

TEST REPORT

Report No.: **SZ4220331-11663E**

Date: July 19, 2022

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Astera LED Technology GmbH
Stahlgruberring 36, 81829 Munich, Germany

Report on the submitted samples said to be:

Sample Description: DATA LINK
Style/Item No.: FP3-DTL
Manufacturer: Astera Manufacturing Limited
Manufacturer Address: Bldg. 3, CLT Science & Technology Park, No. 7, GanLiliu Road, Jihua subdistrict, Longgang District, Shenzhen, P.C.518112.
Sample Receiving Date: March 31,2022
Lately Re-submit Date: July 07,2022
Testing Period: March 31,2022 - July 15,2022
Result: **Please refer to next page(s).**

Signed for and on behalf of

BACL

Queenie Lee

Checked by: _____
Queenie Lee

Lance Lee

Approved by: _____
Lance Lee



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Summary of Test Result:

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CONCLUSION

A. Two hundred and twenty-three (223) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) regarding Regulation (EC) No 1907/2006 and its amendment directives concerning the REACH

See Remark

Remark: According to the specified scope and analytical technique, concentrations of all 223 SVHC (*= excluded lead (CAS No.: 7439-92-1) on Tested parts (10), (13), (19) and (21)) are <0.1% in the submitted sample(s).

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Result:

Tested part(s):

- (1) Black / white coated clear plastic with adhesive (label, data link)
- (2) Black soft plastic (feet pad, data link, semi-product)
- (3) Black plated silvery metal (support, data link)
- (4) Black plated silvery metal (cover, data link)
- (5) Multi color coated white plastic with adhesive (panel, data link)
- (6) Black plastic (switch, data link)
- (7) Black plated silvery metal (screw, data link)
- (8) Black plastic (cover, plug/socket, data link)
- (9) Orange soft plastic (pad, plug / socket, data link)
- (10) Silvery metal with solder (pin, plug, data link)
- (11) Black soft plastic (sleeve, pin, plug/socket, data link)
- (12) Black printed grey / red PVC with silvery metal (flat cable, plug, data link)
- (13) Silvery metal with solder (pin, socket, data link)
- (14) Grey PVC with silvery metal (flat cable, socket, data link)
- (15) White printed black soft plastic with silvery metal (wire, data link)
- (16) White printed red soft plastic with silvery metal (wire, data link)
- (17) White / silvery parts (plug, connector, data link)
- (18) Beige / silvery parts (socket, connector, data link)
- (19) Silvery parts (power socket, data link)
- (20) Translucent soft plastic (washer, power socket, data link)
- (21) Golden metal (double-screw bolt, data link)
- (22) Green PCB with EC and solder (power PCB, data link)
- (23) Green PCB with EC and solder (main PCB, data link)
- (24) Silvery metal (cover, Ethernet port, main PCB, data link)
- (25) Yellow plastic with adhesive (tape, cover, Ethernet port, main PCB, data link)
- (26) Black plastic (frame, Ethernet port, main PCB, data link)
- (27) Green PCB with EC and solder (PCB, Ethernet port, main PCB, data link)
- (28) Grey parts (inductor, PCB, Ethernet port, main PCB, data link)
- (29) Translucent green body (LED, Ethernet port, main PCB, data link)
- (30) Translucent yellow body (LED, Ethernet port, main PCB, data link)
- (31) Golden metal (pin, Ethernet port, main PCB, data link)



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- (32) Translucent / silvery parts (LED, main PCB, data link)
- (33) Black / silvery parts (switch, main PCB, data link)
- (34) Silvery metal (cover, small PCB, main PCB, data link)
- (35) Black PCB with EC and solder (small PCB, main PCB, data link)

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A. Two hundred and twenty-three (223) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) regarding Regulation (EC) No 1907/2006 and its amendment directives concerning the REACH

Test method: With reference to in-house method, Analysis is performed by ICP-AES, UV-VIS, IC, GC-MS, Headspace GC-MS, LC-MS/MS, HPLC-TS-MS.

Item	Unit	MDL	Result						
			(1)+(11)+(17) +(18)+(25)+ (28)+(29)+ (30)+(32)+ (33)	(2)	(3)+(4)+(7)+ (24)+(31)+ (34)	(5)	(6)	(8)	
All Tested 223 SVHC in the Candidate	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Item	Unit	MDL	Result						
			(9)	(15)	(16)	(20)	(22)+(23)+ (27)+(35)	(26)	
All Tested 223 SVHC in the Candidate	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

No.	Item	EC No	Unit	MDL	Result	Category
					(10)	
184	Lead(Pb)	231-100-4	mg/kg	50	10730*	Toxic for reproduction (Article 57 c)
/	All the other tested 222 SVHC in the Candidate	/	mg/kg	/	N.D.	/

No.	Item	EC No	Unit	MDL	Result	Category
					(12)	
3	Dibutyl Phthalate(DBP)	201-557-4	mg/kg	50	798	CMR
/	All the other tested 222 SVHC in the Candidate	/	mg/kg	/	N.D.	/

No.	Item	EC No	Unit	MDL	Result	Category
					(13)	
184	Lead(Pb)	231-100-4	mg/kg	50	19840*	Toxic for reproduction (Article 57 c)
/	All the other tested 222 SVHC in the Candidate	/	mg/kg	/	N.D.	/

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No.	Item	EC No	Unit	MDL	Result	Category
					(14)	
3	Dibutyl Phthalate(DBP)	201-557-4	mg/kg	50	691	CMR
/	All the other tested 222 SVHC in the Candidate	/	mg/kg	/	N.D.	/

No.	Item	EC No	Unit	MDL	Result	Category
					(19)	
184	Lead(Pb)	231-100-4	mg/kg	50	22910*	Toxic for reproduction (Article 57 c)
/	All the other tested 222 SVHC in the Candidate	/	mg/kg	/	N.D.	/

No.	Item	EC No	Unit	MDL	Result	Category
					(21)	
184	Lead(Pb)	231-100-4	mg/kg	50	20558*	Toxic for reproduction (Article 57 c)
/	All the other tested 222 SVHC in the Candidate	/	mg/kg	/	N.D.	/

Full list of tested SVHC:

No.	Item	CAS No.	EC No.	Unit	MDL	Category
1	Anthracene(ANT)	120-12-7	204-371-1	mg/kg	50	PBT
2	4,4' -diaminodiphenymethane (9#)	101-77-9	202-974-4	mg/kg	50	CMR
3	Dibutyl Phthalate(DBP)	84-74-2	201-557-4	mg/kg	50	CMR
4	Cobalt Dichloride(CoCl2)*	7646-79-9	231-589-4	mg/kg	50	CMR
5	Diarsenic Pentaoxide(As2O5)*	1303-28-2	215-116-9	mg/kg	50	CMR
6	Diarsenic Trioxide(As2O3)*	1327-53-3	215-481-4	mg/kg	50	CMR
7	Sodium Dichromate, Dihydrate*	7789-12-0; 10588-01-9	234-190-3	mg/kg	50	CMR
8	5-tert-butyl-2,4,6-trinitro-m-xylene(musk xylene)	81-15-2	201-329-4	mg/kg	50	vPvB
9	Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	204-211-0	mg/kg	50	Equivalent level of concern having probable serious effects to the environment (Article 57 f);Toxic for reproduction (article 57c)

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
10	Hexabromocyclododecane (HBCDD)	25637-99-4 & 3194-55-6 (134237-51-7,134237-50-6,134237-52-8)	247-148-4;221-695-9	mg/kg	50	PBT
11	Alkanes, C10-13, chloro(Short Chain Chlorinated Paraffins) (SCCP)	85535-84-8	287-476-5	mg/kg	50	PBT
12	Bis(tributyltin)oxide(TBTO)**	56-35-9	200-268-0	mg/kg	50	PBT
13	Lead Hydrogen Arsenate*	7784-40-9	232-064-2	mg/kg	50	CMR
14	Benzyl Butyl Phthalate(BBP)	85-68-7	201-622-7	mg/kg	50	CMR
15	Triethyl Arsenate*	15606-95-8	427-700-2	mg/kg	50	CMR
16	Anthracene oil***	90640-80-5	292-602-7	mg/kg	50	PBT
17	Anthracene oil, anthracene paste, distn. lights***	91995-17-4	295-278-5	mg/kg	50	PBT
18	Anthracene oil, anthracene paste, anthracene fraction***	91995-15-2	295-275-9	mg/kg	50	PBT
19	Anthracene oil,Anthracene-low***	90640-82-7	292-604-8	mg/kg	50	PBT
20	Anthracene oil, anthracene paste***	90640-81-6	292-603-2	mg/kg	50	PBT
21	Diisobutyl phthalate(DIBP)	84-69-5	201-553-2	mg/kg	50	CMR
22	2,4-Dinitrotoluene	121-14-2	204-450-0	mg/kg	50	CMR
23	coal tar pitch, high temperature***	65996-93-2	266-028-2	mg/kg	50	PBT
24	tris(2-chloroethyl)phosphate	115-96-8	204-118-5	mg/kg	50	CMR
25	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7	mg/kg	50	CMR
26	C.I.Pigment Red 104	12656-85-8	235-759-9	mg/kg	50	CMR
27	Lead chromate: chrome yellow	7758-97-6	231-846-0	mg/kg	50	CMR
28	Acrylamide	79-06-1	201-173-7	mg/kg	50	CMR
29	Trichloroethylene	79-01-6	201-167-4	mg/kg	50	CMR
30	Boric acid	10043-35-3; 11113-50-1	233-139-2; 234-343-4	mg/kg	50	CMR
31	Disodium tetraborate, anhydrous*	1330-43-4;12179-04-3;1303-96-4	215-540-4	mg/kg	50	CMR
32	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3	mg/kg	50	CMR
33	Sodium chromate*	7775-11-3	231-889-5	mg/kg	50	CMR

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
34	Potassium chromate*	7789-00-6	232-140-5	mg/kg	50	CMR
35	Ammonium dichromate*	7789-09-5	232-143-1	mg/kg	50	CMR
36	Potassium dichromate*	7778-50-9	231-906-6	mg/kg	50	CMR
37	Cobalt(II) sulfate*	10124-43-3	233-334-2	mg/kg	50	CMR
38	Cobalt(II) dinitrate*	10141-05-6	233-402-1	mg/kg	50	CMR
39	Cobalt(II) carbonate*	513-79-1	208-169-4	mg/kg	50	CMR
40	Cobalt(II) diacetate*	71-48-7	200-755-8	mg/kg	50	CMR
41	2-Methoxyethanol	109-86-4	203-713-7	mg/kg	50	CMR
42	2-Ethoxyethanol	110-80-5	203-804-1	mg/kg	50	CMR
43	Chromium trioxide*	1333-82-0	215-607-8	mg/kg	50	CMR
44	Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid*	7738-94-5; 13530-68-2	231-801-5;236-881-5	mg/kg	50	CMR
45	2-Ethoxyethylacetate	111-15-9	203-839-2	mg/kg	50	CMR
46	strontium chromate*	7789-06-2	232-142-6	mg/kg	50	CRM
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters(DHNUP)	68515-42-4	271-084-6	mg/kg	50	CMR
48	Hydrazine	7803-57-8; 302-01-2	206-114-9	mg/kg	50	CMR
49	1-methyl-2-pyrrolidone(NMP)	872-50-4	212-828-1	mg/kg	50	CMR
50	1,2,3-Trichloropropane	96-18-4	202-486-1	mg/kg	50	CMR
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich(DIHP(rich C7))	71888-89-6	276-158-1	mg/kg	50	CMR
52	Zirconia Aluminosilicate Refractory Ceramic Fibres****	---	---	mg/kg	50	CMR
53	Calcium arsenate*	7778-44-1	231-904-5	mg/kg	50	CMR
54	Bis(2-methoxy ethyl)ether	111-96-6	203-924-4	mg/kg	50	CMR
55	Aluminosilicate Refractory Ceramic Fibres(RCF)****	---	---	mg/kg	50	CMR
56	Potassium hydroxyoctaoxodizincatedichromate*	11103-86-9	234-329-8	mg/kg	50	CMR
57	Lead dipicrate	6477-64-1	229-335-2	mg/kg	50	CMR
58	N,N-Dimethylacetamide	127-19-5	204-826-4	mg/kg	50	CMR
59	Arsenic acid	7778-39-4	231-901-9	mg/kg	50	CMR

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
60	2-Methoxyaniline; o-Anisidine (21#)	90-04-0	201-963-1	mg/kg	50	CMR
61	Trilead diarsenate*	3687-31-8	222-979-5	mg/kg	50	CMR
62	1,2-Dichloroethane	107-06-2	203-458-1	mg/kg	50	CMR
63	Pentazinc chromate octahydroxide	49663-84-5	256-418-0	mg/kg	50	CMR
64	4-(1,1,3,3-tetramethylbutyl) phenol	140-66-9	205-426-2	mg/kg	50	Equivalent level of concern having probable serious effects to the environment
65	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	mg/kg	50	CMR
66	Bis(2-methoxyethyl) Phthalate (DMEP)	117-82-8	204-212-6	mg/kg	50	CMR
67	Lead diazide, Lead azide*	13424-46-9	236-542-1	mg/kg	50	CMR
68	Lead styphnate*	15245-44-0	239-290-0	mg/kg	50	CMR
69	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	mg/kg	50	CMR
70	Phenolphthalein	77-09-8	201-004-7	mg/kg	50	CMR
71	Dichromium tris(chromate)*	24613-89-6	246-356-2	mg/kg	50	CMR
72	1,2-bis(2-methoxyethoxy) ethane (TEGDME; triglyme)	112-49-2	203-977-3	mg/kg	50	CMR
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether(EGDME)	110-71-4	203-794-9	mg/kg	50	CMR
74	Diboron trioxide*	1303-86-2	215-125-8	mg/kg	50	CMR
75	Formamide(FMA)	75-12-7	200-842-0	mg/kg	50	CMR
76	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	mg/kg	50	CMR
77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	219-514-3	mg/kg	50	CMR
78	β-TGIC (1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	59653-74-6	423-400-0	mg/kg	50	CMR
79	4,4'-Bis(dimethylamino) benzophenone(Michler's ketone)	90-94-8	202-027-5	mg/kg	50	CMR
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	mg/kg	50	CMR

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
81	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5 - dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3)*****	548-62-9	208-953-6	mg/kg	50	CMR
82	[4-[4-anilino-1-naphthyl][4-(dimethylamino)phenyl] methylene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26)*****	2580-56-5	219-943-6	mg/kg	50	CMR
83	α,α -Bis[4-(dimethylamino) phenyl]-4 (phenylamino) naphthalene-1 -methanol(C.I. Solvent Blue 4)*****	6786-83-0	229-851-8	mg/kg	50	CMR
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol*****	561-41-1	209-218-2	mg/kg	50	CMR
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	1163-19-5	214-604-9	mg/kg	50	PBT
86	Pentacosafuorotridecanoic acid(EGDME)	72629-94-8	276-745-2	mg/kg	50	vPvB
87	Tricosafuorododecanoic acid	307-55-1	206-203-2	mg/kg	50	vPvB
88	Henicosafuoroundecanoic acid	2058-94-8	218-165-4	mg/kg	50	vPvB
89	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	mg/kg	50	vPvB
90	4-(1,1,3,3-tetramethylbutyl) phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	---	---	mg/kg	50	Equivalent level of concern having probable serious effects to the environment
91	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	---	---	mg/kg	50	Equivalent level of concern having probable serious effects to the environment
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	mg/kg	50	Equivalent level of concern having probable serious effects to the environment

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
93	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	mg/kg	50	Equivalent level of concern having probable serious effects to the environment
94	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0; 19438-60-9; 48122-14-1; 57110-29-9	247-094-1;243-072-0;256-356-4;260-566-1	mg/kg	50	Equivalent level of concern having probable serious effects to the environment
95	Methoxyacetic acid	625-45-6	210-894-6	mg/kg	50	CMR
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear(DPIP)	84777-06-0	284-032-2	mg/kg	50	CMR
97	Diisopentylphthalate(DIPP)	605-50-5	210-088-4	mg/kg	50	CMR
98	N-pentyl-iso-pentyl Phthalate (PIPP)	776297-69-9	---	mg/kg	50	CMR
99	1,2-Diethoxyethane	629-14-1	211-076-1	mg/kg	50	CMR
100	N,N-dimethylformamide(DMF)	68-12-2	200-679-5	mg/kg	50	CMR
101	Dibutyltin dichloride(DBTC)	683-18-1	211-670-0	mg/kg	50	CMR
102	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	mg/kg	50	CMR
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)*	1319-46-6	215-290-6	mg/kg	50	CMR
104	Lead oxide sulfate (basic lead sulfate)*	12036-76-9	234-853-7	mg/kg	50	CMR
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)*	69011-06-9	273-688-5	mg/kg	50	CMR
106	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	mg/kg	50	CMR
107	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	mg/kg	50	CMR
108	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	mg/kg	50	CMR
109	Lead cyanamidate*	20837-86-9	244-073-9	mg/kg	50	CMR
110	Lead dinitrate*	10099-74-8	233-245-9	mg/kg	50	CMR
111	Lead oxide (lead monoxide)*	1317-36-8	215-267-0	mg/kg	50	CMR
112	Lead tetroxide (orange lead)*	1314-41-6	215-235-6	mg/kg	50	CMR

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113	Lead titanium trioxide*	12060-00-3	235-038-9	mg/kg	50	CMR
114	Lead Titanium Zirconium Oxide*	12626-81-2	235-727-4	mg/kg	50	CMR
115	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	mg/kg	50	CMR
116	Pyrochlore, antimony lead yellow C.I.*	8012-00-8	232-382-1	mg/kg	50	CMR
117	Silicic acid (H ₂ Si ₂ O 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]	68784-75-8	272-271-5	mg/kg	50	CMR
118	Silicic acid, lead salt*	11120-22-2	234-363-3	mg/kg	50	CMR
119	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	mg/kg	50	CMR
120	Tetraethyllead*	78-00-2	201-075-4	mg/kg	50	CMR
121	Tetralead trioxide sulphate*	12202-17-4	235-380-9	mg/kg	50	CMR
122	Trilead dioxide phosphonate*	12141-20-7	235-252-2	mg/kg	50	CMR
123	Furan	110-00-9	203-727-3	mg/kg	50	CMR
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2	mg/kg	50	CMR
125	Diethyl sulfate	64-67-5	200-589-6	mg/kg	50	CMR
126	Dimethyl sulfate	77-78-1	201-058-1	mg/kg	50	CMR
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	mg/kg	50	CMR
128	Dinoseb	88-85-7	201-861-7	mg/kg	50	CMR
129	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	mg/kg	50	CMR
130	4,4'-oxydianiline and its salts	101-80-4	202-977-0	mg/kg	50	CMR
131	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	200-453-6	mg/kg	50	CMR
132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	202-453-1	mg/kg	50	CMR
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	mg/kg	50	CMR

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
134	Biphenyl-4-ylamine	92-67-1	202-177-1	mg/kg	50	CMR
135	o-aminoazotoluene	97-56-3	202-591-2	mg/kg	50	CMR
136	o-Toluidine	95-53-4	202-429-0	mg/kg	50	CMR
137	N-Methylacetamide	79-16-3	201-182-6	mg/kg	50	CMR
138	1-bromopropane; n-propyl bromide	106-94-5	203-445-0	mg/kg	50	CMR
139	Cadmium(Cd)	7440-43-9	231-152-8	mg/kg	50	CMR
140	Cadmium oxide*	1306-19-0	215-146-2	mg/kg	50	CMR
141	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	mg/kg	50	PBT
142	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	mg/kg	50	PBT
143	Dipentyl phthalate(DPP)	131-18-0	205-017-9	mg/kg	50	PBT
144	4-Nonylphenol, branched and linear,ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol,ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	---	---	mg/kg	50	Equivalent level of concern having probable serious effects to the environment
145	Cadmium sulphide*	1306-23-6	215-147-8	mg/kg	50	Equivalent level of concern having probable serious effects to the environment
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	1937-37-7	217-710-3	mg/kg	50	CMR
147	Dihexyl phthalate	84-75-3	201-559-5	mg/kg	50	PBT
148	Imidazolidine-2-thione(2-imidazoline-2-thiol)	96-45-7	202-506-9	mg/kg	50	PBT
149	Trixylyl phosphate(TXP)	25155-23-1	246-677-8	mg/kg	50	PBT
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	mg/kg	50	CMR
151	Lead di(acetate)*	301-04-2	206-104-4	mg/kg	50	PBT

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
152	Sodium peroxometaborate*	7632-04-4	231-556-4	mg/kg	50	Toxic for reproduction
153	Cadmium chloride*	10108-64-2	233-296-7	mg/kg	50	CMR Equivalent level of concern having probable serious effects to human health (Article 57 f)
154	1,2-Benzenedicarboxylic Acid, dihexyl ester, branched and linear(DIHP)	68515-50-4	271-093-5	mg/kg	50	Toxic for reproduction
155	Sodium perborate; perboric acid, sodium salt*	---	239-172-9;234- 390-0	mg/kg	50	Toxic for reproduction
156	Cadmium fluoride*	7790-79-6	232-222-0	mg/kg	50	CMR, Equivalent level of concern having probable serious effects to human health (Article 57 f)
157	Cadmium sulphate*	10124-36-4; 31119-53-6	233-331-6	mg/kg	50	CMR, Equivalent level of concern having probable serious effects to human health (Article 57 f)
158	2-benzotriazol-2-yl-4, 6-di-tert -butylphenol (UV-320)	3846-71-7	223-346-6	mg/kg	50	PBT (Article 57 d); vPvB (Article 57 e)
159	2-(2H-benzotriazol-2-yl)-4,6- ditertpentylphenol (UV-328)	25973-55-1	247-384-8	mg/kg	50	PBT (Article 57 d);vPvB (Article 57 e)
160	2-ethylhexyl 10-ethyl-4,4- dioctyl-7-oxo-8-oxa-3,5-dithia- 4-stannatetradecanoate(DOTE)	15571-58-1	239-622-4	mg/kg	50	Toxic for reproduction (Article 57 c)
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)	---	---	mg/kg	50	Toxic for reproduction (Article 57 c)
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	271-094-0;272- 013-1	mg/kg	50	Toxic for reproduction (Article 57 c)

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
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 isomers of [1] and [2] or any combination thereof]	---	---	mg/kg	50	vPvB(Article 57e)
164	Nitrobenzene	98-95-3	202-716-0	mg/kg	50	Toxic for reproduction (Article 57 c)
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	mg/kg	50	vPvB (Article 57 e)
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol(UV-350)	36437-37-3	253-037-1	mg/kg	50	vPvB (Article 57 e)
167	1,3-Propane sultone	1120-71-4	214-317-9	mg/kg	50	Carcinogenic(Article 57 a)
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1; 21049-39-8; 4149-60-4	206-801-3	mg/kg	50	Toxic for reproduction (Article 57 c) PBT (Article 57 d)
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5	mg/kg	50	Carcinogenic (Article 57 a) Mutagenic (Article 57 b) Toxic for reproduction (Article 57 c) PBT (Article 57 d) vPvB (Article 57 e)
170	p-(1,1-dimethylpropyl)phenol (PTAP)	80-46-6	201-280-9	mg/kg	50	Equivalent level of concern having probable serious effects to environment (Article 57 f)
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2; 3830-45-3; 3108-42-7	206-400-3;-221-470-5;	mg/kg	50	Toxic for reproduction (Article 57c) PBT (Article 57d)
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]	---	---	mg/kg	50	Endocrine disrupting properties (Article 57(f) - environment)

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
173	4,4' -isopropylidenediphenol (bisphenol A; BPA)	80-05-7	201-245-8	mg/kg	50	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57 (f) - human health)
174	Perfluorohexane-1-sulphonic acid and its salts(PFHxS)	---	---	mg/kg	50	vPvB (Article 57e)
175	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	---	---	mg/kg	50	Endocrine disrupting properties (Article 57(f) – environment)
176	Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual isomers or any combination thereof]	---	---	mg/kg	50	vPvB (Article 57 e)
177	Chrysene(CHR)	218-01-9, 1719-03-5	205-923-4	mg/kg	50	Carcinogenic (Article 57 a) PBT (Article 57 d) vPvB (Article 57 e)
178	Cadmium nitrate*	10022-68-1; 10325-94-7	233-710-6	mg/kg	50	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
179	Cadmium hydroxide*	21041-95-2	244-168-5	mg/kg	50	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
180	Cadmium carbonate*	513-78-0	208-168-9	mg/kg	50	Carcinogenic (Article 57a) Mutagenic (Article 57b) Specific target organ toxicity after repeated exposure (Article 57(f) - human health)
181	Benz[a]anthracene	56-55-3; 1718-53-2	200-280-6	mg/kg	50	Carcinogenic (Article 57 a) PBT (Article 57 d) vPvB (Article 57 e)
182	Terphenyl, hydrogenated	61788-32-7	262-967-7	mg/kg	50	vPvB (Article 57 e)
183	Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	mg/kg	50	PBT (Article 57 d) vPvB (Article 57 e)
184	Lead(Pb)	7439-92-1	231-100-4	mg/kg	50	Toxic for reproduction (Article 57 c)
185	Ethylenediamine(EDA)	107-15-3	203-468-6	mg/kg	50	Respiratory sensitising properties (Article 57 (f)-human health)

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
186	Dodecamethylcyclohexasiloxane(D6)	540-97-6	208-762-8	mg/kg	50	PBT (Article 57 d);vPvB (Article 57 e)
187	Disodium octaborate	12008-41-2	234-541-0	mg/kg	50	Toxic for reproduction (Article 57c)
188	Dicyclohexyl Phthalate(DCHP)	84-61-7	201-545-9	mg/kg	50	Toxic for reproduction (Article 57 c) Endocrine disrupting properties (Article 57(f)-human health)
189	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	mg/kg	50	PBT (Article 57 d) vPvB (Article 57 e)
190	Benzo[g,h,i]perylene (BPE)	191-24-2	205-883-8	mg/kg	50	PBT (Article 57 d) vPvB (Article 57 e)
191	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride(trimellitic anhydride; TMA)	552-30-7	209-008-0	mg/kg	50	Respiratory sensitising properties (Article 57 (f)-human health)
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1	mg/kg	50	Toxic for reproduction (Article 57 c)
193	Benzo[k]fluoranthene (BkFA)	207-08-9	205-916-6	mg/kg	50	Carcinogenic(Article 57 a)PBT (Article 57 d)vPvB(Article 57 e)
194	Fluoranthene (FLT)	206-44-0	205-912-4	mg/kg	50	PBT (Article 57 d) vPvB (Article 57 e)
195	Phenanthrene (PHE)	85-01-8	201-581-5	mg/kg	50	vPvB (Article 57 e)
196	Pyrene (PYR)	129-00-0	204-927-3	mg/kg	50	PBT (Article 57 d) vPvB (Article 57 e)
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo [2.2.1]heptan-2-one	15087-24-8	239-139-9	mg/kg	50	Endocrine disrupting properties (Article 57 (f)-environment)
198	2-Methoxyethyl Acetate	110-49-6	203-772-9	mg/kg	50	Toxic for reproduction (Article 57 (c))
199	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	---	---	mg/kg	50	Endocrine disrupting properties (Article 57(f) – environment)
200	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	---	---	mg/kg	50	Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment) Equivalent level of concern having probable serious effects to human health (Article 57(f) – human health)
201	4-tert-Butylphenol(BP)	98-54-4	202-679-0	mg/kg	50	Endocrine disrupting properties (Article 57(f) – environment)
202	Diisohexyl phthalate(DIHxP)	71850-09-4	276-090-2	mg/kg	50	Toxic for reproduction (Article 57c)

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
203	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	404-360-3	mg/kg	50	Toxic for reproduction (Article 57c)
204	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	400-600-6	mg/kg	50	Toxic for reproduction (Article 57c)
205	Perfluorobutane sulfonic acid (PFBS) and its salts(PFBS)	--	--	mg/kg	50	Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment) Equivalent level of concern having probable serious effects to human health (Article 57(f) – human health)
206	1-Vinylimidazole	1072-63-5	214-012-0	mg/kg	50	Toxic for reproduction (Article 57 (c))
207	2-Methylimidazole	693-98-1	211-765-7	mg/kg	50	Toxic for reproduction (Article 57 (c))
208	Dibutylbis(pentane-2,4-dionato -O,O')tin	22673-19-4	245-152-0	mg/kg	50	Toxic for reproduction (Article 57 (c))
209	Butyl 4-hydroxybenzoate (Butylparaben)	94-26-8	202-318-7	mg/kg	50	Endocrine disrupting properties - human health (Article 57(f) – human health)
210	Bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	205-594-7	mg/kg	50	Toxic for reproduction (Article 57 (c))
211	Diocetyl tin dilaurate, stannane, dioctyl-, bis (cocoacyloxy) derivs., and any other stannane, dioctyl-, bis (fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	--	--	mg/kg	50	Toxic for reproduction (Article 57 (c))
212	Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	--	--	mg/kg	50	Toxic for reproduction (Article 57c) Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)
213	orthoboric acid, sodium salt	--	--	mg/kg	50	Toxic for reproduction (Article 57c)
214	Medium-chain chlorinated paraffins (UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17) (MCCP)	--	--	mg/kg	50	PBT (Article 57d) vPvB (Article 57e)

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No.	Item	CAS No.	EC No.	Unit	MDL	Category
215	Glutaral	111-30-8	203-856-5	mg/kg	50	Respiratory sensitising properties (Article 57(f) - human health)
216	4,4'-(1-methylpropylidene) bisphenol	77-40-7	201-025-1	mg/kg	50	Endocrine disrupting properties (Article 57(f) - environment) Endocrine disrupting properties (Article 57(f) - human health)
217	2-(4-tert-butylbenzyl) propionaldehyde and its individual stereoisomers	--	--	mg/kg	50	Toxic for reproduction (Article 57c)
218	2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0/36483-57-5/1522-92-5/96-13-9	253-057-0/221-967-7/202-480-9	mg/kg	50	Carcinogenic (Article 57a)
219	1,4-dioxane	123-91-1	204-661-8	mg/kg	50	Carcinogenic (Article 57a) Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health) Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)
220	6,6'-di-tert-butyl-2,2'-methylene-di-p-cresol(DBMC)	119-47-1	204-327-1	mg/kg	50	Toxic for reproduction(Article 57 c)
221	tris(2-methoxyethoxy) vinylsilane	1067-53-4	213-934-0	mg/kg	50	Toxic for reproduction(Article 57 c)
222	(±)-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)	--	--	mg/kg	50	Endocrine disrupting properties (Article 57(f) - human health)
223	S-(tricyclo[5.2.1.0 ^{2,6}]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8	401-850-9	mg/kg	50	PBT (Article 57 d)

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Note:

- Please refer to full list of tested SVHC.
- N.D.= Not Detected or less than MDL
- MDL = Method Detection Limit
- + = Composite testing.
- * = Calculated concentration of Cobalt Dichloride(CoCl₂) is based on the identified heavy metal and anion result. Calculated concentration of Diarsenic Pentaoxide(As₂O₅), Diarsenic Trioxide(As₂O₃), Sodium Dichromate, Dihydrate, LeadHydrogen Arsenate and Triethyl Arsenate, Disodium tetraborate, anhydrous , Tetraboron disodium heptaoxide, hydrate, Sodium chromate , Potassium chromate, Ammonium dichromate, Potassium dichromate, Cobalt(II) sulfate, Cobalt(II) dinitrate, Cobalt(II) carbonate, Cobalt(II) diacetate, Chromium trioxide, Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid, strontium chromate, Calcium arsenate, Potassium hydroxyoctaoxidizincatedi-chromate, Lead dipicrate, Arsenic acid , Trilead diarsenate, Lead diazide, Lead azide, Lead styphnate, Dichromium tris(chromate), Diboron trioxide, Lead(II) bis(methanesulfonate), Acetic acid, lead salt, basic, Basic lead carbonate (trilead bis (carbonate)dihydroxide), Lead oxide sulfate (basic lead sulfate), [Phthalato(2-)]dioxotrilead(dibasic lead phthalate), Dioxobis(stearato) trilead, Fatty acids, C16-18, lead salts, Lead bis(tetrafluoroborate), Leadcyanamide, Lead dinitrate, Lead oxide (lead monoxide), Lead tetroxide (orange lead), Lead titanium trioxide, Lead TitaniumZirconium Oxide, Pentalead tetraoxide sulphate, Pyrochlore, antimony lead yellow C.I., Silicic acid (H₂Si₂O₅), 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], Silicic acid, lead salt, Sulfurous acid, lead salt, dibasic, Tetraethyllead, Tetralead trioxide sulphate, Trilead dioxide phosphonate, Cadmium oxide, Cadmium sulphide, Lead di(acetate), Sodiumperoxometaborate, Cadmium chloride , Sodium perborate; perboric acid, sodium salt, Cadmium fluoride, Cadmium sulphate, Cadmium nitrate, Cadmium hydroxide, Cadmium carbonate are based on the identified heavy metal result. Identity of above metal substances present in the article has to be further confirmed.
- ** = Calculated concentration of bis(tributyltin)oxide TBTO is based on the identified tributyltin, TBT Result. The result is screening test of TBTO and can cover TBTO and other salts under current technologies. Further investigation is required if the exact amount of TBTO has to be determined.
- *** = Calculated concentration of these coal-tar products is based on the identified polycyclic aromatic hydrocarbons (PAHs) and heterocyclic compounds.
- **** = Calculated concentration of these Aluminosilicate and Zirconia Aluminosilicate is based on the identified aluminum and zirconium Result by ICP-AES.
- ***** = The substance does only fulfil the criteria of REACH Art. 57 (a) if it contains Michler's ketone (EC Number: 202-027-5) or Michler's base (EC Number: 202-959-2) in a concentration $\geq 0.1\%$ (weight / weight). - Carcinogenic, Mutagenic or toxic to Reproduction (CMR), meeting the criteria for classification in category 1 or 2 in accordance with Directive 67/548/EEC, Persistent, Bioaccumulative and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) according to the criteria in Annex of XIII of the REACH Regulation, and/or Identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to human health or the environment of an equivalent level of concern as those above (e.g. endocrine disrupters).
- The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the list published by ECHA: <https://echa.europa.eu/candidate-list-table> This list is under evaluation by ECHA and may be subject to change in the future.
- If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

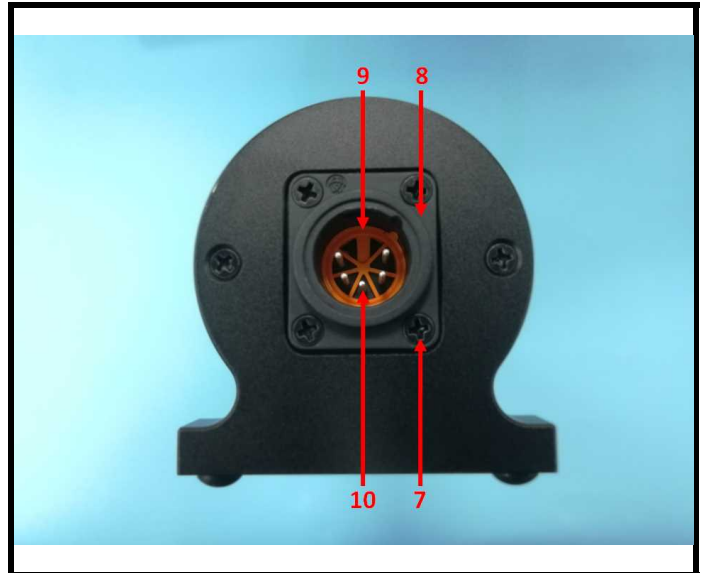
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Photograph of Sample

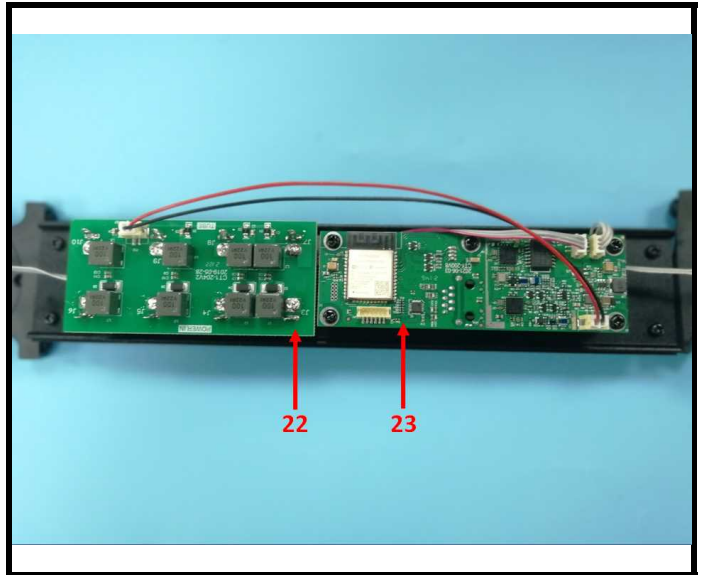
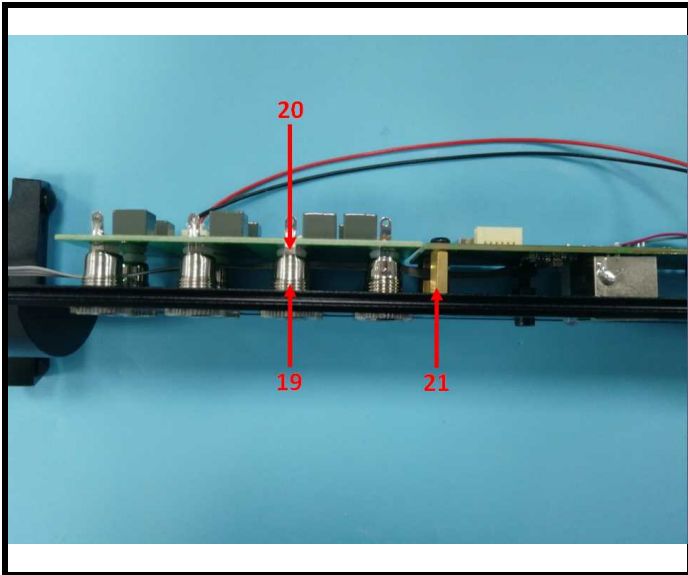
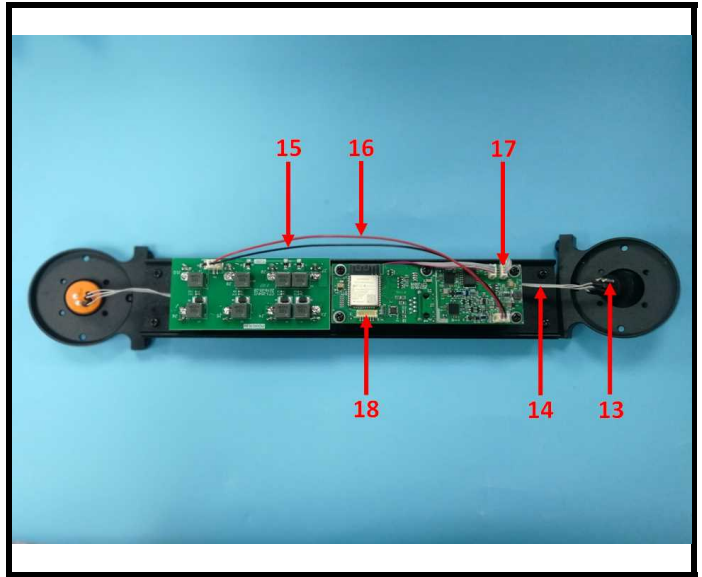
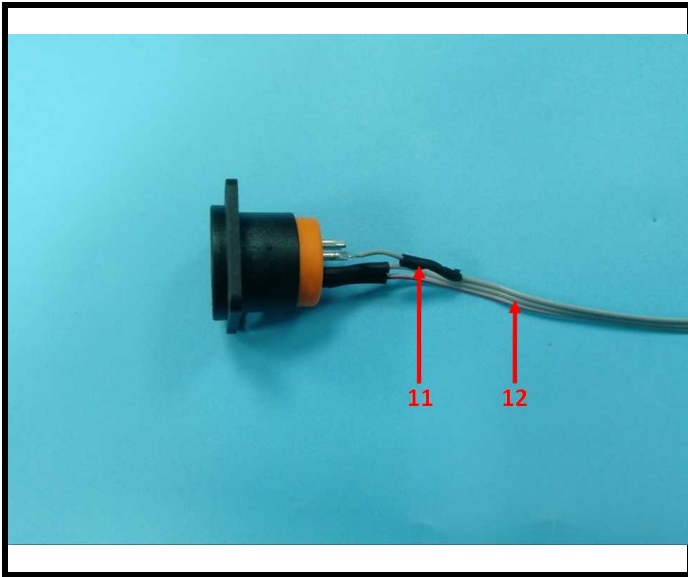


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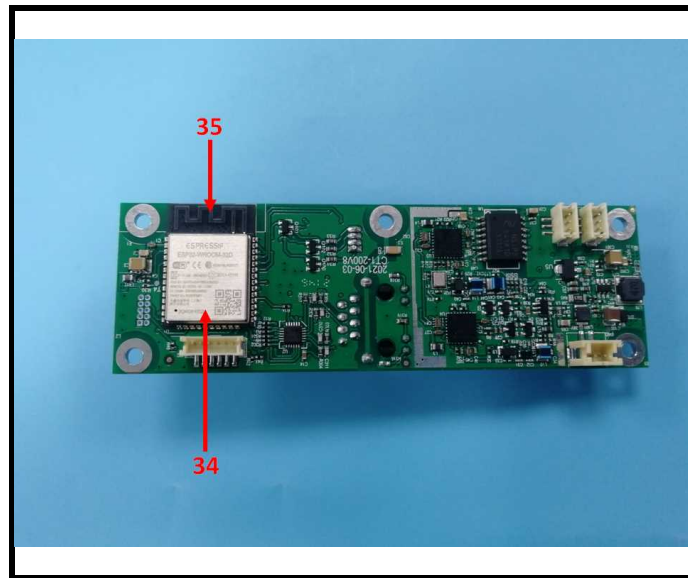
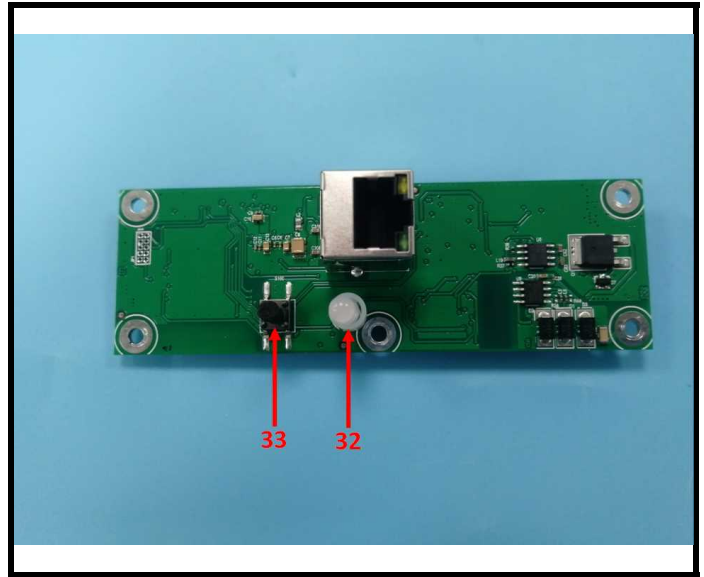
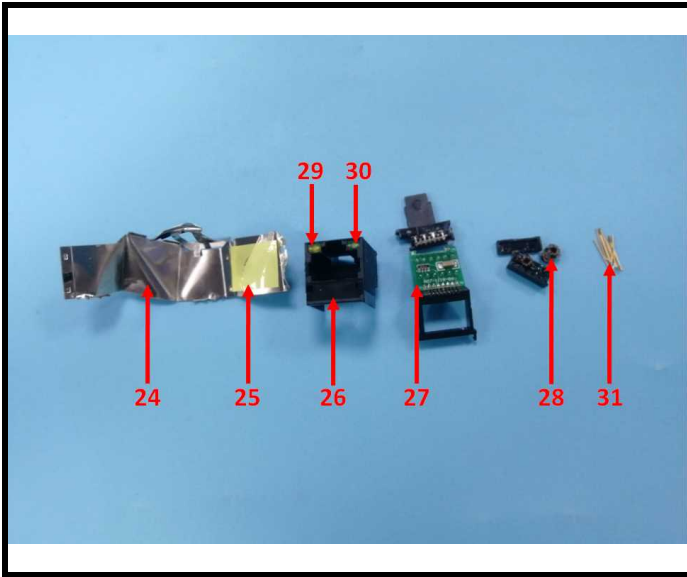


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Statement:

- 1.This report cannot be reproduced except in full, without prior written approval of the Company.
- 2.Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
- 3.This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
- 4.Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
- 5.The information which provided by the applicant, such as sample description, sample name, material component, style/item No. , P.O. No. , manufacturer, age phase, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
- 6.The test samples were in good condition before testing.

*** End of Report ***