



REPORT No. : SZ17060234R04

REACH TEST REPORT

Applicant : Shanxi Jianyu Science and technology co., LTD.

Product name : Li-polymer Battery

Model name : AE603448P

Trade name : N/A

Brand name : N/A

Test Request : As specified by client, based on the list published (last updated:07/07/2017) by ECHA for public consultation regarding regulation (EC) No.1907 /2006 concerning the REACH, to determine the 174 Substances of Very High Concern (SVHC) content in the submitted sample

Issue Date : 2017-08-07

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

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MORLAB GROUP

FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555
[Http://www.morlab.com](http://www.morlab.com)

Fax: 86-755-36698525
E-mail: service@morlab.cn



Test Report Declaration

Applicant	Shanxi Jianyu Science and technology co., LTD.
Applicant Address	NO.12 xin jin ci lu road hui jin garden 7th floor 4-201 Taiyuan city, Shanxi Province
Manufacturer	N/A
Manufacturer Address	N/A
Product Name	Li-polymer Battery
Model Name	AE603448P
Test Standard	(EC)No.1907/2006
Test Date	2017-07-06 to 2017-07-12

Tested by

:

Liu Rui

Liu Rui(Test engineer)

Approved by

:

Xiaoshan Ni

Xiaoshan Ni (Supervisor)



Remark:

- (1) The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA:

<http://echa.europa.eu/wed/guest/candidate-list-table>

These lists are under evaluation by ECHA and may subject to change in the future.

- (2) Concerning article(s):

In accordance with Regulation (EC) No 1907/2006, any EU producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, If a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance is present in those articles in quantities totaling over one tonne per producer or importer per year; and(b) the substance is present in those articles above a concentration of 0.1% weight by weight (w/w)

Article 33 of Regulation (EC) No 1907/2006 requires supplier of article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

- (3) Concerning material(s):

Test results in the report are based on the tested sample .This report to testing result of tested sample submitted as homogenous materials. In case such material is being used to compose an article, the results indicated in this report may not represent SVHC concentration in such article. If this report refer to testing result of composite material group by equal weight proportion, the material in each composite test group may come from more than one article.

If the sample is a substance or mixture, and it directly exports to EU, client has the obligation to comply with the supply chain communication obligation under Article 31 of Regulation (EC) No. 1907/2006 and the conditions of Authorization of substance of very high concern included in the Annex XIV of the Regulation (EC) No. 1907/2006.

**Test Result: (Substances in the Candidate List of SVHC)**

No.	Substance Name	CAS No.	Concentration (%)	RL (%)
1	4,4'-Diaminodiphenylmethane	101-77-9	N.D.	0.050
2	5-tert-butyl-2,4,6-trinitro-m-xylene	81-15-2	N.D.	0.050
3	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	N.D.	0.050
4	Anthracene	120-12-7	N.D.	0.050
5	Diarsenic pentaoxide*	1303-28-2	N.D.	0.005
6	Diarsenic trioxide*	1327-53-3	N.D.	0.005
7	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	N.D.	0.050
8	Bis(tributyltin)oxide (TBTO)	56-35-9	N.D.	0.050
9	Benzyl butyl phthalate (BBP)	85-68-7	N.D.	0.050
10	Cobalt dichloride*	7646-79-9	N.D.	0.005
11	Dibutyl phthalate (DBP)	84-74-2	N.D.	0.050
12	Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD) ^Δ	25637-99-4; 3194-55-6	N.D.	0.050
13	Lead hydrogen arsenate*	7784-40-9	N.D.	0.005
14	Sodium dichromate*	7789-12-0 10588-01-9	N.D.	0.005
15	Triethyl arsenate*	15606-95-8	N.D.	0.005
16	Anthracene oil	90640-80-5	N.D.	0.050
17	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	N.D.	0.050
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	N.D.	0.050
19	Anthracene oil, anthracene-low	90640-82-7	N.D.	0.050
20	Anthracene oil, anthracene paste	90640-81-6	N.D.	0.050
21	Pitch, coal tar, high temp	65996-93-2	N.D.	0.050
22	Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	N.D.	0.050
23	2,4-Dinitrotoluene (2,4-DNT)	121-14-2	N.D.	0.050
24	Diisobutyl phthalate (DIBP)	84-69-5	N.D.	0.050
25	Lead chromate molybdate sulfate red * (C.I. Pigment Red 104)	12656-85-8	N.D.	0.005
26	Lead sulfochromate yellow* (C.I. Pigment Yellow 34)	1344-37-2	N.D.	0.005



No.	Substance Name	CAS No.	Concentration (%)	RL (%)
27	Lead chromate*	7758-97-6	N.D.	0.005
28	Acrylamide	79-06-1	N.D.	0.050
29	Trichloroethylene	79-01-6	N.D.	0.050
30	Boric acid*	10043-35-3 11113-50-1	N.D.	0.005
31	Disodium tetraborate, anhydrous*	1303-96-4 1330-43-4 12179-04-3	N.D.	0.005
32	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	N.D.	0.005
33	Sodium chromate*	7775-11-3	N.D.	0.005
34	Potassium chromate*	7789-00-6	N.D.	0.005
35	Ammonium dichromate*	7789-09-5	N.D.	0.005
36	Potassium dichromate*	7778-50-9	N.D.	0.005
37	Cobalt(II) sulphate*	10124-43-3	N.D.	0.005
38	Cobalt(II) dinitrate*	10141-05-6	N.D.	0.005
39	Cobalt (II) carbonate*	513-79-1	N.D.	0.005
40	Cobalt(II) diacetate*	71-48-7	N.D.	0.005
41	2-Methoxyethanol	109-86-4	N.D.	0.050
42	2-Ethoxyethanol	110-80-5	N.D.	0.050
43	Chromium trioxide*	1333-82-0	N.D.	0.005
44	Acids generated from chromium trioxide and their oligomers Group containing: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid*	7738-94-5 13530-68-2	N.D.	0.005
45	2-ethoxyethyl acetate	111-15-9	N.D.	0.050
46	Strontium chromate*	7789-6-2	N.D.	0.005
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	N.D.	0.050
48	Hydrazine	302-01-2 7803-57-8	N.D.	0.050
49	1-methyl-2-pyrrolidone	872-50-4	N.D.	0.050
50	1,2,3-trichloropropane	96-18-4	N.D.	0.050
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	N.D.	0.050
52	Dichromium tris(chromate)*	24613-89-6	N.D.	0.005



No.	Substance Name	CAS No.	Concentration (%)	RL (%)
53	Potassium hydroxyoctaoxidizincatedi-chromate*	11103-86-9	N.D.	0.005
54	Pentazinc chromate octahydroxide*	49663-84-5	N.D.	0.005
55	Aluminosilicate Refractory Ceramic Fibres*	-	N.D.	0.005
56	Zirconia Aluminosilicate Refractory Ceramic Fibres*	-	N.D.	0.005
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	N.D.	0.050
58	Bis(2-methoxyethyl) phthalate	117-82-8	N.D.	0.050
59	2-Methoxyaniline;o-Anisidine	90-04-0	N.D.	0.050
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	N.D.	0.050
61	1,2-Dichloroethane	107-06-2	N.D.	0.050
62	Bis(2-methoxyethyl) ether	111-96-6	N.D.	0.050
63	Arsenic acid*	7778-39-4	N.D.	0.005
64	Calcium arsenate*	7778-44-1	N.D.	0.005
65	Trilead diarsenate*	3687-31-8	N.D.	0.005
66	N,N-dimethylacetamide (DMAC)	127-19-5	N.D.	0.050
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	N.D.	0.050
68	Phenolphthalein	77-09-8	N.D.	0.050
69	Lead azide Lead diazide*	13424-46-9	N.D.	0.005
70	Lead styphnate*	15245-44-0	N.D.	0.005
71	Lead dipicrate*	6477-64-1	N.D.	0.005
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	N.D.	0.050
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	N.D.	0.050
74	Diboron trioxide*	1303-86-2	N.D.	0.005
75	Formamide	75-12-7	N.D.	0.050
76	Lead(II) bis(methanesulfonate)*	17570-76-2	N.D.	0.005
77	1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (TGIC)	2451-62-9	N.D.	0.050
78	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	N.D.	0.050
79	4,4'-bis(dimethylamino)benzophe	90-94-8	N.D.	0.050



No.	Substance Name	CAS No.	Concentration (%)	RL (%)
	none (Michler's ketone)			
80	N,N,N',N'-tetramethyl-4,4'-methyl enedianiline (Michler's base)	101-61-1	N.D.	0.050
81	[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	N.D.	0.050
82	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylam moniumchloride (C.I. Basic Violet 3) §	548-62-9	N.D.	0.050
83	4,4'-bis(dimethylamino)-4''-(methylamino) trityl alcohol	561-41-1	N.D.	0.050
84	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	N.D.	0.050
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; Deca-BDE)	1163-19-5	N.D.	0.050
86	Pentacosafuorotridecanoic acid	72629-94-8	N.D.	0.050
87	Tricosafuorododecanoic acid	307-55-1	N.D.	0.050
88	Henicosafuoroundecanoic acid	2058-94-8	N.D.	0.050
89	Heptacosafuorotetradecanoic acid	376-06-7	N.D.	0.050
90	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	N.D.	0.050
91	Cyclohexane-1,2-dicarboxylic anhydride	14166-21-3	N.D.	0.050
92	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	N.D.	0.050
93	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]	-	N.D.	0.050



No.	Substance Name	CAS No.	Concentration (%)	RL (%)
94	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	N.D.	0.050
95	Methoxyacetic acid	625-45-6	N.D.	0.050
96	N,N-dimethylformamide	68-12-2	N.D.	0.050
97	Dibutyltin dichloride (DBT)	683-18-1	N.D.	0.050
98	Lead monoxide (Lead oxide)*	1317-36-8	N.D.	0.005
99	Orange lead (Lead tetroxide)*	1314-41-6	N.D.	0.005
100	Lead bis(tetrafluoroborate)*	13814-96-5	N.D.	0.005
101	Trilead bis(carbonate)dihydroxide*	1319-46-6	N.D.	0.005
102	Lead titanium trioxide*	12060-00-3	N.D.	0.005
103	Lead titanium zirconium oxide*	12626-81-2	N.D.	0.005
104	Silicic acid, lead salt*	11120-22-2	N.D.	0.005
105	Silicic acid , barium salt , lead-doped*	68784-75-8	N.D.	0.005
106	1-bromopropane (n-propyl bromide)	106-94-5	N.D.	0.050
107	Methyloxirane (Propylene oxide)	75-56-9	N.D.	0.050
108	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	N.D.	0.050
109	Diisopentylphthalate (DIPP)	605-50-5	N.D.	0.050
110	N-pentyl-isopentylphthalate	776297-69-9	N.D.	0.050
111	1,2-diethoxyethane	629-14-1	N.D.	0.050
112	Acetic acid, lead salt, basic*	51404-69-4	N.D.	0.005
113	Lead oxide sulfate*	12036-76-9	N.D.	0.005
114	[Phthalato(2-)]dioxotrilead*	69011-06-9	N.D.	0.005
115	Dioxobis(stearato)trilead*	12578-12-0	N.D.	0.005
116	Fatty acids, C16-18, lead salts*	91031-62-8	N.D.	0.005
117	Lead cyanamidate*	20837-86-9	N.D.	0.005
118	Lead dinitrate*	10099-74-8	N.D.	0.005
119	Pentalead tetraoxide sulphate*	12065-90-6	N.D.	0.005
120	Pyrochlore, antimony lead yellow*	8012-00-8	N.D.	0.005



No.	Substance Name	CAS No.	Concentration (%)	RL (%)
121	Sulfurous acid, lead salt, dibasic*	62229-08-7	N.D.	0.005
122	Tetraethyllead*	78-00-2	N.D.	0.005
123	Tetralead trioxide sulphate*	12202-17-4	N.D.	0.005
124	Trilead dioxide phosphonate*	12141-20-7	N.D.	0.005
125	Furan	110-00-9	N.D.	0.050
126	Diethyl sulphate	64-67-5	N.D.	0.050
127	Dimethyl sulphate	77-78-1	N.D.	0.050
128	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	N.D.	0.050
129	Dinoseb	88-85-7	N.D.	0.050
130	4,4'-methylenedi- <i>o</i> -toluidine	838-88-0	N.D.	0.050
131	4,4'-oxydianiline and its salts	101-80-4	N.D.	0.050
132	4-aminoazobenzene	60-09-3	N.D.	0.050
133	4-methyl- <i>m</i> -phenylenediamine	95-80-7	N.D.	0.050
134	6-methoxy- <i>m</i> -toluidine	120-71-8	N.D.	0.050
135	Biphenyl-4-ylamine	92-67-1	N.D.	0.050
136	<i>o</i> -aminoazotoluene	97-56-3	N.D.	0.050
137	<i>o</i> -toluidine	95-53-4	N.D.	0.050
138	N-methylacetamide	79-16-3	N.D.	0.050
139	Cadmium*	7440-43-9	N.D.	0.005
140	Cadmium oxide*	1306-19-0	N.D.	0.005
141	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	N.D.	0.050
142	Pentadecafluorooctanoic acid(PFOA)	335-67-1	N.D.	0.050
143	Dipentyl phthalate (DPP)	131-18-0	N.D.	0.050
144	4-Nonylphenol, branched and linear, ethoxylated	-	N.D.	0.050
145	Cadmium sulphide*	1306-23-6	N.D.	0.005
146	Dihexyl phthalate	84-75-3	N.D.	0.050
147	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis (azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	N.D.	0.050



No.	Substance Name	CAS No.	Concentration (%)	RL (%)
148	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. DirectBlack 38)	1937-37-7	N.D.	0.050
149	Imidazolidine-2-thione	96-45-7	N.D.	0.050
150	Lead di(acetate)*	301-04-2	N.D.	0.005
151	Trixylyl phosphate	25155-23-1	N.D.	0.050
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	N.D.	0.050
153	Cadmium chloride*	10108-64-2	N.D.	0.005
154	Sodium perborate; perboric acid, sodium salt*	-	N.D.	0.005
155	Sodium peroxometaborate*	7632-04-4	N.D.	0.005
156	Cadmium fluoride*	7790-79-6	N.D.	0.005
157	Cadmium sulphate*	10124-36-4	N.D.	0.005
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	N.D.	0.050
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	N.D.	0.050
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	N.D.	0.050
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)	-	N.D.	0.050
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)	68515-51-5/ 68648-93-1	N.D.	0.050
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]	-	N.D.	0.050



No.	Substance Name	CAS No.	Concentration (%)	RL (%)
164	1,3-propanesultone	1120-71-4	N.D.	0.050
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	N.D.	0.050
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	N.D.	0.050
167	Nitrobenzene	98-95-3	N.D.	0.050
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	N.D.	0.050
169	Benzo[def]chrysene	50-32-8	N.D.	0.050
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	N.D.	0.050
171	nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3108-42-7 335-76-2 3830-45-3	N.D.	0.050
172	4-heptylphenol, branched and linear (4-HPbl)	-	N.D.	0.050
173	4-tert-pentylphenol (PTAP)	80-46-6	N.D.	0.050
174	Perfluorohexane-1-sulphonic acid and its salts PFHxS	-	N.D.	0.050

Remark:

- (1) RL= Reporting Limit. All RL are based on homogenous material
ND= Not detected (lower than RL), ND is denoted on the SVHC substance
- (2) ^Δ CAS No. of diastereoisomers identified (α -HBCDD, β -HBCDD, γ -HBCDD): 134237-50-6, 134237-51-7, 134237-52-8
- (3) *The test result is based on the calculation of selected element(s)/ marker(s) and the worst-case scenario.
- (4) [§]The substance is proposed for the identification as SVHC only where it contains Michler's ketone (CAS Number:90-94-8) or Michler's base (CAS Number: 101-61-1) $\geq 0.1\%$ (w/w).

Annex A Photo of Sample



***** END OF REPORT *****