



Test Report No. F690501/LF-CTSAYA07-28118

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To: **SAMSUNG SDI**
508
Sungshung-dong
Cheonan-city
CHUNGNAM
Korea

The following merchandise was submitted and identified by the client as :

Product Name : Li-Ion Battery
SGS File No. : AYA07-28118
Received Date : December 12, 2007
Test Performing Date : December 13, 2007
Test Performed : SGS Testing Korea tested the sample(s) selected by applicant with following results
Test Results : For further details, please refer to following page(s)
Comments : The sampling and testing was performed only for the part indicated in the photo without disassembly by the applicant's specific request.

SGS Testing Korea Co. Ltd.

Jeff Jang / Chemical Lab Mgr

Pluto Kim
Monet Jeong
Billy Oh / Testing Person



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SGS File No. : AYA07-28118

Product Name : Li-Ion Battery

SGS File No.	PART NAME	REMARKS
AYA07-28118.001	Jellyroll	ICR18650-22F
AYA07-28118.002	Tubing	ICR18650-22F
AYA07-28118.003	Can	ICR18650-22F

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Sample No. : AYA07-28118.001

Sample Description : Jellyroll

Item No./Part No. : ICR18650-22F

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	5	N.D.
Cadmium (Cd)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	0.5	--
Lead (Pb)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	5	--
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992), UV	1	N.D.

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

- NOTE:
- (1) N.D. = Not detected.(<MDL)
 - (2) mg/kg = ppm
 - (3) MDL = Method Detection Limit
 - (4) - = No regulation
 - (5) - = No regulation
 - (6) ** = Qualitative analysis (No Unit)
 - (7) Negative = Undetectable / Positive = Detectable

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Sample No. : AYA07-28118.001

Sample Description : Jellyroll

Item No./Part No. : ICR18650-22F

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Decabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

Picture of Sample as Received:

Sample Color : Black



- NOTE:
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Sample No. : AYA07-28118.002

Sample Description : Tubing

Item No./Part No. : ICR18650-22F

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	0.5	--
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	5	--
Cadmium (Cd)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992), UV	1	N.D.

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

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Sample No. : AYA07-28118.002

Sample Description : Tubing

Item No./Part No. : ICR18650-22F

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Decabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

Picture of Sample as Received:

Sample Color : Green



- NOTE:
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 - (5) - = No regulation
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Sample No. : AYA07-28118.003

Sample Description : Can

Item No./Part No. : ICR18650-22F

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	0.5	--
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996), ICP	5	--
Cadmium (Cd)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992), UV	1	N.D.

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	--
Monobromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Dibromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Tribromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Tetrabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Pentabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Hexabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Heptabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Octabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--
Nonabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--

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Sample No. : AYA07-28118.003

Sample Description : Can

Item No./Part No. : ICR18650-22F

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Decabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	--

Picture of Sample as Received:

Sample Color : Silver



*** End ***

- NOTE:
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 - (2) mg/kg = ppm
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 - (4) - = No regulation
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