

## Material Safety Data Sheet

File No: PH-L20221225001

## Section 1 - Chemical Product and company Identification Product

Name: Rechargeable Li-ion Cell

Battery Type:H703232P/H703232P-B

Manufacturer: Phenix New Energy (Huizhou) Co., Ltd

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## Section 2 –Composition /Information on ingredient

| Chemical Composition          | Chemical Formula | CAS No.     | Weight (%) |
|-------------------------------|------------------|-------------|------------|
| Lithium Cobalt Oxide          | Co               | 12190-79-3  | 44.9%      |
| Nanotubes                     | CNT              | 308068-56-6 | 0.40%      |
| Polyvinylidene fluoride       | PVDF             | 24937-79-9  | 0.58%      |
| Aluminum Foil                 | AL               | 7429-90-5   | 4.21%      |
| Copper Foil                   | Cu               | 7440-50-8   | 7.12%      |
| Graphite                      | C                | 7782-42-5   | 24.62%     |
| Super P                       | S-P              | 7782-42-5   | 0.27%      |
| Styrene Butadiene rubber      | SBR              | 61789-96-6  | 0.91%      |
| Carboxymethylcellulose Sodium | CMC              | 9000-11-7   | 0.40%      |

## Section 3 – Hazards Identification

**Health Hazards (Acute and Chronic)**

These chemical are contained in a sealed can .Risk of exposure occurs only if the battery is mechanically or electricity abused. Contact of electrolyte and extruded lithium with skin and eyes should be avoided.

**Sign/Symptoms of Exposure**

A shorted lithium battery can cause thermal and chemical burns upon contact with the skin.

#### Section 4 – First Aid Measures

##### **Eyes**

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids .Get medical aid.

##### **Skin**

Remove contaminated clothes and rinse skin with plenty of water shower for 15 minutes. Get medical aid.

##### **Inhalation**

Remove from exposure and move to fresh air immediately. Use oxygen if available.

##### **Ingestion**

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physical.

#### Section 5 – Fire Fighting Measures

**Flash Point:** N/A.

**Auto-ignition temperature :** N/A.

##### **Extinguishing Media**

Dry chemical ,CO<sub>2</sub>.

##### **Special Fire –Fighting Procedures**

Self-contained breathing apparatus.

##### **Unusual Fire and Explosion Hazards**

Cell may vent when subjected to excessive heat-exposing battery contents.

##### **Hazardous Combustion Products**

Carbon monoxide, carbon dioxide oxide fumes.

#### Section 6 – Accidental Release Measures

##### **Steps to be taken in case Material is Released or Spilled**

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the batteries to cool and vapors. Remove spilled liquid with absorbent and incinerate.

##### **Waste DisposalMethod**

It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

#### Section 7 – Handling and Storage



The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

**Precautions to be taken in handling and storing**

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

**Other precautions**

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Section 8 – Exposure Controls, Personnel Protection

**Respiratory Protection**

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory Protection is not necessary under conditions of normal use.

**Ventilation**

Not necessary under conditions of normal use.

**Protective Gloves**

Not necessary under conditions of normal use.

**Other Protective Clothing or Equipment**

Not necessary under conditions of normal use.

Personal Protection is recommended for venting batteries: Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

Section 9 – Physical and Chemical Properties

**Normal Voltage: 3.85V**

**Rated Capacity: 1900mAh**

**Appearance characters: white, quadrate, with odorless solid battery**

Section 10 – Stability and Reactivity

**Stability**

Stable.

**Conditions to avoid**

Heating, mechanical abuse and electrical abuse.

**Hazardous Decomposition Products**

N/A.

**Hazardous polymerization**

N/A.

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.



### Section 11 – Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened. Exposure to internal contents, the corrosive fumes will be very irritating to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibroid lung injury and membrane irritation.

### Section 12 – Ecological Information

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

### Section 13 – Disposal Considerations

#### **APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION**

If batteries are still fully charged or only partially discharged, they can be considered a reactive hazardous waste because of significant amount of not creation, or unconsumed lithium remaining in the spent battery. The batteries must be neutralized through an approved secondary treatment facility prior to disposal as a hazardous waste. Recycling of battery can be done in authorized facility, through licensed waste carrier.

### Section 14 – Transport Information

Label for conveyance: Lithium Battery Label, Class 9 Hazard Label, Cargo aircraft Only Label.

UN Number: UN3480 or UN3481

Packing Group: N/A

EmS No: F-A, S-I

Marine Pollutant: No

Proper Shipping name: Lithium ion batteries. (including Lithium ion polymer batteries)

Hazard Classification: The goods shall be complied with the requirements of Section IB of Packing Instructions 965~967 of 63<sup>rd</sup> DGR Manual of IATA (2023 edition), including the passing of the UN38.3 test. And also complies with the Special Provision 188 of IMDG CODE (Amdt.39-18) 2018 Edition.

### Section 15 – Regulatory Information

#### **Law information**

《Dangerous Goods Regulation》

《Recommendations on the Transport of Dangerous Goods Model Regulations》  
(20<sup>th</sup> revised edition)

《Informational Maritime Dangerous Goods》

《Technical Instructions for the Safe Transport of Dangerous Goods》

《Classification and code of dangerous goods》 (GB 6944-2012)

《Occupational Safety and Health Act》 (OSHA)

《Toxic Substances Control Act》 (TSCA)

《Consumer Product Safety Act》 (CPSA)



《Federal Environmental Pollution Control Act》 (FEPCA)

《The Oil Pollution Act》 (OPA)

《Superfund Amendments and Reauthorization Act TitleIII(302/311/312/313)》

SARA

《Resource Conservation and Recovery Act》 (RCRA)

《safety drinking water act》 (CWA)

《California Propositions 65》

《Code of Federal Regulations》 (CFR)

In accordance with all Federal, State and Local laws.

#### **Section 16 – Additional Information**

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

End

