



Safety Data Sheet

ACCORDING TO HCS-2012 APPENDIX D TO §1910.1200

Issued/Revised date : April 13 2018

Document No. : Go-180413001

1 IDENTIFICATION

(a) *Product Identification:*

Product Name: Lithium-Ion Rechargeable Battery Pack

Product Model : A70 Coslight/4600mAh, 2S2P

Simplo Part Number : 93GTA005H / 93GTA005HB

Other Means of Identification:

Product description: 7.7V==48.29Wh

(b) *Recommended use of the chemical and restrictions on use*

Recommended use:: Used for Notebook , PDA, cell phones, electronic products

Restriction on use: No information available.

(c) *Details of the supplier of the product:*

Company Name: Simplo Technology Co.,Ltd.

Address: No 471 Sec 2 Pa Teh Rd Hu Kou 30348 Hsin Chu Hsien, Taiwan

Postcode: 30348

Telephone: +886-3-5695920

Fax: +886-3-5695931

(d) *Emergency phone number: +886-3-5695920*

2.Hazard(s) identification

(a) *Classification of the chemical*

The battery is considered as an article, and this product is not classified as hazardous.

(b) *Label elements*

Pictogram(s): No pictogram is used.

Signal word: No signal word is used.

Hazard statements: Not classified.

Precautionary statements: Not classified

(c) *Description of any hazards not otherwise classified*

Do not dismantle, open or shred the battery, the ingredients contained within could be harmful.

(d) *Ingredient with unknown acute toxicity*

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

(a) *Mixtures information: ingredients contained within the battery*



Chemical name	CAS No.	Typical concentration
Lithium cobaltate	12190-79-3	37.80%
Graphite	7782-42-5	20.85%
Carbon Black	1333-86-4	0.58%
Polyvinylidene fluoride	24937-79-9	0.58%
Carboxymethyl cellulose	9004-32-4	0.27%
Aluminum	7429-90-5	6.25%
Copper	7440-50-8	9.00%
polyethylene	9002-88-4	3.38%
polypropylene	9003-07-0	5.07%
Lithium hexafluorophosphate	21324-40-3	4.0%
Ethylene carbonate	96-49-1	4.0%
Ethyl methyl carbonate	623-53-0	4.0%
Dimethyl carbonate	616-38-6	4.0%
Oroxylin A	480-11-5	0.11%
Organosilicone resin	67763-03-5	0.11%

4. FIRST-AID MEASURES

(a) Description of first aid measures

Caution! No effect under routine handling and use. If exposure to internal materials within cell due to damaged outer metal casing, the following actions are recommended.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.

Skin contact:

Immediately flush skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing and shoes before reuse. Get medical aid.

Eye contact:

Rinse cautiously with water for 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Ingestion:

Rinse mouth with water. Never give anything through mouth to an unconscious person. Call a POISON Center or doctor if you feel unwell.

(b) Most important symptoms/effects, acute and delayed



No effect under routine handling and use

(c) Immediate medical attention and special treatment

Note to physicians: Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

(a) Extinguishing media

Extinguishing Media:

Use suitable extinguishing media.

Firefighting Equipment:

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

(b) Special hazards arising from the chemical

Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide

(c) Special protective equipment and precautions for fire-fighters

If possible, remove cell(s) from fire fighting area. If heated above 130°C, cell(s) may Swell /explode /vent. Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6. ACCIDENTAL RELEASE MEASURES

(a) Personal precautions, protective equipment and emergency procedures

Restrict access to area until completion of clean up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in section 8.

(b) Methods and materials for containment and cleaning up

On Land: Place material into suitable containers and call local fire/police department. In Water: If possible, remove from water and call local fire/police department.

7. HANDLING AND STORAGE

(a) Precautions for safe handling

Do not expose the battery to excessive physical shock or vibration. Short-circuiting should be avoided. However, accidental short-circuiting for a few seconds will not seriously affect the battery. Prolonged short circuits will cause the battery to rapidly lose energy, could generate enough heat to burn skin. Sources of short circuits include jumbled batteries in bulk containers, coins, metal jewelry, metal covered tables, or metal belts used for assembly of batteries in devices. To minimize risk of short-circuiting, the protective case supplied with the battery should be used to cover the terminals when transporting or storing the battery. Do not disassemble or deform the battery. Should an individual cell within a battery become ruptured, do not allow contact with water.

(b) Conditions for safe storage, including any incompatibilities

The lithium ion battery should be between 25% and 75% of full charge when stored for a long period of time. Stored in a cool, dry, and well ventilated area. Elevated temperatures can result in loss of battery performance, leakage, or rust. Do not expose the battery to open flames.



8. EXPOSURE CONTROLS / PERSONAL PROTECTION

(a) Engineering Controls :

Keep away from heat and open flame. Store in a cool dry place

Personal Protection :

(b) Respirator :

Not required during normal operations. SCBA required in the event of a fire.

(c) Eye/Face Protection :

Not required beyond safety practices of employer.

(d) Gloves :

Not required for handling of battery.

Foot Protection : Steel toed shoes recommended for large container handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

(a) Appearance	Black Solid
(b) Odor	Odourless
(c) Odor threshold	No data available
(d) pH	No data available
(e) Melting point	No data available
(f) Initial boiling point and boiling range	No data available
(g) Flash point	No data available
(h) Evaporation rate	No data available
(i) Flammability	No data available
(j) Upper/lower flammability or explosive limits	No data available
(k) Vapor pressure	No data available
(l) Vapor density	No data available
(m) Density	No data available
(n) Water solubility	No data available
(o) Partition coefficient: n-octanol/water	No data available
(p) Auto-ignition temperature	No data available
(q) Decomposition temperature	No data available
(r) Viscosity	No data available

10. STABILITY AND REACTIVITY

(a) Reactivity

None during normal operating or handling conditions.

(b) Chemical stability

Stable under normal condition.

(c) Possibility of hazardous reactions

No hazardous reactions known.

(d) Conditions to avoid

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

(e) Incompatible materials



Strong oxidizing agents, strong acids, strong bases.

(f) Hazardous decomposition products

None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

11. TOXICOLOGICAL INFORMATION

(a) Information on the likely routes of exposure

Inhalation:	No effect under routine handling and use for sealed battery. If battery is broken, inhale fume/dust may cause irritation, chemical burns or lung oedema.
Ingestion:	No effect under routine handling and use for sealed battery. Harmful if swallowed the electrolyte contained inside the battery. Exposure to the electrolyte contained inside the battery may cause severe chemical burn to mouth, esophagus and gastrointestinal system.
Skin contact:	No effect under routine handling and use for sealed battery. Exposure to the electrolyte contained inside the battery may result in chemical burns. Exposure to battery particulate may cause dermatitis.
Eye contact:	No effect under routine handling and use for sealed battery. Exposure to the electrolyte contained inside the battery may result in severe irritation and chemical burns.

(b) Information on toxicological characteristics

This product does not elicit toxicological properties during routine handling and use. If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

Acute toxicity:	No data available.
Skin corrosion/irritation:	No data available.
Serious eye damage/irritation:	No data available.
Respiratory sensitization:	No data available.
skin sensitization:	No data available.
Carcinogenicity:	No data available.
Germ Cell Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
STOT-Single Exposure:	No data available.
STOT-Repeated Exposure:	No data available.
Aspiration Hazard:	No data available.

12. ECOLOGICAL INFORMATION

(a) Ecotoxicity



No data available.

(b) Persistence and Degradability

No data available.

(c) Bioaccumulative potential

No data available.

(d) Mobility in soil

No data available.

(e) Other adverse effects

Some materials within the cell are bio-accumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment

13. DISPOSAL CONSIDERATIONS

(a) Safe handling and methods of disposal

Dispose of according to all federal, state, and local regulations.

14. TRANSPORT INFORMATION

This enclosed battery fulfills the requirements and conditions in accordance with UN Recommendations on the Transport of Dangerous Goods Model Regulations that can be treated as “Non-Dangerous Goods”.

(a) UN number	Not regulated as dangerous goods
(b) UN Proper shipping name	Not regulated as dangerous goods
(c) Transport hazard class(es)	Not regulated as dangerous goods
(d) Packing group (if applicable)	Not regulated as dangerous goods
(e) Marine pollutant (Yes/No)	No
(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	No information available.
(g) Special precautions	No information available.

15. REGULATORY INFORMATION

(a) Safety, health and environmental regulations specific for the product in question

CAS No.	USA TSCA	China IECSC	Canada DSL/NDSL
12190-79-3	Listed	Listed	DSL
7782-42-5	Listed	Listed	DSL
1333-86-4	Listed	Listed	DSL
24937-79-9	Listed	Listed	DSL
9004-32-4	Listed	Listed	DSL
7429-90-5	Listed	Listed	DSL
7440-50-8	Listed	Listed	DSL
9002-88-4	Listed	Listed	DSL
9003-07-0	Listed	Listed	DSL
21324-40-3	Listed	Listed	NDSL
96-49-1	Listed	Listed	DSL
623-53-0	Listed	Listed	DSL
616-38-6	Listed	Listed	DSL
480-11-5	Listed	Listed	DSL
67763-03-5	Listed	Listed	DSL

Remark: The above-mentioned search results are based on the Non-Confidential Inventory.



16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

(a) Preparation and revision information

The information contained in this Safety data sheet is based on the present state of knowledge and current legislation.

This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The information contained in this Safety data sheet is based on the present state of knowledge and current legislation.

(b) Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
OSHA:	The United States Occupational Safety and Health Administration.
TWA:	time-weighted average
STEL:	Short term exposure limit
DOT:	US Department Of Transportation)
IMDG:	International Maritime Dangerous Goods
IATA:	International Air Transport Association
TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
IECSC:	Inventory of existing chemical substances in China.

(c) Disclaimer

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the SDS -----



Safety Data Sheet

ACCORDING TO HCS-2012 APPENDIX D TO §1910.1200

Issued/Revised date : April 24 2018

Document No. : Go-180424001

1 IDENTIFICATION

(a) Product Identification:

Product Name: Lithium-Ion Rechargeable Battery Pack
Product Model : A70 ATL/4600mAh, 2S2P
Simplo Part Number : 93GTA004H / 93GTA004HB

Other Means of Identification:

Product description: 7.7V==48.29Wh

(b) Recommended use of the chemical and restrictions on use

Recommended use:: Used for Notebook , PDA, cell phones, electronic products
Restriction on use: No information available.

(c) Details of the supplier of the product:

Company Name: Simplo Technology Co.,Ltd.
Address: No 471 Sec 2 Pa Teh Rd Hu Kou 30348 Hsin Chu Hsien, Taiwan
Postcode: 30348
Telephone: +886-3-5695920
Fax: +886-3-5695931

(d) Emergency phone number: +886-3-5695920

2.Hazard(s) identification

(a) Classification of the chemical

The battery is considered as an article, and this product is not classified as hazardous.

(b) Label elements

Pictogram(s): No pictogram is used.
Signal word: No signal word is used.
Hazard statements: Not classified.
Precautionary statements: Not classified

(c) Description of any hazards not otherwise classified

Do not dismantle, open or shred the battery, the ingredients contained within could be harmful.

(d) Ingredient with unknown acute toxicity

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

(a) Mixtures information: ingredients contained within the battery



Chemical name	CAS No.	Typical concentration
Graphite	7782-42-5	20%
Lithium cobaltate	12190-79-3	30%
Lithium hexafluorophosphate	21324-40-3	3%
Diethyl carbonate	105-58-8	10%
Propylene carbonate	108-32-7	10%
Ethylene Carbonate	96-49-1	10%
Copper	7440-50-8	12%
Aluminum	7429-90-5	4%
Nickel	7440-02-0	1%

4. FIRST-AID MEASURES

(a) Description of first aid measures

Caution! No effect under routine handling and use. If exposure to internal materials within cell due to damaged outer metal casing, the following actions are recommended.

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.
Skin contact:	Immediately flush skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing and shoes before reuse. Get medical aid.
Eye contact:	Rinse cautiously with water for 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Ingestion:	Rinse mouth with water. Never give anything through mouth to an unconscious person. Call a POISON Center or doctor if you feel unwell.

(b) Most important symptoms/effects, acute and delayed

No effect under routine handling and use

(c) Immediate medical attention and special treatment

Note to physicians: Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

(a) Extinguishing media

Extinguishing Media:

Use suitable extinguishing media.

Firefighting Equipment:

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full



protective gear.

(b) Special hazards arising from the chemical

Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide

(c) Special protective equipment and precautions for fire-fighters

If possible, remove cell(s) from fire fighting area. If heated above 130°C, cell(s) may Swell /explode /vent. Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

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(a) Personal precautions, protective equipment and emergency procedures

Restrict access to area until completion of clean up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in section 8.

(b) Methods and materials for containment and cleaning up

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7. HANDLING AND STORAGE

(a) Precautions for safe handling

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(b) Conditions for safe storage, including any incompatibilities

The lithium ion battery should be between 25% and 75% of full charge when stored for a long period of time. Stored in a cool, dry, and well ventilated area. Elevated temperatures can result in loss of battery performance, leakage, or rust. Do not expose the battery to open flames.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

(a) Engineering Controls :

Keep away from heat and open flame. Store in a cool dry place
Personal Protection :

(b) Respirator :

Not required during normal operations. SCBA required in the event of a fire.

(c) Eye/Face Protection :

Not required beyond safety practices of employer.



(d) Gloves :

Not required for handling of battery.

Foot Protection : Steel toed shoes recommended for large container handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

(a) Appearance	Black Solid
(b) Odor	Odourless
(c) Odor threshold	No data available
(d) pH	No data available
(e) Melting point	No data available
(f) Initial boiling point and boiling range	No data available
(g) Flash point	No data available
(h) Evaporation rate	No data available
(i) Flammability	No data available
(j) Upper/lower flammability or explosive limits	No data available
(k) Vapor pressure	No data available
(l) Vapor density	No data available
(m) Density	No data available
(n) Water solubility	No data available
(o) Partition coefficient: n-octanol/water	No data available
(p) Auto-ignition temperature	No data available
(q) Decomposition temperature	No data available
(r) Viscosity	No data available

10. STABILITY AND REACTIVITY

(a) Reactivity

None during normal operating or handling conditions.

(b) Chemical stability

Stable under normal condition.

(c) Possibility of hazardous reactions

No hazardous reactions known.

(d) Conditions to avoid

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

(e) Incompatible materials

Strong oxidizing agents, strong acids, strong bases.

(f) Hazardous decomposition products

None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

11. TOXICOLOGICAL INFORMATION

(a) Information on the likely routes of exposure

Inhalation:

No effect under routine handling and use for sealed battery. If battery is broken, inhale fume/dust may cause irritation, chemical burns or lung oedema.



Ingestion:

No effect under routine handling and use for sealed battery. Harmful if swallowed the electrolyte contained inside the battery. Exposure to the electrolyte contained inside the battery may cause severe chemical burn to mouth, esophagus and gastrointestinal system.

Skin contact:

No effect under routine handling and use for sealed battery. Exposure to the electrolyte contained inside the battery may result in chemical burns. Exposure to battery particulate may cause dermatitis.

Eye contact:

No effect under routine handling and use for sealed battery. Exposure to the electrolyte contained inside the battery may result in severe irritation and chemical burns.

(b) Information on toxicological characteristics

This product does not elicit toxicological properties during routine handling and use. If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

Acute toxicity:	No data available.
Skin corrosion/irritation:	No data available.
Serious eye damage/irritation:	No data available.
Respiratory sensitization:	No data available.
skin sensitization:	No data available.
Carcinogenicity:	No data available.
Germ Cell Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
STOT-Single Exposure:	No data available.
STOT-Repeated Exposure:	No data available.
Aspiration Hazard:	No data available.

12. ECOLOGICAL INFORMATION

(a) Ecotoxicity

No data available.

(b) Persistence and Degradability

No data available.

(c) Bioaccumulative potential

No data available.

(d) Mobility in soil

No data available.

(e) Other adverse effects

Some materials within the cell are bio-accumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment



13. DISPOSAL CONSIDERATIONS

(a) Safe handling and methods of disposal

Dispose of according to all federal, state, and local regulations.

14. TRANSPORT INFORMATION

This enclosed battery fulfills the requirements and conditions in accordance with UN Recommendations on the Transport of Dangerous Goods Model Regulations that can be treated as “Non-Dangerous Goods”.

- | | |
|--|----------------------------------|
| (a) UN number | Not regulated as dangerous goods |
| (b) UN Proper shipping name | Not regulated as dangerous goods |
| (c) Transport hazard class(es) | Not regulated as dangerous goods |
| (d) Packing group (if applicable) | Not regulated as dangerous goods |
| (e) Marine pollutant (Yes/No) | No |
| (f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code) | No information available. |
| (g) Special precautions | No information available. |

15. REGULATORY INFORMATION

(a) Safety, health and environmental regulations specific for the product in question

CAS No.	USA TSCA	China IECSC	Canada DSL/NDSL
7782-42-5	Listed	Listed	DSL
12190-79-3	Listed	Listed	DSL
21324-40-3	Listed	Listed	NDSL
105-58-8	Listed	Listed	DSL
108-32-7	Listed	Listed	DSL
96-49-1	Listed	Listed	DSL
7440-50-8	Listed	Listed	DSL
7429-90-5	Listed	Listed	DSL
7440-02-0	Listed	Listed	DSL

Remark: The above-mentioned search results are based on the Non-Confidential Inventory.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

(a) Preparation and revision information

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(b) Abbreviations and acronyms

- | | |
|-------|--|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| OSHA: | The United States Occupational Safety and Health Administration. |
| TWA: | time-weighted average |



STEL:	Short term exposure limit
DOT:	US Department Of Transportation)
IMDG:	International Maritime Dangerous Goods
IATA:	International Air Transport Association
TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
IECSC:	Inventory of existing chemical substances in China.

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The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the SDS -----