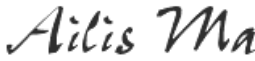


**Safety Data Sheets (SDSs)**

|                      |                                                                                                                                                   |                                                                                      |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Client               | Shenzhen Powercome Electronics Co.,Ltd.                                                                                                           |                                                                                      |
| Add. of Client       | Building 10, Shi'ao Second Industrial Zone, No.8,Langqin Road,Shi'ao,Dalang Village, Longhua Area, Shenzhen                                       |                                                                                      |
| Description          | RECHARGEABLE POLYMER LITHIUM-ION BATTERY                                                                                                          |                                                                                      |
| Model /Type          | PC944755-2S1P                                                                                                                                     |                                                                                      |
| Manufacturer         | Shenzhen Powercome Electronics Co.,Ltd.                                                                                                           |                                                                                      |
| Add. of Manufacturer | Building 10, Shi'ao Second Industrial Zone, No.8,Langqin Road,Shi'ao,Dalang Village, Longhua Area, Shenzhen                                       |                                                                                      |
| Nominal Voltage      | 7.6V, 3150mAh, 23.94Wh                                                                                                                            |                                                                                      |
| Date of Receipt      | 2021-06-30                                                                                                                                        |                                                                                      |
| Laboratory           | Dongguan ZRLK Testing Technology Co., Ltd.                                                                                                        |                                                                                      |
| Address              | Building D, No.2, Jinyuyuan Mansion, No.18, Industrial West Road, Songshan Lake High-tech Industrial Development Zone, Dongguan, Guangdong, 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 POLYMER LITHIUM-ION BATTERY

Model: PC944755-2S1P

### 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: Shenzhen Powercome Electronics Co.,Ltd.

Address: Building 10, Shi'ao Second Industrial Zone, No.8,Langqin Road,Shi'ao,Dalang Village, Longhua Area, Shenzhen

Telephone number of the supplier: 0086- 0769-82618300

Fax: xxxx

Postcode: 518101

E-mail address: op.qa@powercome.hk

**Emergency telephone number****Company Emergency Phone Number:** 0086- 0769-82618300**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**

Toxic in contact with skin

Causes serious eye irritation

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure

**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 |
|--------------------------------------------|-------------------|------------|
| Lithium Cobalt Oxide (LiCoO <sub>2</sub> ) | 35.5              | 12190-79-3 |
| Aluminum Foil                              | 9                 | 7429-90-5  |
| 1.1-Difluoroethylene polymer               | 1                 | 24937-79-9 |
| Graphite                                   | 18                | 7782-42-5  |
| Copper                                     | 15                | 7440-50-8  |
| Styrene-Butadiene polymer                  | 1.5               | 9003-55-8  |
| Phosphate(1-),hexafluoro-,lithium          | 2.8               | 21324-40-3 |
| Ethylene carbonate                         | 5                 | 96-49-1    |
| Dimelene carbonate                         | 5                 | 616-38-6   |
| Carbonate, methyl ethyl                    | 5                 | 623-53-0   |
| Nickel                                     | 2.2               | 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 RECHARGEABLE POLYMER LITHIUM-ION BATTERY is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Li-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 RECHARGEABLE POLYMER 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 Li-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 Polymer Li-ion Rechargeable 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 Polymer Li-ion Rechargeable 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  
Report No.: ZKS210600637  
TRF No. SDS-1A

regulations for the safe transport of RECHARGEABLE POLYMER LITHIUM-ION BATTERY.

Polymer Li-ion Rechargeable 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<br>(EINECS<br>) | US<br>(TSCA) | Japan<br>(ENCS) | Canada<br>(DSL/<br>NDSL) | Australia<br>(AICS) | Korea<br>(ECL) | China<br>(IECSC) |
|------------|--------------------|--------------|-----------------|--------------------------|---------------------|----------------|------------------|
| 12190-79-3 | Listed             | Not listed   | Not listed      | NDSL                     | Not listed          | Not listed     | Not listed       |
| 7429-90-5  | Listed             | Listed       | Listed          | DSL                      | Listed              | Listed         | Listed           |
| 24937-79-9 | Listed             | Listed       | Listed          | DSL                      | Listed              | Listed         | Listed           |
| 7782-42-5  | Not listed         | Listed       | Not listed      | DSL                      | Listed              | Listed         | Listed           |
| 7440-50-8  | Not listed         | Listed       | Not listed      | DSL                      | Listed              | Listed         | Listed           |
| 9003-55-8  | 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       |



## Safety Data Sheets (SDSs)

|           |        |            |            |      |            |            |            |
|-----------|--------|------------|------------|------|------------|------------|------------|
| 96-49-1   | Listed | Not listed | Not listed | NDSL | Not listed | Not listed | Not listed |
| 616-38-6  | Listed | Not listed | Not listed | NDSL | Not listed | Not listed | Not listed |
| 623-53-0  | Listed | Not listed | Not listed | NDSL | Not listed | Not listed | Not listed |
| 7440-02-0 | Listed | Not listed | Not listed | NDSL | Not listed | Not listed | Not listed |

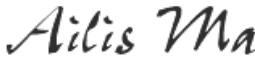
**Chemical safety assessment** A Chemical Safety Assessment has not been carried out.

## 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 Sheets (SDSs)**

|                      |                                                                                                                                                   |                                                                                      |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Client               | Shenzhen Powercome Electronics Co.,Ltd.                                                                                                           |                                                                                      |
| Add. of Client       | Building 10, Shi'ao Second Industrial Zone, No.8,Langqin Road,Shi'ao,Dalang Village, Longhua Area, Shenzhen                                       |                                                                                      |
| Description          | RECHARGEABLE POLYMER LITHIUM-ION BATTERY                                                                                                          |                                                                                      |
| Model /Type          | PC944755-2S2P                                                                                                                                     |                                                                                      |
| Manufacturer         | Shenzhen Powercome Electronics Co.,Ltd.                                                                                                           |                                                                                      |
| Add. of Manufacturer | Building 10, Shi'ao Second Industrial Zone, No.8,Langqin Road,Shi'ao,Dalang Village, Longhua Area, Shenzhen                                       |                                                                                      |
| Nominal Voltage      | 7.6V, 6300mAh, 47.88Wh                                                                                                                            |                                                                                      |
| Date of Receipt      | 2021-06-30                                                                                                                                        |                                                                                      |
| Laboratory           | Dongguan ZRLK Testing Technology Co., Ltd.                                                                                                        |                                                                                      |
| Address              | Building D, No.2, Jinyuyuan Mansion, No.18, Industrial West Road, Songshan Lake High-tech Industrial Development Zone, Dongguan, Guangdong, 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 POLYMER LITHIUM-ION BATTERY

Model: PC944755-2S2P

### Other means of identification

Synonyms:none

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Uses advisd against:

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- 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: Shenzhen Powercome Electronics Co.,Ltd.

Address: Building 10, Shi'ao Second Industrial Zone, No.8,Langqin Road,Shi'ao,Dalang Village, Longhua Area, Shenzhen

Telephone number of the supplier: 0086- 0769-82618300

Fax: xxxx

Postcode: 518101

E-mail address: op.qa@powercome.hk

**Emergency telephone number****Company Emergency Phone Number:** 0086- 0769-82618300**2. HAZARDS IDENTIFICATION****Classification**

|                                                    |             |
|----------------------------------------------------|-------------|
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| Carcinogenicity                                    | Category 2  |
| Specific target organ toxicity (repeated exposure) | Category 1  |

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

Toxic in contact with skin

Causes serious eye irritation

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure

**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 |
|--------------------------------------------|-------------------|------------|
| Lithium Cobalt Oxide (LiCoO <sub>2</sub> ) | 35.5              | 12190-79-3 |
| Aluminum Foil                              | 9                 | 7429-90-5  |
| 1.1-Difluoroethylene polymer               | 1                 | 24937-79-9 |
| Graphite                                   | 18                | 7782-42-5  |
| Copper                                     | 15                | 7440-50-8  |
| Styrene-Butadiene polymer                  | 1.5               | 9003-55-8  |
| Phosphate(1-),hexafluoro-,lithium          | 2.8               | 21324-40-3 |
| Ethylene carbonate                         | 5                 | 96-49-1    |
| Dimelene carbonate                         | 5                 | 616-38-6   |
| Carbonate, methyl ethyl                    | 5                 | 623-53-0   |
| Nickel                                     | 2.2               | 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 RECHARGEABLE POLYMER LITHIUM-ION BATTERY is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Li-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 RECHARGEABLE POLYMER 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 Li-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 Polymer Li-ion Rechargeable 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 Polymer Li-ion Rechargeable 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  
Report No.: ZKS210600640  
TRF No. SDS-1A

regulations for the safe transport of RECHARGEABLE POLYMER LITHIUM-ION BATTERY.

Polymer Li-ion Rechargeable 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<br>(EINECS<br>) | US<br>(TSCA) | Japan<br>(ENCS) | Canada<br>(DSL/<br>NDSL) | Australia<br>(AICS) | Korea<br>(ECL) | China<br>(IECSC) |
|------------|--------------------|--------------|-----------------|--------------------------|---------------------|----------------|------------------|
| 12190-79-3 | Listed             | Not listed   | Not listed      | NDSL                     | Not listed          | Not listed     | Not listed       |
| 7429-90-5  | Listed             | Listed       | Listed          | DSL                      | Listed              | Listed         | Listed           |
| 24937-79-9 | Listed             | Listed       | Listed          | DSL                      | Listed              | Listed         | Listed           |
| 7782-42-5  | Not listed         | Listed       | Not listed      | DSL                      | Listed              | Listed         | Listed           |
| 7440-50-8  | Not listed         | Listed       | Not listed      | DSL                      | Listed              | Listed         | Listed           |
| 9003-55-8  | 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       |



## Safety Data Sheets (SDSs)

|           |        |            |            |      |            |            |            |
|-----------|--------|------------|------------|------|------------|------------|------------|
| 96-49-1   | Listed | Not listed | Not listed | NDSL | Not listed | Not listed | Not listed |
| 616-38-6  | Listed | Not listed | Not listed | NDSL | Not listed | Not listed | Not listed |
| 623-53-0  | Listed | Not listed | Not listed | NDSL | Not listed | Not listed | Not listed |
| 7440-02-0 | 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\*\*\*\*\*

## Material Safety Data Sheet

For  
SHENZHEN KAYO BATTERY CO.,LTD

301 Room ,No 17, Yifenghua Innovation Industrial Park, Xin shi community, Dalang  
Street, LongHua district, Shenzhen , P.R.China. 518109,

And for their product

Rechargeable Li-ion Battery

Model/type reference ..... : KPL944755-2S2P

Nominal Voltage.....: 7.6V

Rated Capacity.....: 6300mAh (47.88Wh)

Version number .....: V1.0

Revision date .....: N/A

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Laboratory .....: **Shenzhen NTEK Testing Technology Co., Ltd.**

Address .....: 1/F, Building C, Fenda Science Park, Sanwei Community,  
Xixiang  
Street, Bao'an District, Shenzhen 518126 P. R. China

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Compiled by (name+ signature) ...: Marco Huang

Approved by (+ signature) .....: KK Yu

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**Shenzhen NTEK Testing Technology Co., Ltd.**

Address: 1/F, Building C, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China  
Tel: +86(0)-755-3699 5529      <http://www.ntek.org.cn>

## Section 1- Chemical Product and Company Identification

Product Identification: Rechargeable Li-ion Battery

Model No.: KPL944755-2S2P

Manufacturer's / Supplier Name: SHENZHEN KAYO BATTERY CO.,LTD

Address: 301 Room ,No 17, Yifenghua Innovation Industrial Park, Xin shi community, Dalang Street, LongHua district, Shenzhen , P.R.China. 518109,

Telephone number of the supplier: +86-13534039490

Emergency Telephone No. (24h): +86-13534039490

Fax: +86-0769-81870916

E-mail address: lfei@kayobattery.com

Preparation Date: 2022-12-07

Effective date: 2023-01-01 ~ 2023-12-31

This MSDS was prepared by Shenzhen NTEK Testing Technology Co., Ltd.

Item Number: PN20220707202434

Referenced documents: ISO 11014:2009 Safety data sheet for chemical products

## Section 2 – Hazards Identification

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preparation hazards and classification | Not dangerous with normal use. Do not dismantle, open or shred the Rechargeable Li-ion Battery ingredients contained within or their ingredients products could be harmful.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Apperance, Color, and Odor             | Solid object with no odor, no color.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Primary Route(s) of Exposure           | These chemicals are contained in a sealed enclosure. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by Inhalation, Ingestion, Eye contact and Skin contact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Potential Health Effects:              | <p><b>ACUTE (short term):</b> see Section 8 for exposure controls In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns.</p> <p><b>Inhalation:</b> Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.</p> <p><b>Ingestion:</b> Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.</p> <p><b>Skin:</b> Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin.</p> <p><b>Eye:</b> Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye.</p> |

|                                           |                                                                              |
|-------------------------------------------|------------------------------------------------------------------------------|
|                                           | <b>CHRONIC (long term):</b> see Section 11 for additional toxicological data |
| Medical Conditions Aggravated by Exposure | Not applicable                                                               |
| Reported as carcinogen                    | Not applicable                                                               |

## Section 3 – Composition/Information on Ingredients

Rechargeable Li-ion Battery is a mixture.

| Hazardous Ingredients (Chemical Name) | Concentration or concentration ranges (%) | CAS Number |
|---------------------------------------|-------------------------------------------|------------|
| Lithium Cobalt Oxide                  | 41.0644                                   | 12190-79-3 |
| Polyvinylidene fluoride               | 0.5747                                    | 24937-79-9 |
| Aluminium                             | 7.0742                                    | 7429-90-5  |
| Graphite                              | 23.8046                                   | 7782-42-5  |
| Carboxymethyl cellulose               | 0.4287                                    | 9004-32-4  |
| Styrene-butadiene rubber              | 1.1379                                    | 9003-55-8  |
| Copper                                | 7.1839                                    | 7440-50-8  |
| Polyethylene                          | 1.4943                                    | 9002-88-4  |
| Lithium hexafluorophosphate           | 2.502                                     | 21324-40-3 |
| Diethyl carbonate                     | 4.107                                     | 105-58-8   |
| Ethyl methyl carbonate                | 4.051                                     | 623-53-0   |
| Vinylene carbonate                    | 3.925                                     | 872-36-6   |
| Poly                                  | 1.1751                                    | 24937-16-4 |
| Polypropylene                         | 1.4772                                    | 9003-07-0  |

Labeling according to EC directives.

No symbol and risk phrase are required.

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not applicable.

## Section 4 – First-aid Measures

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | If contents of an opened battery are inhaled, remove source of contamination or move victim to fresh air. Obtain medical advice.                                                                                                                                                                                                                                                                                                                                                   |
| <b>Skin contact</b> | If skin contact with contents of an open battery occurs, as quickly as possible remove contaminated clothing, shoes and leather goods. Immediately flush with lukewarm, gently flowing water for at least 30 minutes. If irritation or pain persists, seek medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.                                                                                                                  |
| <b>Eye contact</b>  | If eye contact with contents of an open battery occurs, immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes while holding the eyelids open. Neutral saline solution may be used as soon as it is available. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto face. Quickly transport victim to an emergency care facility. |
| <b>Ingestion</b>    | If ingestion of contents of an open battery occurs, never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 60 to 240 mL (2-8 oz.) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.      |

## Section 5 – Fire-fighting Measures

|                      |                                                                                                                                                                                                                                                                               |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flammable Properties | In the event that this battery has been ruptured, the electrolyte solution contain the battery would be flammable. Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials. |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                            |                                                                                                                                                                                                                                                                           |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing Media               | Use extinguishing media suitable for the materials that are burning.                                                                                                                                                                                                      |
| Unsuitable extinguishing Media             | Not available                                                                                                                                                                                                                                                             |
| Explosion Data                             | <b>Sensitivity to Mechanical Impact:</b> This may result in rupture in extreme cases<br><b>Sensitivity to Static Discharge:</b> Not Applicable                                                                                                                            |
| Specific Hazards arising from the chemical | Fires involving Rechargeable Li-ion Battery are controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended to extinguish the fire |
| Protective Equipment                       | As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear.                                                                                                          |

|                                  |                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| and precautions for firefighters | Fight fire from a protected location or a safe distance. Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear. |
| NFPA                             | Health: 0 Flammability: 0 Instability: 0                                                                                                                        |

## Section 6 – Accidental Release Measures

|                                                                      |                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                                                                                                                                                                  |
| Environmental Precautions                                            | Prevent material from contaminating soil and from entering sewers or waterways.                                                                                                                                                                                                                                                  |
| Methods and materials for Containment                                | Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.                                                                                                                                                                                                                  |
| Methods and materials for cleaning up                                | Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal. |

## Section 7 – Handling and Storage

|          |                                                                                                                                                                                                                                                                                                                     |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Handling | <p>Don't handle Rechargeable Li-ion Battery with metalwork. Do not open, disassemble, crush or burn battery. Ensure good ventilation/exhaustion at the workplace.</p> <p>Prevent formation of dust.</p> <p>Information about protection against explosions and fires: Keep ignition sources away- Do not smoke.</p> |
| Storage  | <p>If the Rechargeable Li-ion Battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Rechargeable Li-ion Battery periodically.</p> <p>3 months: -10°C~+40°C, 45 to 85%RH</p> <p>And recommended at 0°C~+35°C for long period storage.</p>                      |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more.</p> <p>The voltage for a long time storage shall be 3.7V~4.2V range.</p> <p>Do not store Rechargeable Li-ion Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.</p> <p>Keep out of reach of children.</p> <p>Do not expose Rechargeable Li-ion Battery to heat or fire. Avoid storage in direct sunlight.</p> <p>Do not store together with oxidizing and acidic materials.</p> |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Section 8 – Exposure Controls and Personal Protection

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering Controls          | <p>Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor.</p> <p>Keep away from heat and open flame. Store in a cool, dry place.</p>                                                                                                                                                                                                                                                                                                       |
| Personal Protective Equipment | <p><b>Respiratory Protection:</b> Not necessary under normal conditions.</p> <p><b>Skin and body Protection:</b> Not necessary under normal conditions, Wear neoprene or nitrile rubber gloves if handling an open or leaking battery.</p> <p><b>Hand protection:</b> Wear neoprene or natural rubber material gloves if handling an open or leaking battery.</p> <p><b>Eye Protection:</b> Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.</p> |
| Other Protective Equipment    | <p>Have a safety shower and eye wash fountain readily available in the immediate work area.</p>                                                                                                                                                                                                                                                                                                                                                                                                    |
| Hygiene Measures              | <p>Do not eat, drink, or smoke in work area.</p> <p>Maintain good housekeeping.</p>                                                                                                                                                                                                                                                                                                                                                                                                                |

## Section 9 - Physical and Chemical Properties

|                                                         |                |
|---------------------------------------------------------|----------------|
| Physical State                                          | Form: Solid    |
|                                                         | Color: Black   |
|                                                         | Odor: Odorless |
| Change in condition:                                    |                |
| pH, with indication of the concentration                | Not applicable |
| Melting point/freezing point                            | Not available. |
| Boiling Point, initial boiling point and Boiling range: | Not available. |
| Flash Point                                             | Not available. |
| Upper/lower flammability or explosive limits            | Not available. |
| Vapor Pressure:                                         | Not applicable |
| Vapor Density: (Air = 1)                                | Not applicable |
| Density/relative density                                | Not available. |
| Solubility in Water:                                    | Insoluble      |
| n-octanol/water partition coefficient                   | Not available. |
| Auto-ignition temperature                               | 130°C          |
| Decomposition temperature                               | Not available. |
| Odour threshold                                         | Not available. |
| Evaporation rate                                        | Not available. |
| Flammability (soil, gas)                                | Not available. |
| Viscosity                                               | Not applicable |

## Section 10 - Stability and Reactivity

|                                                                 |                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stability                                                       | The product is stable under normal conditions.                                                                                                                                                                                                                          |
| Conditions to Avoid (e.g. static discharge, shock or vibration) | Do not subject Rechargeable Li-ion Battery to mechanical shock.<br>Vibration encountered during transportation does not cause leakage, fire or explosion.<br>Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse. |
| Incompatible Materials                                          | Not Available                                                                                                                                                                                                                                                           |
| Hazardous Decomposition Products                                | This material may release toxic fumes if burned or exposed to fire                                                                                                                                                                                                      |
| Possibility of Hazardous Reaction                               | Not Available                                                                                                                                                                                                                                                           |

## Section 11 - Toxicological Information

|                                       |                                                                                                                                                                                                                        |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Irritation                            | Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur. |
| Sensitization                         | Not Available                                                                                                                                                                                                          |
| Neurological Effects                  | Not Available                                                                                                                                                                                                          |
| Teratogenicity                        | Not Available                                                                                                                                                                                                          |
| Reproductive Toxicity                 | Not Available                                                                                                                                                                                                          |
| Mutagenicity (Genetic Effects)        | Not Available                                                                                                                                                                                                          |
| Toxicologically Synergistic Materials | Not Available                                                                                                                                                                                                          |

## Section 12 - Ecological Information

|                                                                                                     |                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General note:                                                                                       | Water hazard class 1(Self-assessment): slightly hazardous for water.<br>Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. |
| Anticipated behavior of a chemical product in environment/possible environmental impact/ecotoxicity | Not Available                                                                                                                                                                          |
| Mobility in soil                                                                                    | Not Available                                                                                                                                                                          |
| Persistence and Degradability                                                                       | Not Available                                                                                                                                                                          |
| Bioaccumulation potential                                                                           | Not Available                                                                                                                                                                          |
| Other Adverse Effects                                                                               | Not Available                                                                                                                                                                          |

## Section 13 – Disposal Considerations

Product disposal recommendation: Observe local, state and federal laws and regulations.

Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassembly the battery. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local, state and federal laws and regulations.

## Section 14 – Transport Information

The Rechargeable Li-ion Battery (KPL944755-2S2P) had passed the UN 38.3 test and is classified as non-dangerous goods and also complies with the UN Recommendations on the Transport of

Dangerous Goods; IATA Dangerous Goods regulations, and applicable U.S. DOT regulations for the safe transport of Rechargeable Li-ion Battery.

The Rechargeable Li-ion Battery is transported according to the PACKING INSTRUCTION 966 Section II of IATA DGR 64<sup>th</sup> edition (Proper shipping name and UN ID number: LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, UN No.: UN3481).

However, the Rechargeable Li-ion Battery may also be transported according to the PACKING INSTRUCTION 965 Section IB of IATA DGR 64<sup>th</sup> edition (Proper shipping name and UN ID number: LITHIUM ION BATTERIES, UN No.: UN3480) or PACKING INSTRUCTION 967 Section II of IATA DGR 64<sup>th</sup> edition (Proper shipping name and UN ID number: LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT, UN No.: UN3481).

More information concerning shipping, testing, marking and packaging can be obtained from label master at <http://www.labelmaster.com/>.

Each package must be labeled with a Lithium Battery handling label.

Li-ion batteries can be treated as "Non-dangerous goods" under the United Nations Recommendations on the Transport of Dangerous Goods, Special Provision 188, provided that packaging is strong and prevent the products from short-circuit.

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

- The International Civil Aviation Organization (ICAO) Technical Instructions (2023-2024 edition).
- The International Air transport Association (IATA) Dangerous Goods Regulations (64<sup>th</sup> edition).
- The International Maritime Dangerous Goods (IMDG) Code (Amdt. 40-20).
- 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)

## Section 15 - Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

\_\_\_\_\_ Hazardous

\_\_\_\_\_ ☒ Non-hazardous

## Section 16 - Other Information

The information above is believed to be accurate and represents the best currently available to us. However, NTEK makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

\*\*\*\*\* End of MSDS \*\*\*\*\*



SHENZHEN KAYO BATTERY CO., LTD

## Fiche de données de sécurité de matériel

Pour  
SHENZHEN KAYO BATTERIE CO., LTD

Chambre 301, Numéro 17, Parc industriel de l'innovation Yifenghua, communauté  
Xin shi, rue Dalang, district de LongHua, Shenzhen, R.P.Chine. 518109,

Et pour leur produit Batterie

Li-ion rechargeable

Modèle/type référence ..... : MT 6spdaisin KPL944755-2S2P

Tension nominale.....: 7,6V

Capacité nominale.....: 6300mAh (47.88Wh)

Numéro de version .....: MT 6spdaisin V1.0

Date de révision ..... : Non disponible

## Section 1- Identification du produit chimique et de l'entreprise

Identification du produit: Numéro de modèle de batterie

Li-ion rechargeable: MT 6spdaisin KPL944755-2S2P

Nom du fabricant/fournisseur: SHENZHEN KAYO BATTERIE CO., LTD

Adresse: Chambre 301, Numéro 17, Parc industriel de l'innovation Yifenghua, communauté Xin shi, rue Dalang, district de LongHua, Shenzhen, R.P.Chine. 518109,

Numéro de téléphone du fournisseur: +86-13534039490

Numéro de téléphone d'urgence (24h/24) : +86-13534039490

Fax: +86-0769-81870916

Adresse e-mail : lfei@kayobattery.com Date de

préparation : Le 07/12/2022

Date effective: 2023-01-01 ~ 2023-12-31

Cette fiche signalétique a été préparée par Shenzhen NTEK Testing

Technology Co., Ltd. MT 6spdaisin PN20220707202434

Documents référencés : ISO 11014:2009 Fiche de données de sécurité pour les produits chimiques

## Section 2 – Identification des dangers

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dangers de la préparation et classification | Non dangereux avec une utilisation normale. Ne démontez pas, n'ouvrez pas et ne déchiquetez pas les ingrédients contenus dans la batterie Li-ion rechargeable ou leurs ingrédients pourraient être                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Apparence, couleur et odeur                 | Objet solide sans odeur, sans couleur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Voie(s) principale(s) d'exposition          | Ces produits chimiques sont contenus dans une enceinte étanche. Le risque d'exposition ne se produit que si la cellule subit des abus mécaniques, thermiques ou électriques au point de compromettre l'enceinte. Si cela se produit, l'exposition à la solution d'électrolyte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Effets potentiels sur la santé:             | <p><b>AIGUË (court terme): voir la Section 8 pour les contrôles d'exposition.</b></p> <p><b>Dans le cas où cette batterie aurait été rompue, la solution d'électrolyte</b> contenue dans la batterie serait corrosive et pourrait provoquer des brûlures.</p> <p><b>Inhalation:</b> L'inhalation de matériaux provenant d'une batterie scellée n'est pas une voie d'exposition prévue. Les vapeurs ou les brouillards d'une batterie endommagée peuvent provoquer une irritation des voies respiratoires. <b>Ingestion:</b> L'ingestion de matériaux provenant d'une batterie scellée n'est pas une voie d'exposition prévue. L'ingestion du contenu d'une pile ouverte peut provoquer de graves brûlures chimiques de la bouche, de l'œsophage et du tractus gastro-intestinal.</p> <p><b>Peau:</b> Le contact entre la batterie et la peau ne causera aucun dommage. Le contact de la peau avec le contenu d'une pile ouverte peut provoquer une grave irritation ou des brûlures de la peau. <b>Œil:</b> Le contact entre la batterie et l'œil ne causera aucun dommage. Contact visuel</p> |

|                                                 |                                                                     |
|-------------------------------------------------|---------------------------------------------------------------------|
|                                                 | <b>CHRONIQUE (long terme) : voir la section 11 pour des données</b> |
| Conditions médicales aggravées par l'exposition | Non applicable                                                      |
| Signalé comme cancérigène                       | Non applicable                                                      |

## Section 3 – Composition/Informations sur les ingrédients

La batterie Li-ion rechargeable est un mélange.

| Ingrédients dangereux<br>(Nom chimique) | concentration ou<br>plages de concentration (%) | Numéro CAS |
|-----------------------------------------|-------------------------------------------------|------------|
| Oxyde de lithium-cobalt                 | 41,0644                                         | 12190-79-3 |
| Fluorure de polyvinylidène              | 0,5747                                          | 24937-79-9 |
| Aluminium                               | 7,0742                                          | 7429-90-5  |
| Graphite                                | 23,8046                                         | 7782-42-5  |
| Carboxyméthylcellulose                  | 0,4287                                          | 9004-32-4  |
| Caoutchouc styrène-butadiène            | 1,1379                                          | 9003-55-8  |
| Cuivre                                  | 7,1839                                          | 7440-50-8  |
| Polyéthylène                            | 1,4943                                          | 9002-88-4  |
| Hexafluorophosphate de lithium          | 2,502                                           | 21324-40-3 |
| Carbonate de diéthyle                   | 4,107                                           | 105-58-8   |
| Carbonate d'éthyle et de méthyle        | 4,051                                           | 623-53-0   |
| Carbonate de vinylène                   | 3,925                                           | 872-36-6   |
| Poly                                    | 1,1751                                          | 24937-16-4 |
| Polypropylène                           | 1,4772                                          | 9003-07-0  |

Étiquetage selon les directives CE.

Aucun symbole et aucune phrase de risque ne sont requis.

Remarque: Le numéro CAS est le numéro d'enregistrement du Service des résumés chimiques.

N/A=Non applicable.

## Section 4 – Mesures de premiers secours

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>           | Si le contenu d'une batterie ouverte est inhalé, retirez la source de contamination ou                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Contact avec la peau</b> | En cas de contact de la peau avec le contenu d'une batterie ouverte, retirez le plus rapidement possible les vêtements, chaussures et articles en cuir contaminés. Rincez immédiatement avec de l'eau tiède à faible débit pendant au moins 30 minutes. Si l'irritation ou la douleur persiste, consulter un médecin.<br>Décontaminer complètement les vêtements, les chaussures et le cuir                                                                                                   |
| <b>Contact visuel</b>       | En cas de contact oculaire avec le contenu d'une pile ouverte, rincez immédiatement l'œil ou les yeux contaminés avec de l'eau courante tiède pendant au moins 30 minutes tout en maintenant les paupières ouvertes. Une solution saline neutre peut être utilisée dès qu'elle est disponible. Si nécessaire, continuer à rincer pendant le transport vers un établissement de soins d'urgence.<br>Veillez à ne pas rincer l'eau contaminée dans l'œil non affecté ou sur                     |
| <b>Ingestion</b>            | En cas d'ingestion du contenu d'une pile ouverte, ne jamais rien faire avaler si la victime perd rapidement conscience, est inconsciente ou convulse. Faire rincer abondamment la bouche de la victime avec de l'eau. NE PAS FAIRE VOMIR. Faire boire à la victime 60 à 240 ml (2 à 8 oz) d'eau. Si le vomissement se produit naturellement, faire pencher la victime vers l'avant pour réduire le risque d'aspiration. Demandez à la victime de se rincer à nouveau la bouche avec de l'eau. |

## Section 5 – Mesures de lutte contre l'incendie

|                                                 |                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Propriétés inflammables                         | En cas de rupture de cette batterie, la solution d'électrolyte contient la batterie serait inflammable. Comme tout conteneur scellé, les cellules de la batterie peuvent se rompre lorsqu'elles sont exposées à une chaleur excessive ; cela pourrait entraîner la libération de matériaux inflammables ou corrosifs. |
| Extinction appropriée Média                     | Utilisez des moyens d'extinction adaptés aux matériaux qui brûlent.                                                                                                                                                                                                                                                   |
| Extinction inadaptée Média                      | Indisponible                                                                                                                                                                                                                                                                                                          |
| Explosion Données                               | <b>Sensibilité aux chocs mécaniques:</b> Cela peut entraîner une rupture dans les cas extrêmes                                                                                                                                                                                                                        |
| spécifique liés à l'eau résultant de le produit | Les incendies impliquant une batterie Li-ion rechargeable sont maîtrisés avec de est utilisé, cependant, de l'hydrogène gazeux peut se dégager. Dans un espace peut former un mélange explosif. Dans cette situation, les agents étouffants sont recommandé d'éteindre le feu                                         |
| Équipement de protection                        | Comme pour tout incendie, évacuez les lieux et combattez l'incendie à une distance sécuritaire. Porter un appareil respiratoire autonome à pression et équipement de protection complet.                                                                                                                              |

|                               |                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| et<br>précautions<br>pour les | Combattre l'incendie à partir d'un endroit protégé ou à une distance de sécurité.<br>Utilisez un appareil respiratoire autonome (SCBA) intégral approuvé par NIOSH/MSHA avec un équipement de protection complet. |
| NFPA                          | Santé: 0 Inflammabilité: 0 Instabilité: 0                                                                                                                                                                         |

## Section 6 – Mesures en cas de déversement accidentel

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Précautions personnelles, équipement de protection et procédures d'urgence | Restreindre l'accès à la zone jusqu'à la fin de nettoyage. Ne touchez pas le matériau renversé. Porter un équipement de protection individuelle adéquat comme indiquée à la section 8.                                                                                                                                                                                                |
| Précautions environnementales                                              | Empêcher le matériau de contaminer le sol et de pénétrer dans les égouts ou les cours d'eau.                                                                                                                                                                                                                                                                                          |
| Méthodes et matériaux pour le confinement                                  | Arrêtez la fuite si vous pouvez le faire en toute sécurité. Contenez le liquide renversé avec du sable sec ou de la terre. Nettoyez les déversements                                                                                                                                                                                                                                  |
| Méthodes et matériel de nettoyage                                          | Absorber le produit déversé avec un absorbant inerte (sable sec ou terre). Ramassez l'absorbant contaminé dans un contenant à déchets acceptable. Recueillir tous les absorbants contaminés et les éliminer conformément aux instructions de la section 13. Frottez la zone avec du détergent et de l'eau; tout collecter l'eau de lavage contaminée pour une élimination appropriée. |

## Section 7 – Manipulation et stockage

|             |                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manutention | Ne manipulez pas la batterie Li-ion rechargeable avec du métal. Ne pas ouvrir, démonter, écraser ou brûler la batterie. Veiller à une bonne ventilation/aspiration sur le lieu de travail.<br>Empêcher la formation de poussière.<br>Informations sur la protection contre les explosions et les incendies: <u>Tenir à l'écart des sources d'ignition - Ne pas</u> |
| stockage    | Si la batterie Li-ion rechargeable est stockée pendant une durée aussi longue que plus de 3 mois, il est recommandé de recharger périodiquement la batterie Li-ion rechargeable.<br>3 Mois: -10°C~+40°C, 45 à 85%RH<br>Et recommandé à 0°C~+35°C pour un stockage de longue durée.                                                                                 |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Le taux de récupération de capacité à l'état de livraison (50% de capacité de charge complète) après le stockage est supposé être de 80% ou plus.</p> <p>La tension pour un stockage de longue durée doit être comprise entre 3,7V et 4,2V.</p> <p>Ne rangez pas la batterie Li-ion rechargeable au hasard dans une boîte ou un tiroir où elles pourraient se court-circuiter ou être court-circuitées par d'autres objets métalliques.</p> <p>Tenir hors de portée des enfants.</p> <p>N'exposez pas la batterie Li-ion rechargeable à la chaleur ou au feu. Eviter le stockage en plein soleil.</p> <p>Ne pas stocker avec des matières oxydantes et acides.</p> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Section 8 – Contrôles de l'exposition et protection individuelle

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contrôles techniques                  | Utiliser une ventilation par aspiration locale ou d'autres contrôles techniques pour contrôler les sources de poussière, de brouillard, d'émanations et de vapeur.<br>Tenir à l'écart de la chaleur et des flammes nues.<br>Conserver dans un                                                                                                                                                                                                                                                                                                                                              |
| Équipement de protection individuelle | <b>Protection respiratoire:</b> Pas nécessaire dans des conditions normales.<br><b>Protection de la peau et du corps:</b> Pas nécessaire dans des conditions normales. Portez des gants en néoprène ou en caoutchouc nitrile si vous manipulez une batterie ouverte ou qui fuit.<br><b>Protection des mains:</b> Portez des gants en néoprène ou en caoutchouc naturel si vous manipulez une batterie ouverte ou qui fuit.<br><b>Protection des yeux:</b> Pas nécessaire dans des conditions normales, Portez des lunettes de sécurité si vous manipulez une batterie ouverte ou qui fuit. |
| Autre équipement de protection        | Avoir une douche de sécurité et une fontaine oculaire facilement disponible dans la zone de travail immédiate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Mesures d'hygiène                     | Ne pas manger, boire ou fumer dans la zone de travail.<br>Maintenir un bon ménage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Section 9 - Propriétés physiques et chimiques

|                                                              |                |                 |
|--------------------------------------------------------------|----------------|-----------------|
| État physique                                                | Forme: Solide  |                 |
|                                                              | Couleur: Noir  |                 |
|                                                              | Odeur: Inodore |                 |
| Changement d'état:                                           |                |                 |
| pH, avec indication de la concentration                      |                | Non applicable  |
| Point de fusion/point de congélation                         |                | Non disponible. |
| Point d'ébullition, point d'ébullition initial et ébullition |                | Non disponible. |
| Point Flash                                                  |                | Non disponible. |
| Limites supérieures/inférieures                              |                | Non disponible. |
| Pression de vapeur:                                          |                | Non applicable  |
| Densité de vapeur: (Air = 1)                                 |                | Non applicable  |
| Densité/densité relative                                     |                | Non disponible. |
| Solubilité dans l'eau:                                       |                | Insoluble       |
| coefficient de partage n-octanol/eau                         |                | Non disponible. |
| La température d'auto-inflammation                           |                | 130°C           |
| température de décomposition                                 |                | Non disponible. |
| Seuil Odout                                                  |                | Non disponible. |
| Taux d'évaporation                                           |                | Non disponible. |
| Inflammabilité (sol, gaz)                                    |                | Non disponible. |
| Viscosité                                                    |                | Non applicable  |

## Section 10 - Stabilité et réactivité

|                                                                         |                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| La stabilité                                                            | Le produit est stable dans des conditions normales.                                                                                                                                                                                                                                                             |
| Conditions à éviter (par exemple, décharge statique, choc ou vibration) | Ne soumettez pas la batterie Li-ion rechargeable à des chocs mécaniques. Les vibrations rencontrées pendant le transport ne provoquent pas de fuite, d'incendie ou d'explosion. Ne pas démonter, écraser, court-circuiter ou installer avec une polarité incorrecte. Évitez les abus mécaniques ou électriques. |
| Matériaux incompatibles                                                 | Indisponible                                                                                                                                                                                                                                                                                                    |

|                                     |                                                                                 |
|-------------------------------------|---------------------------------------------------------------------------------|
| Produits de décomposition dangereux | Ce matériau peut libérer des fumées toxiques s'il est brûlé<br>ou exposé au feu |
| Possibilité de réaction dangereuse  | Indisponible                                                                    |

## Section 11 - Informations toxicologiques

|                                         |                                                                                                                                                                                                                                                                       |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Irritation                              | Le risque d'irritation ne se produit que si la cellule est soumise à des abus mécaniques, thermiques ou électriques au point de compromettre l'enceinte. Si cela se produit, une irritation de la peau, des yeux et des voies respiratoires<br>voie peut se produire. |
| Sensibilisation                         | Indisponible                                                                                                                                                                                                                                                          |
| Effets neurologiques                    | Indisponible                                                                                                                                                                                                                                                          |
| Tératogénicité                          | Indisponible                                                                                                                                                                                                                                                          |
| Toxicité pour la reproduction           | Indisponible                                                                                                                                                                                                                                                          |
| Mutagénicité (effets génétiques)        | Indisponible                                                                                                                                                                                                                                                          |
| Matériaux toxicologiquement synergiques | Indisponible                                                                                                                                                                                                                                                          |

## Section 12 - Informations écologiques

|                                                                                         |                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remarque générale:                                                                      | Classe de danger pour l'eau 1 (auto-évaluation): légèrement polluant pour l'eau.<br>Ne pas laisser le produit non dilué ou de grandes quantités de celui-ci atteindre les eaux souterraines, les cours d'eau ou système d'égout. |
| Comportement anticipé d'un produit chimique dans l'environnement/environnement éventuel | Indisponible                                                                                                                                                                                                                     |
| Mobilité dans le sol                                                                    | Indisponible                                                                                                                                                                                                                     |
| Persistance et dégradabilité                                                            | Indisponible                                                                                                                                                                                                                     |
| Potentiel de bioaccumulation                                                            | Indisponible                                                                                                                                                                                                                     |
| Autres effets indésirables                                                              | Indisponible                                                                                                                                                                                                                     |

## Section 13 – Considérations relatives à l'élimination

Recommandation d'élimination du produit: Respectez les lois et réglementations locales, nationales et fédérales. Recommandation d'élimination des emballages: Sachez que les batteries jetées peuvent provoquer un incendie, scotchez les bornes de la batterie pour les isoler. Ne démontez pas la batterie. Vider complètement les contenants (pas de larmes, pas de reste de poudre, racler soigneusement). Les contenants peuvent être recyclés ou réutilisés. Respectez les lois et réglementations locales, nationales et fédérales.

## Article 14 – Informations sur le transport

La batterie Li-ion rechargeable (KPL944755-2S2P) a réussi le test UN 38.3 et est classée comme marchandise non dangereuse et est également conforme aux recommandations des Nations Unies sur le transport de Marchandises dangereuses; Réglementations IATA sur les marchandises dangereuses et réglementations U.S. DOT applicables pour le transport en toute sécurité de la batterie Li-ion rechargeable.

La batterie Li-ion rechargeable est transportée conformément à la section II de l'INSTRUCTION D'EMBALLAGE 966 de l'IATA DGR 64e édition (nom d'expédition correct et numéro d'identification ONU: BATTERIES AU LITHIUM-ION EMBALLÉES AVEC L'ÉQUIPEMENT, N° ONU: UN3481).

Cependant, la batterie Li-ion rechargeable peut également être transportée conformément à l'INSTRUCTION D'EMBALLAGE 965, section IB de la 64e édition de la DGR IATA (Nom d'expédition correct et numéro d'identification ONU: BATTERIES AU LITHIUM-ION, N° ONU : UN3480) ou INSTRUCTION D'EMBALLAGE 967 Section II de l'IATA DGR 64e édition (Nom d'expédition correct et numéro d'identification ONU: BATTERIES AU LITHIUM-ION CONTENUES DANS UN ÉQUIPEMENT, N° ONU: UN3481).

De plus amples informations concernant l'expédition, les tests, le marquage et l'emballage peuvent être obtenues auprès de label master à l'adresse <http://www.labelmaster.com/>.

Chaque colis doit être étiqueté avec une étiquette de manipulation de batterie au lithium.

Les batteries Li-ion peuvent être traitées comme des "marchandises non dangereuses" en vertu des Recommandations des Nations Unies sur le transport des marchandises dangereuses, disposition spéciale 188, à condition que l'emballage soit solide et empêche les produits de court-circuit.

En matière de transport, les réglementations suivantes sont citées et prises en compte :

- Les Instructions techniques de l'Organisation de l'aviation civile internationale (OACI) (édition 2023-2024).
- Règlements sur les marchandises dangereuses de l'Association internationale du transport aérien (IATA) (64e édition).
- Le Code maritime international des marchandises dangereuses (IMDG) (Amdt. 40-20).
- Le règlement américain sur les matières dangereuses (HMR) conformément à une règle finale émise par la RSPA
- Le bureau de la sécurité des matières dangereuses au sein de l'administration de la

- recherche et des programmes spéciaux (RSPA) du département des Transports des États-Unis (DOT)

## Article 15 - Informations réglementaires

Norme de communication des dangers OSHA (29 CFR 1910.1200)

- Dangereux ☒ Non dangereux

## Article 16 - Autres informations

Les informations ci-dessus sont considérées comme exactes et représentent les meilleures dont nous disposons actuellement. Cependant, NTEK n'offre aucune garantie de qualité marchande ou toute autre garantie, expresse ou implicite, concernant ces informations, et nous n'assumons aucune responsabilité résultant de leur utilisation. Les utilisateurs doivent faire leurs propres recherches pour déterminer la pertinence des informations à leurs fins particulières. Bien que des précautions raisonnables aient été prises dans la préparation des données contenues dans ce document, elles sont offertes uniquement pour votre information, votre considération et votre enquête. Cette fiche de données de sécurité fournit des directives pour la manipulation et l'utilisation en toute sécurité de ce produit; il ne donne pas et ne peut pas conseiller sur toutes les situations possibles, par conséquent, votre utilisation spécifique de ce produit doit être évaluée pour déterminer si des précautions supplémentaires sont nécessaires.

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\*\*\*\*\* Fin de la FDSM \*\*\*\*\*