

CTC Laboratories,Inc.

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Material Safety Data Sheet

Product Name...... Lithium Battery

Trademark....: ---

Main Model.....: CR2025

Applicant...... Dongguan King Power Digital Technology Co.,Ltd

City, Guangdong Province, P.R.China

Manufacturer...... Heyuan dongrun new energy technology co. LTD.

Address of Manufacturer..... The second floor, north of longling road, longling industrial

park, longling industrial park, yuancheng district, heyuan city.

Nominal Voltage..... 3.0V

Typical Capacity...... 150mAh ,0.450Wh

Weight...... 2.4g Max

Shape and Physical Dimension(mm).....: Button, H: 2.5mm Φ: 20mm

Report Reference No...... CTC20201286S02

Date of Issue...... Sep.01, 2020

Testing Laboratory.....: CTC Laboratories,Inc.

1F, Block 2 & 2F, Block 1, Jiaquan Building, Guanlan High-

tech Park, LongHua District, Shenzhen, GuangDong, PRC

Tested by (name + signature)...... Paul Chen

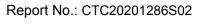
Paul chen

Compiled by (name + signature)..... Max Chen

Approved by (name + signature)...... Totti Zhao

Man che CTC certification

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| Section 1. Chemical Product and Company Identification | | |
|--|--|--|
| Products Name | Lithium Battery | |
| Model | CR2025 | |
| Manufacture Name | Dongguan King Power Digital Technology Co.,Ltd | |
| Address | No.7,Buliding D, Longjiang 2nd Road, Qingxi Town, Dongguan City, Guangdong Province, P.R.China | |
| Emergency Telephone No. | 18576741421 | |
| Fax | | |
| E-mail address | renqiqi@bldpower.cn | |
| Item Number | CTC20201286S02 | |
| Date Prepared | Sep.01, 2020 | |
| Referenced documents | ISO 11014:2009 Safety data sheet for chemical products | |

| | Section 2. Hazards Identification |
|------------------------------|--|
| Preparation | When the battery is In extreme pressure deformation, high-temperature environment, |
| Hazards and | overload, short-circuit condition, or disassemble the battery, an explosion of fire and |
| Classification | chemical burn hazards may occur. |
| Apperance, Color and Odor | Solid object with no odor,silver. |
| Primary Route(s) of Exposure | These chemicals are contained in a sealed aluminium 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 | ACUTE (short term): 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. Inhalation: A battery volatilizes no gas unless it was damaged. Damaged battery will volatilize little gas that may stimulate the respiratory tract or cause an anaphylaxis in serious condition. Ingestion: Swallowing battery will be damaged to the respiratory tract and cause chemical burns to the stomach; in serious conditions it will cause permanent damage. Skin: In normal condition, contact between the battery and skin will not cause any harms. Contact with a damaged battery may cause skin allergies or chemical burns. Eye: In normal condition, contact between the battery and eyes will not cause any |

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| | harms. However, the gas volatilize from a damaged battery may be harmful to eyes. |
|--------------------|---|
| Medical Conditions | |
| Aggravated by | Not applicable. |
| Exposure | |
| Reported as | Niet englischie |
| Carcinogen | Not applicable. |

| Section 3. Composition/Information on Ingredients | | |
|---|--------------------|------------|
| Chemical Name | Percent of Content | CAS No. |
| Manganese Dioxide | 30% | 1313-13-9 |
| Propylene Carbonate | 6% | 108-32-7 |
| Lithium Perchlorate | 1.5% | 7791-03-9 |
| Lithium or Lithium Alloy | 5% | 7439-93-2 |
| Graphite | 4% | 7782-42-5 |
| Stainless steel | 53.5% | 12597-68-1 |
| | | |

Note: CAS No. = Chemical Abstract Service Registry Number.

| | Section 4. First Aid Measures |
|--------------|--|
| Skin Contact | Not anticipated. If the battery is leaking and the contained material contacts the |
| | skin, flush with copious amounts of clear water for at least 15 minutes. |
| Eye Contact | Not anticipated. If the battery is leaking and the contained material contacts eyes, |
| | flush with copious amounts of clear water for at least 15 minutes. Get medical |
| | attention at once. |
| Inhalation | Not anticipated. If the battery is leaking, remove to fresh air. If irritation persists, |
| | consult a physician. |
| Ingestion | Not anticipated. If the battery is leaking and the contained material is ingested, |
| | rinse mouth and surrounding area with clear water at once. Consult a physician |
| | immediately for treatment. |

| | Section 5. Fire Fighting Measures |
|------------------|---|
| Unusual Fire and | Battery may explode or leak potentially hazardous vapors subject to: exposed to |

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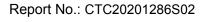
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| Explosion Hazards | excessive heat (above the maximum rated temperature as specified by the |
|----------------------------------|--|
| | manufacturer) or fire, over-charged, short circuit, punctured and crushed. |
| Hazardous Combustion Products | Fire, excessive heat, or over voltage conditions may produce hazardous |
| | decomposition products. Damaged batteries can result in rapid heating and the |
| | release of flammable vapors. |
| Extinguishing Media | Dry chemical type extinguishers are the most effective means to extinguish a |
| | battery fire. ACO ₂ extinguisher will also work effectively. |
| Fire Fighting Procedures | Use a positive pressure self-contained breathing apparatus if batteries are involved |
| | in a fire. Full protective clothing is necessary. During water application, caution is |
| | advised as burning pieces of flammable particles may be ejected from the fire. |

Section 6. Accidental Release Measures

The material contained within the battery would only be released under abusive conditions. In the event of battery rupture and leakage, collect all the released materials that are not hot or burning in an appropriate waste disposal container while wearing proper protective clothing and ventilate the area. Placed in approved container and disposed according to the local regulations.



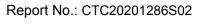




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| Section 7. Handling and Storage | | |
|---------------------------------|--|--|
| | Batteries are designed to be recharged. However, improperly charging a battery may cause the battery to flame. When charging the battery, use | |
| | dedicated chargers and follow the specified conditions. | |
| | 2. Never disassemble or modify a battery. | |
| | 3. Do not immerse, throw, and wet a battery in water. | |
| | 4. Should a battery unintentionally be crushed, thus releasing its contents, rubber | |
| Handling | gloves must be used to handle all battery components. Avoid the inhalation of any vapors that may be emitted. | |
| | 5. Short circuit causes heating. In addition, short circuit reduces the life of the battery and can lead to ignition of surrounding materials. Physical contact with to short-circuited battery can cause skin burn. | |
| | 6. Avoid reversing the battery polarity, which can cause the battery to be | |
| | damaged or flame. | |
| | 7. In the event of skin or eye exposure to the electrolyte, refer to Section 4, First | |
| | Aid Measures. | |
| | 1. Batteries should be separated from other materials and stored in a | |
| | noncombustible, well ventilated, sprinkler-protected structure with sufficient | |
| | clearance between walls and battery stacks. Do not place batteries near | |
| | heating equipment, nor expose to direct sunlight for long periods. | |
| Storage | 2. Do not store batteries above 30°C or below -5°C. Store batteries in a cool | |
| Storage | (about 20±5°C) in a long time, dry and ventilated area that is subject to little | |
| | temperature change. Elevated temperatures can result in reduced battery | |
| | cycle life. Battery exposure to temperatures in excess of 60°C will result in the | |
| | battery venting flammable liquid and gases. | |
| | 3. Keep batteries in original package until use and do not jumble them. | |







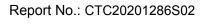
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| Section 8. Exposure Controls/Personal Protection | | |
|--|---|--|
| Engineering Controls | Keep away from heat and open flame. | |
| Ventilation | Not necessary under conditions of normal use. In case of abuse, use adequate mechanical ventilation (local exhaust) for the battery that vent gas or fumes. | |
| Respiratory Protection | Not necessary under conditions of normal use. If battery is burning, leave the area immediately. During fire fighting, fireman should use self-contained breathing, full-face respiratory equipment. Fires may be fought but only from safe fire fighting distance, evacuate all persons from the area of fire immediately. | |
| Eye Protection | Not necessary under conditions of normal use. Use safety glasses with side shields if handling a leaking or ruptured battery. | |
| Body Protection | Not necessary under conditions of normal use. Use rubber apron and protective working in case of handling a leaking of ruptured battery. | |
| Protective Gloves | Not necessary under conditions of normal use. Use chemical resistant rubber gloves if handling a leaking or ruptured battery. | |
| Others | Use good chemical hygiene practice. Wash hands thoroughly after cleaning-up a battery spill caused by leaking battery. No eating, drinking, or smoking in battery storage area. | |

| Section 9. Physical and Chemical Properties | | |
|--|---|--|
| State | Form: Solid, Colour: Black, Odour: Monotony | |
| рН | N/A | |
| Melting point/freezing point | N/A | |
| Boiling Point, initial boiling point and Boiling range | N/A | |
| Flash Point | N/A | |
| Upper/lower flammability or explosive limits | N/A | |
| Vapor Pressure | N/A | |
| Vapor Density: (Air = 1) | N/A | |
| Density/relative density | N/A | |
| Solubility in Water | insoluble | |
| n-octanol/water partition coefficient | N/A | |
| Auto-ignition temperature | 130 degree | |
| Decomposition temperature | N/A | |
| Evaporation rate | N/A | |
| Flammability (soil, gas) | N/A | |
| Viscosity | N/A | |

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| Section 10. Stability and Reactivity | | |
|--------------------------------------|--|--|
| Stability | Stable | |
| Conditions to Avoid | Do not heat, throw into fire, disassemble, short circuit, immerse in water or overcharge, etc. | |
| Incompatibility | None during normal operation. Avoid exposure heat, open flame and corrosives. | |
| Hazardous Polymerization | Will not occur | |
| Hazardous | | |
| Decomposition | The battery may release irritative gas once the electrolyte leakage. | |
| Products | | |

| Section 11. Toxicological Information | | | |
|---------------------------------------|--|--|--|
| The battery does not el | The battery does not elicit toxicological properties during routine handling and use. If the battery is opened | | |
| through misuse or dama | age, discard immediately. Internal components of cell are irritant and sensitization. | | |
| Irritancy | The electrolytes contained in this battery can irritate eyes with any contact. Prolonged contact with the skin or mucous membranes may cause irritation. | | |
| Sensitization | No information is available. | | |
| Teratogenicity | No information is available. | | |
| Carcinogenicity | No information is available. | | |
| Mutagenicity | No information is available. | | |
| Reproductive toxicity | No information is available. | | |
| Acute Toxicity: | | | |
| 7440-50-8 | Oral (rat) LD50:5800 mg/kg. | | |
| Others | No information is available. | | |

Section 12. Ecological Information

- 1. When properly used and disposed, the battery does not present environmental hazard.
- 2. The battery does not contain mercury, cadmium, or lead.
- 3. Do not let internal components enter marine environment. Avoid releasing to waterways, wastewater or ground water.

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Section 13. Disposal Considerations

- 1. Disposal of the battery should be performed by permitted, professional disposal firms knowledgeable in Federal, State or Local requirements of hazardous waste treatment and hazardous waste transportation.
- 2. The battery should be completely discharged prior to disposal and/or the terminals taped or capped to prevent short circuit. When completely discharged it is not considered hazardous.
- 3. The battery contains recyclable materials. Recycling options available in your local area should be considered when disposing of this product, through licensed waste carrier.

Section 14. Transport Information

This report applies to by sea, by air and by land; The lithium ion or lithium polymer cells or batteries 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 lithium ion or lithium polymer cells and batteries according to PACKING INSTRUCTION Section II of PI 965-967 of the IATA Dangerous Goods regulations 61st Edition may be transported.

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

Cell and battery offered for transport must be packed in inner packaging that completely encloses 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;

Each package must be labeled with a Lithium Battery handling label or in addition to the Class 9 hazard label. 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 or UN3481;

UN Proper shipping name/Description (technical name): Lithium ion batteries or Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment;

UN Classification (Transport hazard class): Non dangerous;

Marine pollutant(Y/N): N;

- The International Maritime Dangerous Goods (IMDG) Code.

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

UN number of lithium battery: UN3480 or UN3481;

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

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contained in equipment or Lithium ion batteries packed with equipment;

UN Classification (Transport hazard class): Non dangerous;

Marine pollutant(Y/N): Y;

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).

Section 15. Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200): Non-hazardous.

China: This MSDS in accordance with GB/T18287-2013 General specification of lithium-ion cells and batteries for mobile phone.

USA: This MSDS meets/exceeds OSHA requirements.

International: This MSDS conforms to European Union (EU), the International Standards Organization (ISO) and the International Labour Organization (ILO).

UL certification: The Future Power batteries are registered by Underwriters Laboratories, Northbrook.

PS.1. When large amount of batteries are transported by ship, vehicle and railroad, avoid high temperature and dew condensation.

PS.2. Avoid transportation which may cause damage of package.

Section 16. Other Information

The information above is believed to be accurate and represents the best information currently available to us. however, CTC 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 report =====

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