# **SAFETY DATA SHEET**

Date of issue 30-07-2019 English

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

Product identifier

Product Name Lithium-ion polymer rechargeable battery 104656

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended Use Lithium ion battery

Uses advised against No information available

Details of the supplier of the safety data sheet

Initial supplier identifier Foshan Zhaoneng Battery Industrial Co., Ltd.

Address No.8 Nanda Road, Jinsha Chengnan Industrial Zone, Danzao Town, Nanhai District

**Telephone** 0757-86778505

**E-mail** info@zhaoneng-battery.com

Emergency telephone number

**Company Emergency Phone** 

Number

0757-86778505

# 2. HAZARDS IDENTIFICATION

#### Classification

This is a battery. In case of rupture:

| Skin corrosion/irritation                          | Category 2  |
|----------------------------------------------------|-------------|
| 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**

This is a battery. In case of rupture:.

Causes skin irritation
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 If skin irritation occurs: Get medical advice/attention Take off 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

Very toxic to aquatic life with long lasting effects

#### Unknown acute toxicity

30.9 % of the mixture consists of ingredient(s) of unknown toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable.

#### Mixture

| <del>_</del>  |        |             |                    |                      |
|---------------|--------|-------------|--------------------|----------------------|
| Chemical name | CAS-No | Percent (%) | Hazardous Material | Date HMIRA filed and |

|                                            |            |      | Information Review Act registry number (HMIRA registry #) | date exemption granted (if applicable) |
|--------------------------------------------|------------|------|-----------------------------------------------------------|----------------------------------------|
| Lithium Cobalt Oxide (CoLiO <sub>2</sub> ) | 12190-79-3 | 38.5 | -                                                         | -                                      |
| Copper                                     | 7440-50-8  | 8.8  | -                                                         | -                                      |
| Graphite                                   | 7782-42-5  | 38.6 | -                                                         | -                                      |
| Phosphate(1-), hexafluoro-, lithium        | 21324-40-3 | 5.9  | -                                                         | -                                      |
| Aluminum foil                              | 7429-90-5  | 8.2  | -                                                         | -                                      |

#### 4. FIRST AID MEASURES

First aid measures

General advice First aid is upon rupture of sealed battery. IF exposed or concerned: Get medical

advice/attention. Show this safety data sheet to the doctor in attendance.

**Inhalation** Remove to fresh air. Get medical attention immediately if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.

**Skin contact** Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical

attention if irritation develops and persists.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

**Symptoms** Burning sensation.

Indication of any immediate medical attention and special treatment needed

#### 5. FIRE-FIGHTING MEASURES

environment.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

No information available.

**Explosion Data** 

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

# 6. ACCIDENTAL RELEASE MEASURES

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

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Evacuate personnel to safe areas.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

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** Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

# 7. HANDLING AND STORAGE

#### Precautions for safe handling

Advice on safe handling In case of rupture: Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Exposure Limits**The following ingredients are the only ingredients of the product above the cut-off level (or

level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other

recommended limit. At this time, the other relevant constituents have no known exposure

limits from the sources listed here.

| Chemical name | Alberta                  | British Columbia         | Ontario TWAEV            | Quebec                   |
|---------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Graphite      | TWA: 2 mg/m <sup>3</sup> |
| 7782-42-5     |                          |                          |                          |                          |

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 controls Showers

Eyewash stations Ventilation systems.

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

Eye/face protection If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

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.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or

> smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eve/face protection. Avoid contact with skin, eves or

> > None known

clothing.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical and Chemical Properties** 

**Physical state** Solid

No information available **Appearance** Odor No information available Color No information available **Odor Threshold** No information available

Remarks Method Property Values

No data available None known Hq Melting / freezing point No data available None known Boiling point / boiling range No data available None known **Flash Point** No data available None known **Evaporation Rate** No data available None known Flammability (solid, gas) No data available None known None known

Flammability Limit in Air

**Upper flammability limit** No data available Lower flammability limit No data available

Vapor pressure No data available None known Vapor density No data available None known Relative density No data available None known

**Water Solubility** Insoluble in water

No data available Solubility(ies) None known

Partition coefficient: n-octanol/water0

No data available Autoignition temperature

Nordeatan awarilable **Decomposition temperature** Kinematic viscosity No nobertan awarilable **Dynamic viscosity** No nobertan awarilable **Explosive properties** No information available.

Oxidizing properties No information available.

Other Information

No information available **Softening Point** Molecular Weight No information available **VOC Content (%)** No information available **Liquid Density** No information available **Bulk Density** No information available **Particle Size** No information available **Particle Size Distribution** No information available

# 10. STABILITY AND REACTIVITY

**Reactivity** No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid None known based on information supplied.

**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.

# 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information

In case of rupture:

**Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of

respiratory tract.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye irritation.

(based on components). Irritating to eyes.

**Skin contact** Specific test data for the substance or mixture is not available. Causes skin irritation. (based

on components).

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhea.

#### Information on toxicological effects

**Symptoms** Redness. May cause redness and tearing of the eyes.

#### Numerical measures of toxicity

Unknown acute toxicity 30.9 % of the mixture consists of ingredient(s) of unknown toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation**Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Irritating to eyes.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Classification based on data available for ingredients. Contains a known or suspected

carcinogen.

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure**Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** No information available.

# 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Persistence and Degradability No information available.

**Bioaccumulation** 

**Mobility** No information available.

Other adverse effects No information available.

#### 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

# 14. TRANSPORT INFORMATION

Note: The transportation of primary lithium cells and batteries is regulated by the International Civil

Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous

Passenger Aircraft; Final Rule)

Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment",

Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard

or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"

TDG Not regulated

 DOT
 NOT REGULATED

 Proper Shipping Name
 NON-REGULATED

Hazard Class N/A Emergency Response Guide 147

Number

MEX Not regulated

ICAO Not regulated

Not regulated

Proper Shipping Name NON REGULATED

Hazard Class N/A

IMDG/IMO Not regulated

Hazard Class N/A EmS-No. F-A, S-I

RID Not regulated

ADR Not regulated

ADN Not regulated

# 15. REGULATORY INFORMATION

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

# **International Regulations**

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

**Export Notification requirements** Not applicable

#### International Inventories

TSCA Contact supplier for inventory compliance status.

DSL/NDSL Contact supplier for inventory compliance status.

EINECS/ELINCS Contact supplier for inventory compliance status.

ENCS Contact supplier for inventory compliance status.

KECL Contact supplier for inventory compliance status.

PICCS Contact supplier for inventory compliance status.

AICS Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

#### Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

#### AICS - Australian Inventory of Chemical Substances

# 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Health hazards 1 Flammability 0 Instability 0 **Physical and Chemical** NFPA Properties -

Health hazards 0 Personal Protection X HMIS Flammability 0 Physical hazards 0

Prepared By Guangzhou CP-UP Certification Technology Service Co., Ltd.

30-07-2019 **Issuing Date** 

**Revision Note** No information available

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

#### **End of Safety Data Sheet**

Inhalation Statement dust

Not Hazardous This is a battery. In case of rupture:

Hazard statements Causes damage to organs through prolonged or repeated exposure

Signal word Danger

**Precautionary Statements** P302 + P352 - IF ON SKIN: Wash with plenty of water and soap P321 - Specific treatment (see supplemental first aid instructions on this label) P332 + P313 - If skin irritation occurs: Get medical

> advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/attention P405 - Store locked up P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/ container to an approved waste disposal

plant

Signal word Danger Skin corrosion/irritation Category 2

Hazard statements Causes skin irritation

Signal word Warning Serious eye damage/eye irritation Category 2A

Hazard statements Causes serious eye irritation

Signal word Warning Carcinogenicity Category 2

Suspected of causing cancer Hazard statements

Signal word Warning

Specific target organ toxicity (repeated Category 1 exposure)

Skin corrosion/irritation - (H315) Serious eye damage/eye irritation - (H319) Carcinogenicity - (H351) STOT - repeated exposure - (H372)

STOT - repeated exposure

Graphic

Graphic

Graphic

Hazard statements

Hazard statements

Precautionary Statements - EU (§28, 1272/2008)

**Precautionary Statements** 

Skin

**Precautionary Statements** 



Causes skin irritation Causes serious eye irritation Suspected of causing cancer Causes damage to organs through prolonged or repeated exposure

H315 - Causes skin irritation H319 - Causes serious eye irritation H351 - Suspected of causing cancer H351 - Suspected of causing cancer H372 - Causes damage to organs through prolonged or repeated exposure H372 - Causes damage to organs through prolonged or repeated exposure P103 - Read label before use P280 - Wear face protection P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish P234 - Keep only in original container P303 - IF ON SKIN (or hair):

IF ON SKIN: Wash with plenty of water and soap IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention If skin irritation occurs: Get medical advice/attention Take off contaminated clothing And wash it before reuse Take off contaminated clothing and wash it before reuse Take off contaminated clothing And wash it before reuse Take off contaminated clothing and wash it before reuse IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing 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 If eye irritation persists: Get medical advice/attention Obtain special instructions before use Obtain special instructions before use Do not handle until all safety precautions have been read and understood Do not handle until all safety precautions have been read and understood Wear protective gloves Wear protective gloves IF exposed or concerned: Get medical advice/attention IF exposed or concerned: Get medical advice/attention Store locked up Do not breathe dust/fume/gas/mist/vapors/spray Do not breathe dust/fume/gas/mist/vapors/spray Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product Do not eat, drink or smoke when using this product Get medical advice/attention if you feel unwell Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap P321 - Specific treatment (see supplemental first aid instructions on this label) P332 + P313 - If skin irritation occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/attention P405 - Store locked up P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P314 - Get medical

advice/attention if you feel unwell P501 - Dispose of contents/ container to an approved waste disposal plant

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 If skin irritation occurs: Get medical advice/attention

Take off 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

Contains lithium
Unknown acute toxicity
90.77 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
Unknown Acute Aquatic Toxicity
90.77
Unknown Chronic Aquatic Toxicity
90.77
Product ATE Oral Status
1
Product ATE Dermal Status
1

Product ATE Oral Status

Product ATE Dermal Status

1

Product ATE Inhalation - Gas Status

1

Product ATE Inhalation - Vapor Status

1

Product ATE Inhalation - Dust/Mist Status

1

Product Skin Corrosion Status

1

Product Eye Damage Status

1

Product Respiratory Sens. Status

Product Skin Sensitization Status 1
Product Mutagenic Status 1
Product Carcinogenic Status 1
Product Reproductive Toxicity Status 1
Product STOT Single Status 1
Product STOT Repeated Status 1
Product Aquatic Toxicity Status 1

Product Aspiration Toxicity Status
Product Ozone Status
Product and Component Overall

Classification Status

STOT - repeated exposure - (H372)

**Unknown acute toxicity** 30.9 % of the mixture consists of ingredient(s) of unknown toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30.9~% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Symbols/Pictograms

Symbols/Pictograms

Other hazards Very toxic to aquatic life with long lasting effects

Health hazards Skull and Crossbones Health hazards Exclamation mark

Inhalation Statement dust Health hazards 1