Safety Data Sheets (SDSs)

Client	Guangdong Hongjie New Energy Co.,Ltd
Add. of Client	No. 1, private no. 2, private industrial zone, Shangnan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China
Description	Lithium-ion Polymer Rechargeable Cell
Model /Type	HJ 501745
Manufacturer	Guangdong Hongjie New Energy Co.,Ltd
Add. of Manufacturer	No. 1, private no. 2, private industrial zone, Shangnan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China
Nominal Voltage	3.8V
Capacity/Wh rating	380mAh, 1.444Wh
Effective Date	2023-8-1

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	Maggie Gao
Inspected by	Ailis.Ma	Ailis Ma
Censored by	Lahm Peng	Lahm Peng

ZRLK WERCS Special Seal
ZRLK WERCS

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

Product Identifier

Product name: Lithium-ion Polymer Rechargeable Cell

Model: HJ 501745

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advidsed 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: Guangdong Hongjie New Energy Co.,Ltd

Address: No. 1, private no. 2, private industrial zone, Shangnan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China

Telephone number of the supplier:+86-752-6101556

Fax: /

Postcode: /

E-mail address: 670360539@qq.com

Emergency telephone number

Company Emergency Phone Number: +86-752-6101556

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 ($LiCoO_2$)	35.5	12190-79-3
Aluminum Foil (Al)	9	7429-90-5
1.1-Difluoroethylene polymer	1	24937-79-9
Graphite (C)	18	7782-42-5
Copper Foil (Cu)	15	7440-50-8
Styrene-Butadiene polymer	1.5	9003-55-8
Lithium hexafluorophosphate	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_2, 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 hazardus 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℃), 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 Lithium-ion Polymer Rechargeable battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Lithium-ion Polymer Rechargeable battery periodically.
3 months: -10℃~+40℃, 45 to 85%RH
And recommended at 0℃~+35℃ 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 Lithium-ion Polymer Rechargeable 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 Lithium-ion Polymer Rechargeable 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^3
MAK (Germany)	0.1mg/m^3

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 trough 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.
Odout 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 toxiciy: 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 Lithium-ion Polymer 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 Lithium-ion Polymer Rechargeable battery according to Section IB of PACKING INSTRUCTION 965 of the 2022 IATA Dangerous Goods regulations 63rd Edition may be transported. and applicable U.S. DOT regulations for the safe transport of Lithium-ion Polymer Rechargeable battery.

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.

14.1. UN number or ID number: UN3480
14.2. UN Proper shipping name/Description (technical name): Lithium ion batteries;
14.3. Transport hazard class(es): Class 9
14.4. Packing group: II
14.5. Environmental hazards: Clean the spills and batteries, place them in a dry sealed metal container or nonflammable material container, and bring them to battery recycling companies to deal with environmental protection. Do not throw away the damaged batteries or waste batteries.
14.6. Special precautions for user: Li-ion cell 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;
14.7. Maritime transport in bulk according to IMO instruments: International maritime dangerous goods code (IMDG) 188;

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 (EINECS)	**US (TSCA)**	**Japan (ENCS)**	**Canada (DSL/ NDSL)**	**Austrlia (AICS)**	**Korea (ECL)**	**China (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
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**********

化学品安全技术说明书（MSDS）

委托方 Client	广东弘捷新能源有限公司 Guangdong Hongjie New Energy Co., Ltd.
委托方地址 Add. of Client	广东省惠州市博罗县园洲镇上南村民营工业区民营二路 1 号 No. 1, Private No. 2, Private Industrial Zone, Shangnan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China
样品名称 Description	锂离子聚合物可充电电芯 Lithium-ion Polymer Rechargeable Cell
型号规格 Model/Type	HJ 541112
标称电压 Nominal Voltage	3.8V
额定容量 Rated Capacity	45mAh
额定能量 Rated Energy	0.171Wh
制造厂 Manufacturer	广东弘捷新能源有限公司 Guangdong Hongjie New Energy Co., Ltd.
制造厂地址 Add. Of Manufacturer	广东省惠州市博罗县园洲镇上南村民营工业区民营二路 1 号 No. 1, Private No. 2, Private Industrial Zone, Shangnan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China
技术依据 Reference documents	ISO 11014:2009 化学品安全技术说明书—内容和项目顺序 ISO 11014:2009 Safety data sheet for chemical products-Content and order of sections GB/T 16483-2008 化学品安全技术说明书 内容和项目顺序 GB/T 16483-2008 Safety data sheet for chemical products-Content and order of sections 国际航空运输协会《危险品规则》（第 64 版） IATA Dangerous Goods Regulation (64th) 国际海事组织《国际海运危险货物规则》（第 40-20 版） IMO International Maritime Dangerous Goods Code (40-20 edition)

出版日期 Date of Receipt	2023 年 10 月 13 号

编写：

审核：

一． 样品信息 Sample information

样品名称 Sample Name	锂离子聚合物可充电电芯 Lithium-ion Polymer Rechargeable Cell	样品型号 Type	HJ 541112
标称电压 Nominal voltage	3.8V	额定容量 Rated capacity	45mAh
样品外观 Shape	棱柱形 Prismatic		

二．内容与说明 Content and instructions

1. 化学品及企业标识 Chemical product and company identification

化学品的名称 Name of chemical product		锂离子聚合物可充电电芯 Lithium-ion Polymer Rechargeable Cell
制造商 Manufacturer	名称 Name	广东弘捷新能源有限公司 Guangdong Hongjie New Energy Co., Ltd.
	地址 Address	广东省惠州市博罗县园洲镇上南村民营工业区民营二路 1 号 No. 1, Private No. 2, Private Industrial Zone, Shangnan Village, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, China
	电话号码 Telephone number	+86-752-6101556
	应急咨询电话 Emergency telephone number	+86-752-6101556
	电子邮件 E-mail address	670360539@qq.com

这份 MSDS 报告由东莞市中认联科检测技术有限公司签发；
This MSDS was prepared by Dongguan ZRLK Testing Technology Co., Ltd.

2. 危险性概述 Hazards identification

1) 主要的物理及化学危险性 Important Physical and chemical hazards

在强压变形、拆解、短路时有起火爆炸与化学烧伤等危险，在高温环境或放置于火焰环境中、超负荷使用时有起火爆炸危险.

When the battery is in extreme pressure deformation, high-temperature environment, overload, short-circuit condition, or disassemble the battery, an explosion of fire and chemical burn hazards may occur.

2) 对人体健康影响 Effects of the human health.

眼睛 Eyes

正常使用下无危害性，但在拆解、弯曲、短路可能会引起电池起火爆炸伤害眼睛。破损时挥发出气体会对眼睛产生刺激。

In normal condition, contact between the battery and eyes will not cause any harms. However, the gas Volatilize from a damaged battery may be harmful to eyes.

皮肤 Skin

正常情况下接触无对皮肤危害性。在电池破损情况下接触有可能引起化学烧伤或皮肤过敏发炎症状。

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.

吸入 Inhalation

完好电池并无挥发出可供吸入气体情况。破损时会挥发出微量气体会刺激呼吸道，严重者可能引起过敏反应。

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.

食入 Ingestion

食入会对呼吸道产生伤害、对肠胃产生烧伤，严重会造成永久性损害

Swallowing battery will be damaged to the respiratory tract and cause chemical burns to the stomach; in serious conditions it will cause Permanent damage.

3. 成分/组成信息 Composition/information on ingredients

Hazardous Ingredients (Chemical Name)	Concentration or concentration ranges (%)	CAS Number
钴酸锂 Lithium Cobalt Oxide (LiCoO2)	35.5	12190-79-3
铝 Aluminum Foil (Al)	9	7429-90-5
聚偏氟乙烯树脂 1.1-Difluoroethylene polymer	1	24937-79-9
石墨 Graphite (C)	18	7782-42-5

铜 Copper Foil (Cu)	15	7440-50-8
丁苯橡胶 Styrene-Butadiene polymer	1.5	9003-55-8
六氟磷酸锂 /Lithium hexafluorophosphate	2.8	21324-40-3
碳酸乙烯酯 Ethylene carbonate	5	96-49-1
碳酸二甲酯 Dimelene carbonate	5	616-38-6
碳酸甲乙酯 Carbonate, methyl ethyl	5	623-53-0
镍/Nickel	2.2	7440-02-0

4. 急救措施 First-aid measures

眼睛 Eyes

如有接触损坏电池，立即用清水清洗眼睛 15 分钟以上直至刺痛/刺激感消失为止，并及时去就医。

If your eyes contact with a damaged battery, flush with copious amount of water for at least 15 minutes until the stinging and irritation subside, and Seek immediate medical attention.

皮肤 Skin

如有接触，立即脱下被污染衣服并用大量清水冲洗皮肤或淋浴，如灼伤感持续立刻去就医。

If your skin contact with a damaged battery, immediately take off contaminated clothing and flush your skin with copious amount of water or have a shower. Seek immediate medical attention if burning sensation continues.

吸入 Inhalation

立刻转移到空气新鲜环境下呼吸新鲜空气，休息。如出现呼吸困难或头晕头痛等症状立刻请人陪同去就医。

Remove to fresh air immediately and have a rest, If you feel dyspnea, dizziness or headache, seek immediate medical attention.

食入 Ingestion

如果食入电池，不要催吐且不要再吃下食物或喝饮料，立刻就医

If battery or open battery is ingested, do not induce vomiting or give food or drink. Seek medical attention immediately.

5. 消防措施 Fire-fighting measures

此产品在强压弯曲或短路等情况下容易起火并冒出大量烟雾，应正确使用并置于阴凉环境下，避免放置在高温、日光照射及受重压的地方。如发生起火，戴上防毒面具在条件允许情况下洒水或用灭火器让毗邻的未起火电池降温避免火势蔓延并用工具把起火电池和其他电池分离，让其自然熄灭；或用大量的水灭火，但起火电池一般都会在内部化学物质反应完后火才熄灭下来。如果有电池起火火势较大，立刻报火警并疏散人员到安全地方。

This battery can get fire easily and made a lot of smoke under the forced bending and short-circuit condition, so it should be properly used and placed in a cool environment and Avoid placing the battery package under heat,

pressure and direct sunlight. In the event of fire, wear gas masks and cool the adjacent batteries and control the spread of fire with water or extinguishers, separate the fire batteries with other batteries as conditions permit, let the fire naturally extinguished, otherwise put out the fire with lots of water. In normal condition the fire is not extinguished until the reactions that between the chemicals contained in the battery are completed. In the event of a big fire, report the fire immediately and evacuate to a safe place.

6. 泄漏应急处理 Accidental release measures

将溢漏物与电池清扫，并放进干燥可密闭的金属容器或材质不易燃的容器中，交由电池回收企业进行环保处理。避免电池弃扔到自然环境中。

Clean the spills and batteries, place them in a dry sealed metal container or nonflammable material container, and bring them to battery recycling companies to deal with environmental protection. Do not throw away the damaged batteries or waste batteries.

7. 操作处置与储存 Handling and storage

操作 Handling

不能擅自组装拆解电池或短路，不能让电池接近火源。运输电池应避免暴力装卸电池货物、避免电池受到挤压或剧烈振动。

Do not assemble and disassemble a battery, battery short-circuit is not allowed too. Keep the battery away from the fire. When transporting these batteries, the battery should be careful handling to avoid the battery being squeezed or excessive vibration.

储存 Storage

长时间存储前先充满电。电池应储存于阴凉环境中。

The battery should be fully charged before long term storage. The battery should be stored in a cool environment.

8. 接触控制和个体防护 Exposure controls/Personal Protection

工程控制 Engineering control

选择合理的通风设备，足够量的防毒面具灭火器及水源，配备存放泄漏电池的金属容器。配备洗浴设备。

Choose the suitable ventilation equipment; provide sufficient quantity of fire extinguishers, gas mask and water; equip with metal storage containers and bathing equipments.

呼吸系统防护 Respiratory protection

正常情况下无必要作防护 Normally there is no need to do protection.

眼睛防护 Eye protection

正常情况下无必要作防护 Normally there is no need to do protection.

身体和皮肤防护 The body and skin protection

正常情况下无必要作防护 Normally there is no need to do protection.

9. 理化特性 Physical and chemical properties

物品外观与形状 Object appearance and shape
棱柱形 Prismatic

气味 Odour
无 None

10. 稳定性和反应性 Stability and reactivity

稳定性 Stability
正常环境下稳定。 Stable under the regular environment.

应避免的条件 Should avoid conditions
高温或过湿环境，撞击震动或受挤压，正负极反接使用。
High temperature, wet environment, mechanical shock, vibration, crush, reverse polarity used should be avoided.

不相容物质 Incompatible materials
无 None

危险的分解产物 Hazardous decomposition products
在起火时会释放出刺鼻的浓烟雾。
When the battery catches fire, it will release pungent thick smoke.

11. 毒理学信息 Toxicological information

正常情况下接触电池无毒性作用。
In normal condition, contact with the battery is non-toxic.

12. 生态学信息 Ecological information

正常处理电池不会对生态环境产生影响。
Proper disposal of battery does not present ecological hazard.

13. 废弃处置 Disposal considerations

交由电池回收企业进行回收处置，不能随意丢弃于环境中。具体参照有关国家相关法规。
It needs to be referred to the waste battery recycling companies for recycling disposal, cannot arbitrarily discarded in the environment. Specific conditions reference to the relevant national laws and regulations.

14. 运输信息 Transport information

这份报告适用于海运，空运和陆运；
This report applies to by sea, by air and by land;

该电池样品为锂离子聚合物可充电电芯,该电池型号已通过 UN38.3 测试。

This battery sample is Lithium-ion Polymer Rechargeable Cell and This battery type is proved to meet the Requirements tests in the UN *Manual of Tests and Criteria,* Part III, subsection 38.3.

锂离子聚合物可充电电芯应满足 2023 国际航空运输协会《危险品规则》(64 版)的 3.9.2.6.1(e) 规定进行包装空运；

Lithium-ion Polymer Rechargeable Cell Can be transport by air according to the International Air transport Association (IATA) Dangerous Goods Regulations relevant regulations (64th) for section 3.9.2.6.1(e).

可按 IATA《危险品规则》中包装说明 PI965 IB、PI966 II 和 PI 967 II 章节相关规定进行包装空运。

Can be transport by air according to the Packing Instructions PI965 IB、PI966 II and PI 967 II Section of IATA

锂离子聚合物可充电电芯必须加以保护防止短路，包括防止与同一包装件内可能导致短路的导电材料接触；

Lithium-ion Polymer Rechargeable Cell 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;

锂离子聚合物可充电电芯必须放置于可将其完全封闭的内包装中，再放入外包装。为防止电池损坏和被挤压，内包装必须放电坚固硬质外包装中；

Lithium-ion Polymer Rechargeable Cell 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;

UN No. UN 编号	Proper shipping name/Description (technical name) 运输专用名称	Class or Div. (Sub Hazard) 危险类别	Packing Group 包装等级	Packing Instruction 包装说明	Remark 备注
UN3480	Lithium ion batteries 锂离子电池	--	--	Section IB of PI 965 包装说明 PI965 的第 IB 部分	Lithium-ion cells and batteries must be transported in a state of charge (SoC) not exceeding 30% of their rated capacity; 锂离子电池芯和电池必须在荷电状态（SoC）不超过其额定容量的 30%状态下进行运输；
UN3481	Lithium ion batteries contained in equipment 锂离子电池安装在设备中 or 或 Lithium ion batteries packed with equipment	--	--	Section II of PI 967 包装说明 PI967 的第 II 部分 or 或 Section II of PI 966	--

	锂离子电池与设备包装在一起			包装说明 PI966 的第 II 部分	

可按 IMO IMDG CODE(2020 版)《国际海运危险货物规则》特殊规定第 188 条相关规定进行包装海运。
Can be transport by sea according to the special provision 188 of IMO *International Maritime Dangerous Goods Code relevant regulations*.
根据 IMO IMDG CODE(2020 版) 的 2.9.4.7，锂电池或电池组的制造商和生产后的销售商应提供联合国《试验和标准手册》第 III 部分第 38.3 小节第 38.3.5 段规定的 UN38.3 试验概要；
According to 2.9.4.7 of IMO IMDG Code (2020 Edition), Manufacturers and subsequent distributors of batteries manufactured shall make available the test summary as specified in the manual of tests and criteria, Part III, sub-section 38.3, paragraph 38.3.5;
根据 ADR-2021 (2023 版) 的 2.2.9.1.7(g), 锂电池组的制造商和生产后的销售商应提供联合国《试验和标准手册》第 III 部分第 38.3 小节第 38.3.5 段规定的 UN38.3 试验概要；
According to 2.2.9.1.7(g) of ADR-2021 (2023 Edition), Manufacturers and subsequent distributors of batteries manufactured shall make available the test summary as specified in the manual of tests and criteria, Part III, sub-section 38.3, paragraph 38.3.5;

15. 法规信息 Regulatory Information

《危险品规则》Dangerous Goods Regulations
《国际海运危险货物规则》IMO International Maritime Dangerous Goods Code relevant regulations.
参照联合国，国家，地方性法规。
Refer to U. N., national, local regulations.

16. 其他信息 Other information

上述信息是基于现有的数据信息，是我们目前所掌握的最佳资料。然而，不对此类信息做出适当性担保或任何其他明示或默示担保，我们也不承担使用此类信息所产生的任何责任。用户应自行调查，以确定信息是否适合其特定目的。虽然在编制本报告所载的数据时采取了合理的预防措施，但仅供你参考、考虑和调查。这份材料安全数据表为安全处理和使用本产品提供了指导方针；它没有也不能就所有可能的情况提出建议；因此，应该评估你对本产品的具体使用情况，以确定是否需要采取额外的预防措施。
本文件所载的数据/资料已根据本文件不含受出口管制资料的情况加以审查并核准予以普遍公布。
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.