

Material Safety Data Sheet

For

JIANGSU FENGCHI GREEN POWER CO., LTD.

No. 82 Xinzhong Road, Xinzhuang Street, Yixing City, Jiangsu Province, China
and their products.

Polymer Lithium-Ion Battery pack

Model / Type Reference: ITP2404

Trademark: N/A

Nominal Voltage: 24V

Typical Capacity: 4000mAh, 96Wh

Weight: 1590.0g

Shape and Physical Dimensions (mm)...: L: 170mm
W: 80mm
T: 115mm

Version Number: V1.0

Preparation Date: January 16th, 2022

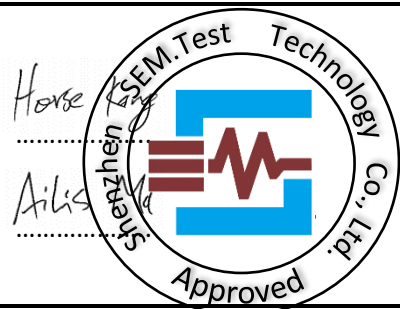
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Section 1 – Chemical Product and Company Identification

1. Chemical Product Identification

Product Name: Lithium-Ion Polymer Battery Pack

Model: ITP2404

2. Company Identification

Manufacturer / Supplier Name: JIANGSU FENCHI GREEN POWER CO., LTD.

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This MSDS was prepared by Shenzhen SEM.Test Technology Co., Ltd.

Item No.: STR14119051S

Referenced Documents: ISO 11014:2009 Safety data sheet for chemical products.

Section 2 – Hazards Identification

Preparation Hazards and Classification	When the battery is in extreme pressure deformation, high-temperature environment, overload, short-circuit conditions, or disassembled, an explosion resulting in fire and chemical burn hazards may occur.
Appearance, Colour and Odour	Solid object with no odor, no colour.
Primary Route(s) of Exposure	These chemicals are contained in a sealed stainless-steel 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, Contact with Eyes and Contact with Skin .
Potential Health Effects	<p>ACUTE (short term): Refer to Section 8 for exposure controls. In the event that this battery is ruptured, the electrolyte solution contained within the battery is corrosive and can cause burns.</p> <p>Inhalation: A battery volatilizes no gas unless it is damaged. This gas can affect the respiratory tract and may cause anaphylaxis.</p> <p>Ingestion: Swallowing any chemicals or materials in the battery will cause minor to permanent damage to the digestive and / or respiratory tract as well as cause chemical burns to the stomach.</p> <p>Skin: Contact with a damaged battery and its contents may result in skin allergies and / or chemical burns.</p> <p>Eye: Contact with gas and chemicals from a damaged battery is harmful And may cause permanent damage to the eyes.</p> <p>CHRONIC (long term): Refer to Section 11 for additional toxicological data.</p>

Section 3 – Composition / Information on Ingredients

Lithium-Ion Polymer Battery pack consist of a mixture of elements.

Hazardous Ingredients (Chemical Name)	Concentration or Concentration Ranges (%)	CAS Number
Aluminum Foil (Al)	5	7429-90-5
Copper Foil (Cu)	7-10	7440-50-8
Lithium Cobalt Oxide (LiCoO ₂)	2-3	12190-79-3
Nickel	2-5	7440-02-0
C ₃ H ₄ O ₃	5	N/A
(C ₂ H ₂ F ₂) _n	6	N/A
LiNixCoyMn1-x-yo ₂	58-62	N/A
Graphite(C)	12-15	7782-42-5
C ₃ H ₆ O ₃	2-5	N/A

Note: CAS Number - Chemical Abstract Service Registry Number.
N/A - Not Applicable.

Section 4 – First-Aid Measures

Inhalation	If contents of an opened battery are inhaled, remove source of contamination of move victim to fresh air. Obtain medical advice and assistance.
Skin Contact	If the contents of an open battery come into contact with skin, immediately flush the affected area with running water for at least 30 minutes. If irritation and / or pain persists, seek medical attention. All exposed articles of clothing must be removed and decontaminated or discarded.
Eye Contact	If the contents of an open battery come into contact with eyes, immediately flush the eyes with running water for at least 30 minutes with the eyelids open. Use saline solution if it is available. Quickly transport the affected individual to an emergency care facility and if necessary, continue to flush the eyes during transit. If only one eye has been exposed, take extra precautions so that the unaffected eye is not contaminated as well.
Ingestion	If the contents of an open battery have been accidentally ingested, first rinse the mouth thoroughly with water. If the affected individual is rapidly losing consciousness, unconscious or convulsing, DO NOT attempt to administer water or insert anything into the mouth as this can result in choking. If the affected individual is still conscious, make the individual drink 60ml to 240ml of water. DO NOT INDUCE VOMITTING but if vomiting occurs naturally, have the individual lean forward to reduce the risk of aspiration. Continue rinsing mouth with water and ensure that the affected individual is transported to an emergency care facility as quickly as possible.

Section 5 – Fire-fighting Measures

Flammable Properties	In the event that this battery ruptures, the electrolyte solution contained within the battery will leak out and this solution is flammable. Like any sealed container, battery cells may rupture when exposed to excessive heat and this may result in the release of corrosive and flammable materials.
Suitable Extinguishing Media	Use suitable extinguishing media to handle burning materials.
Unsuitable Extinguishing Media	N/A
Explosion Data	Sensitivity to Mechanical Impact: Rupture in extreme cases. Sensitivity to Static Discharge: N/A
Specific Chemical Hazards	Fires involving Lithium -Ion Polymer Battery Packs can be controlled with water. However, when water is used, hydrogen gas is released and will form an explosive mixture. In this scenario, smothering agents are recommended to extinguish the fire.
Protective Equipment and Precautions for Firefighters	As with any situation regarding fires, evacuate the immediate area and fight the fire from a safe distance. It is recommended that NIOSH/MSHA approved, pressured, self-contained breathing apparatus (SCBA) and full protective gear be equipped.
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 protective equipment as indicated in Section 8.
Environmental Precautions	Prevent material from contaminating soil and from entering sewers of waterways.
Methods and Materials for Containment	Stop the leak if it is 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 accordingly. Refer to Section 13. Scrub the area with detergent and water. Collect all contaminated wash water for proper disposal.

Section 7 – Handling and Storage

Lithium-Ion Polymer Battery Pack Handling	DO NOT dismantle, disassemble, open, crush, shred or burn. DO NOT handle the battery pack with any metal. Ensure good ventilation during regular use and charging. Store in approved container for dust-free and tamper-free use. Keep Away from open flame and other sources of ignition.
Lithium-Ion Polymer Battery Pack Storage	Periodic charging is recommended for storage > 3 months. 3 months: -10°C to +40°C, 45% to 85%RH. Recommended storage at 0oC to +35oC for longer periods. Delivery State: 50% charged / of full capacity. Recovery Rate Capacity after storage: 80% or more. Ideal voltage for long term storage is 24V to 25V. DO NOT store Lithium-Ion Polymer battery packs 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 to heat, fire or direct sunlight. DO NOT store together with oxidizing and acidic materials.

Section 8 – Exposure Controls and Personal Protection

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

Section 9 – Physical and Chemical Properties

Physical State	Form: Solid
	Colour: Black
	Odour: Monotony
Change in Condition:	
pH, with indication of the concentration	N/A
Melting Point / Freezing Point	N/A
Boiling Point, Initial Boiling Point and Range	N/A
Flash Point	N/A
Upper/Lower Flammability/Explosive Limits	N/A
Vapour Pressure	N/A
Vapour Density: (Air=1)	N/A
Density / Relative Density	N/A
Solubility in Water	N/A
n-octanol / water partition co-efficient	N/A
Auto-Ignition Temperature	Insoluble
Decomposition Temperature	N/A
Odour Threshold	130°C
Evaporation Rate	N/A
Flammability (soil,gas)	N/A
Viscosity	N/A

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 the Lithium-Ion Polymer battery packs to mechanical shock. Vibration encountered during transportation does not cause leakage, fire or explosion. DO NOT disassemble, crush, short-circuit or install with incorrect polarity. Avoid mechanical or electrical abuse.
Incompatible Materials	N/A
Hazardous Decomposition Products	This material may release toxic fumes if burned or exposed to fire.
Possibility of Hazardous Reaction	N/A

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.
Sensitisation	N/A
Neurological Effects	N/A
Teratogenicity	N/A
Reproductive Toxicity	N/A
Mutagenicity (Genetic Effects)	N/A
Toxicologically Synergistic Materials	N/A

Section 12 – Ecological Information

General Note	Water hazard class 1(self-assessment) slightly hazardous for water. 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 the environment / possible environmental impact / ecotoxicity	N/A
Mobility in Soil	N/A
Persistence and Degradability	N/A
Bioaccumulation Potential	N/A
Other Adverse Effects	N/A

Section 13 – Disposal Considerations

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

Packaging disposal recommendation: Be aware that discarded batteries may cause a fire. Tape the battery terminals to insulate them. DO NOT disassemble the battery. Completely discharge containers (no tear drops, no powder residue). Containers may be recycled or re-used. Observe local, state and federal laws and regulations.

The potential effects on the environment and human health of the substances used in batteries and accumulators, the desirability of not disposing of batteries and accumulators as unsorted municipal waste and of participating in their separate collection so as to facilitate treatment and recycling.

Section 14 – Transport Information

This report applies to transportation by sea, by air and by land.

The Lithium-Ion Polymer battery pack (model ITP2404) tested according to the requirements of the UN manual tests and Criteria, Part III, subsection 38.3;

The Lithium-Ion Polymer battery pack according to Section III of PACKING INSTRUCTION 967 of the 2019-2020 IATA Dangerous Goods regulations 60th Edition, may be transported and corresponds to the US DOT regulations for the safe transport of Lithium-Ion Polymer battery pack.

The Lithium-Ion Polymer battery pack must be protected to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to short circuits.

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

The packaging must 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 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 for 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): 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 Transportation (DOT) Research and Special Programs Administration (RSPA)

Section 15 – Regulatory Information

OSHA Hazard Communication Standard (29 CFE 1910.1200)

_____ Hazardous

_____ v _____ Non-Hazardous

Section 16 – Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, concorde 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.

*****The End*****