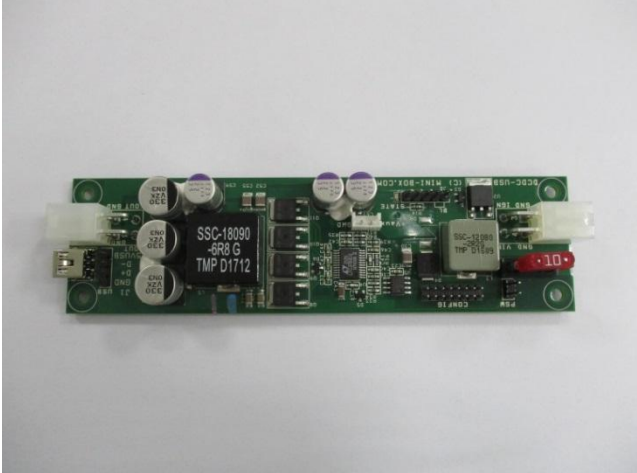
The published date of REACH 26th all 4 SVHC candidate list was 2021/9/15

No.	Test Item(s)	Method	Instrument	Unit	MDL	Result
220	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) (CAS NO. : NA)	Reference: EPA 3540C	LC-MS	mg/kg	50	N.D.
221	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC) (CAS NO. : 119-47-1)				50	N.D.
222	S-(tricyclo[5.2.1.0 <sup>2,6</sup> ]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate (CAS NO. : 255881-94-8)	Reference: EPA 3540C	GC-MS	mg/kg	50	N.D.
223	tris(2-methoxyethoxy)vinylsilane (CAS NO. : 1067-53-4)				50	N.D.

**Note :**

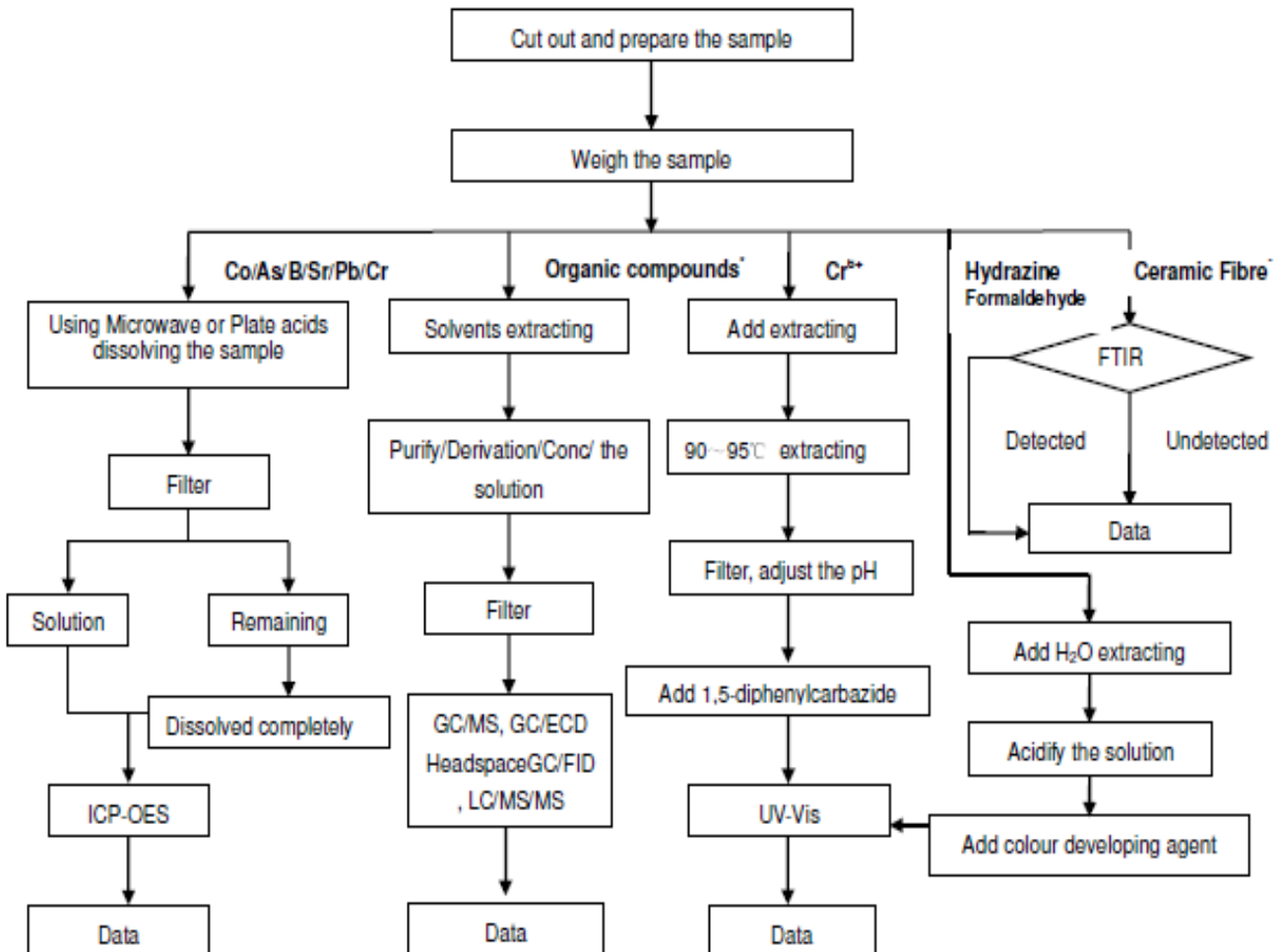
1. MDL = Method Detection Limit.
2. mg/kg = ppm.
3. N.D. = Not Detected. (The result is below the MDL.)
4. Negative = Undetectable.
5. GC-MS = Gas Chromatograph-Mass Spectrometer.
6. GC-MS/MS = Gas Chromatograph-tandem mass spectrometer.
7. GC-FID = Gas Chromatograph-flame ionization detector.
8. LC-MS/MS = Liquid Chromatograph-tandem mass spectrometer.
9. OM = Optical Microscope .
10. XRF = X-ray Fluorescence Spectrometer
11. FTIR = Fourier-Transform Infrared Spectrometer
12. ICP-OES = Inductively Coupled Plasma-Optical Emission Spectrometer.
13. UV-VIS = Ultraviolet-Visible Spectrophotometer.

## 2.2 PHOTO OF SAMPLE

Sample NO.	Description of test part	Photo
-	DCDC-USB(RS)	

## 2.3 MEASUREMENT FLOW CHART

### Measurement Flowchart REACH SVHC 22 Items



-----End of Report-----