

## Safety Data Sheets (SDSs)

Client	SUNWODA Electronic Co., Ltd.
Add. of Client	Floor 1, A, B, D District of Floor 2 and Floor 3 to 9 of Comprehensive Building, No.2 Yihe Road, Shilong Community, Shiyan Street, Bao an District, Shenzhen City, Guangdong Province, P.R. China
Description	Rechargeable Lithium-ion Polymer Battery
Model /Type	MQ03
Manufacturer	SUNWODA Electronic Co., Ltd.
Add. of Manufacturer	Floor 1, A, B, D District of Floor 2 and Floor 3 to 9 of Comprehensive Building, No.2 Yihe Road, Shilong Community, Shiyan Street, Bao an District, Shenzhen City, Guangdong Province, P.R. China
Nominal Voltage	7.58V, 5039mAh, 38.2Wh
Date of Receipt	2019-04-30

Laboratory	Shenzhen ZRLK Testing Technology Co., Ltd.	
Address	6F, Fuxinfa Industrial Park, Liuxiangdong, Xili Street, Nanshan District, Shenzhen, China	
Approved Signatory	Maggie.Gao	
Inspected by	Ailis.Ma	
Censored by	Lahm Peng	



### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Identifier**

Product name: Rechargeable Lithium-ion Polymer Battery

Model: MQ03

**Other means of identification**

Synonyms:none

**Recommended use of the chemical and restrictions on use**

Recommended Use:Used in portabl electronic equipments;

Uses advised against:

- a) Do not dismantle, open or shred secondary cells or batteries.
- b) Keep batteries out of the reach of children  
Battery usage by children should be supervised. Especially keep small batteries out of reach of small children.
- c) Seek medical advice immediately if a cell or a battery has been swallowed.
- d) Do not expose cells or batteries to heat or fire. Avoid storage in direct sunlight.
- e) Do not short-circuit a cell or a battery. Do not store cells or batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
- f) Do not remove a cell or battery from its original packaging until required for use.
- g) Do not subject cells or batteries to mechanical shock.
- h) In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.
- i) Do not use any charger other than that specifically provided for use with the equipment.
- j) Observe the plus (+) and minus (-) marks on the cell, battery and equipment and ensure correct use.
- k) Do not use any cell or battery which is not designed for use with the equipment.
- l) Do not mix cells of different manufacture, capacity, size or type within a device.
- m) Always purchase the battery recommended by the device manufacturer for the equipment.
- n) Keep cells and batteries clean and dry.
- o) Wipe the cell or battery terminals with a clean dry cloth if they become dirty.
- p) Secondary cells and batteries need to be charged before use. Always use the correct charger and refer to the manufacturer's instructions or equipment manual for proper charging instructions.
- q) Do not leave a battery on prolonged charge when not in use.
- r) After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.
- s) Retain the original product literature for future reference.
- t) Use the cell or battery only in the application for which it was intended.
- u) When possible, remove the battery from the equipment when not in use.
- v) Dispose of properly.

**Details of the supplier of the safety data sheet:**

Supplier Name: SUNWODA Electronic Co., Ltd.

Address: Floor 1, A, B, D District of Floor 2 and Floor 3 to 9 of Comprehensive Building, No.2 Yihe Road, Shilong Community, Shiyan Street, Bao an District, Shenzhen City, Guangdong Province, P.R. China

Telephone number of the supplier: 0086-755-2951 6888

Fax: 0086-755-2951 6888

Postcode: 518108

E-mail address: zhangxiuping@sunwoda.com

**F-Emergency telephone number**

Company Emergency Phone Number: 0086-755-2951 6888

**2. HAZARDS IDENTIFICATION****Classification**

Acute toxicity - Dermal	Category 3
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

**GHS Label elements, including precautionary statements****Danger****Hazard statements**

Causes serious eye irritation

May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Harmful in contact with skin

Harmful if swallowed

In contact with water releases flammable gases.

Catches fire spontaneously if exposed to air

Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

May cause an allergic skin reaction.

**Precautionary statements-Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not breathe dust/fume/gas/mist/vapors/spray

Do not eat, drink or smoke when using this product

**Precautionary Statements - Response**

If exposed or concerned: Get medical advice/attention  
Specific treatment (see supplemental first aid instructions on this label)

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Skin**

IF ON SKIN: Wash with plenty of water and soap  
Call a POISON CENTER or doctor if you feel unwell  
Take off immediately all contaminated clothing and wash it before reuse

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other information**

harmful if swallowed. Very toxic to aquatic life with long lasting effects.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical characterixation: Mixtures****Description:**

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number
Graphite	22	7782-42-5
Lithium Cobalt Oxide (CoLiO <sub>2</sub> )	35	12190-79-3
Phosphate(1-), hexafluoro-, lithium	3	21324-40-3
Diethyl Carbonate	8	105-58-8
Propylene Carbonate	8.5	108-32-7
Ethylene Carbonate	8	96-49-1
1,3-Propane sultone	2	1120-71-4
Copper	10	7440-50-8
Aluminum	3	7429-90-5



Nickel	0.5	7440-02-0
--------	-----	-----------

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

## 4. FIRST-AID MEASURES

### First aid measures

**Eye Contact** Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

**Skin Contact** Remove contaminated clothing and shoes. Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

**Inhalation** Move to fresh air. If symptoms persist, call a physician.

**Ingestion** Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

**Most important symptoms and effects, both acute and delayed**

**Swallowing** Do not induce vomiting. Get medical attention.

**Most Important Symptoms/Effects** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

CO<sub>2</sub>, dry chemical powder, water spray.

**Unsuitable Extinguishing Media:**No information available.

### Specific Hazards Arising from the Chemical

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide(CO)

Carbon dioxide

Other irritating and toxic gases.

### Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No

Sensitivity to Static Discharge No

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. For example: Wear self-contained respiratory protective device. Wear suitable protective clothing and eye/face protection.

### Special hazards arising from the substance or mixture:

Battery may burst and release hazardous decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high

temperature(>150°C), When damaged or abused(e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

Personal Precautions Avoid contact with eyes.

Refer to section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

### **Environmental precautions**

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

### **Methods and material for containment and cleaning up**

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning up Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### **Precautions for safe handling**

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.

Wash thoroughly after handling. Use this material with adequate ventilation.

The product is not explosive.

### **Conditions for safe storage, including any incompatibilities**

If the Lithium-ion Battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Rechargeable Lithium-ion Polymer Battery periodically.

3 months: -10°C~+40°C, 45 to 85%RH

And recommended at 0°C~+35°C for long period storage.

The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more.

The voltage for a long time storage shall be 3.7V~4.2V range.

Do not storage Lithium-ion Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

Keep out of reach of children.

Do not expose Rechargeable Lithium-ion Polymer Battery to heat or fire. Avoid storage in direct sunlight.

Do not store together with oxidizing and acidic materials.

Keep ignition sources away- Do not smoke.

Store in cool, dry and well-ventilated place.

**Incompatible Products** None known.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Control parameters

Ingredients with limit values that require monitoring at the workplace:	
12190-79-3 Lithium Cobalt Oxide	
TLV (USA)	0.02mg/m <sup>3</sup>
MAK (Germany)	0.1mg/m <sup>3</sup>

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992).

### Appropriate engineering controls

**Engineering Measures** Showers  
 Eyewash stations  
 Ventilation systems

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ensure adequate ventilation.

### Individual protection measures, such as personal protective equipment

#### **Eye/Face Protection:**



**Tightly sealed goggles**

#### **Body protection:**

Protective work clothing.

#### **Skin protection:**



**Protective gloves**

#### **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

#### **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Respiratory Protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Form: Prismatic	
	Color: Silver	
	Odour: Odourless	
	Odor Threshold: No information available	
Change in condition:		Not determined.
pH, with indication of the concentration		Not determined.
Melting point/freezing point		Not determined.
Initial boiling point and Boiling range:		Not determined.
Flash Point		Not determined.
Evaporation rate		Not determined.
Flammability (solid, gas)		Not determined.
Upper/lower flammability or explosive limits		Not determined.
Vapor Pressure:		Not determined.
Vapor Density:		Not determined.
relative density:		Not determined.
Solubility in Water:		Not determined.
Solubility in other solvents		Not determined.
n-octanol/water partition coefficient		Not determined.
Auto-ignition temperature		Product is not self-igniting.
Decomposition temperature		Not determined.
Odour threshold		Not determined.
Evaporation rate		Not determined.
Viscosity		Not determined.
Other Information		No further relevant information available.

## 10. STABILITY AND REACTIVITY

**Reactivity:** Stable under recommended storage and handling conditions (see section 7, Handling and storage).

**Chemical stability:** Stable under normal conditions of use, storage and transport.

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of Hazardous Reactions:** None under normal processing.

**Hazardous Polymerization:** Hazardous polymerization does not occur.



**Conditions to avoid:** Strong heating, fire, Incompatible materials.

**Incompatible materials:** Strong oxidizing agents. Strong acids. Base metals.

**Hazardous Decomposition Products:** Carbon oxides, Other irritating and toxic gases.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:** No data available.

LD/LC50 values relevant for classification:
---

Not available.
----------------

**Skin corrosion/irritation:** No irritant effect.

**Serious eye damage/irritation:** Cause serious eye irritation.

**Respiratory or skin sensitization:** No sensitizing effects known.

**Specific target organ system toxicity:** No information available.

**CMR effects(carcinogenity, mutagenicity and toxicity for reproduction):** No information available.

## 12. Ecological Information

**Toxicity:**

Acquatic toxicity:
--------------------

No further relevant information available.
--

**Persistence and degradability:** No further relevant information available.

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

**Other adverse effects:** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

Recommendation: Must not be disposed together with household garbage.

Do not allow product to reach sewage system

**Uncleaned packaging:**

Recommendation: Disposal must be made according to official regulations.

## 14. TRANSPORT INFORMATION

This report applies to by sea, by air and by land;

The Rechargeable Lithium-ion Polymer Battery must be of a design type proved to meet the testing

requirements of the Manual of test and criteria, Part III, subsection 38.3;

The Rechargeable Lithium-ion Polymer Battery according to Section II of PACKING INSTRUCTION 965-967 of the 2019 IATA Dangerous Goods regulations 60<sup>th</sup> Edition may be transported. and applicable U.S. DOT regulations for the safe transport of Lithium-ion Battery.

Rechargeable Lithium-ion Polymer Battery was protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to short circuit;

Cell and batteries offered for transport must be packed in inner packaging's that completely enclose the cell or battery; to provide protection from damage or compression to the batteries, the inner packaging's must be placed in a strong rigid outer packaging;

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

The package must be handled with care and that a flammability hazard exists if the package is damaged;

With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions.
- The International Air transport Association (IATA) Dangerous Goods Regulations.

UN number of lithium battery: UN3480;

UN Proper shipping name/Description (technical name): Lithium ion batteries;

- The International Maritime Dangerous Goods Code 2018 Edition (Amdt.39-18)

For lithium-ion batteries by sea, provided that packaging is strong and prevent the products from short-circuit.

UN number of lithium battery: UN3481;

UN Proper shipping name/Description (technical name): Lithium ion batteries

Special Provision: International maritime dangerous goods code (IMDG) 188, 230, 310, 348, 957;

- The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA
- The Office of Hazardous Materials Safety within the US Department of Transportations' (DOT) Research and Special Programs Administration (RSPA)

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation:

**Authorisations:** No information available.

**Restrictions on use:** No information available.

#### Regulatory information

CAS No.	EU (EINECS )	US (TSCA)	Japan (ENCS)	Canada (DSL/ NDSL)	Austrlia (AICS)	Korea (ECL)	China (IECSC)
7429-90-5	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
12190-79-3	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7440-50-8	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed



7440-02-0	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
21324-40-3	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
96-49-1	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
108-32-7	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed

**Chemical safety assessment** A Chemical Safety Assessment has not been carried out.

## 16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

\*\*\*\*\*End of SDS\*\*\*\*\*



# Safety Data Sheet

ACCORDING TO HCS-2012 APPENDIX D TO §1910.1200

Issued/Revised date : July 16 2019

Document No. : MI-190716006

## 1 IDENTIFICATION

### *(a) Product Identification:*

Product Name : Lithium-Ion Rechargeable Battery Pack  
Product Model : ATL/2854A6/2720mAh [min. 2663mAh ]  
MSFT Model Name: : Paki'i  
Simplo Part Number : G3HTA060H / G3HTA060HA / G3HTA060HB  
MSFT Part Number : : M1091231-002

### *(b) Other Means of Identification:*

Product description: Voltage: 7.58V  
Ampere-hour: 5.039Ah  
Content of Li: 1.5117g  
Watt-Hour: 38.2Wh

### *(c) 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.

### *(d) 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

### *(e) 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.	Concentration range
Graphite	7782-42-5	16.72%
copper	7440-50-8	14.02%
Nickel	7440-02-0	0.98%
aluminium	7429-90-5	11.44%
cobalt lithium dioxide	12190-79-3	27.6%
lithium hexafluorophosphate(1-)	21324-40-3	2.57%
ethylene carbonate	96-49-1	5.73%
propylene carbonate	108-32-7	5.73%
Diethyl carbonate	105-58-8	5.73%
NYLON 6	25038-54-4	2.06%
1-Propene, polymer with ethene	9010-79-1	2.47%
Poly(ethylene)	9002-88-4	4.87%
1,3-Benzenedicarbonyl dichloride, polymer with 1,3-benzenediamine	25765-47-3	0.04%
polymer with 1,4-benzenedicarboxylic acid, [1,1'-3-benzenedicarboxylic acid	60088-52-0	0.04%

### 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	Silver 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
7440-50-8	Listed	Listed	DSL
7440-02-0	Listed	Listed	DSL
7429-90-5	Listed	Listed	DSL
NA	Listed	Listed	DSL
12190-79-3	Listed	Listed	DSL
21324-40-3	Listed	Listed	NDSL
96-49-1	Listed	Listed	DSL
108-32-7	Listed	Listed	DSL
105-58-8	Listed	Listed	DSL
25038-54-4	Listed	Listed	DSL
9010-79-1	Listed	Listed	DSL
9002-88-4	Listed	Listed	DSL
25765-47-3	Listed	Listed	DSL



60088-52-0

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*

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 : July 16 2019

Document No. : MI-190716005

## 1 IDENTIFICATION

### (a) Product Identification:

Product Name : Lithium-Ion Rechargeable Battery Pack  
Product Model : Coslight/CA2955A7G-7/2720 mAh[min. 2650 mAh]  
MSFT Model Name: : Paki'i  
Simplo Part Number : G3HTA056H / G3HTA056HA / G3HTA056HB  
MSFT Part Number : : M1086676-004

### (b) Other Means of Identification:

Product description: Voltage: 7.58V  
Ampere-hour: 5.039Ah  
Content of Li: 1.5117g  
Watt-Hour: 38.2Wh

### (c) 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.

### (d) 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

### (e) 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.	Concentration range
Organosilicone resin	67763-03-5	0.02%
Ethene, 1,1-difluoro-, homopolymer	24937-79-9	1.86%
Graphite	7782-42-5	20.19%
5,7-dihydroxy-6-methoxyflavone	480-11-5	0.02%
cobalt lithium dioxide	12190-79-3	37.83%
Poly(ethylene)	9002-88-4	2.11%
ethylene carbonate	96-49-1	4.38%
Ethyl methyl carbonate	623-53-0	4.38%
lithium hexafluorophosphate(1-)	21324-40-3	0.55%
dimethyl carbonate	616-38-6	4.38%
copper	7440-50-8	6.62%
Polypropylene	9003-07-0	0.63%
aluminium	7429-90-5	14.42%
carbon	7440-44-0	0.83%
Nickel	7440-02-0	1.78%

### 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	Silver 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
67763-03-5	Listed	Listed	DSL
24937-79-9	Listed	Listed	DSL
7782-42-5	Listed	Listed	DSL
480-11-5	Listed	Listed	DSL
12190-79-3	Listed	Listed	DSL
9002-88-4	Listed	Listed	DSL
96-49-1	Listed	Listed	DSL
623-53-0	Listed	Listed	DSL
21324-40-3	Listed	Listed	NDSL
616-38-6	Listed	Listed	DSL
7440-50-8	Listed	Listed	DSL
9003-07-0	Listed	Listed	DSL
7429-90-5	Listed	Listed	DSL
7440-44-0	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*

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 -----