Safety Data Sheet

(IPBT Safety Data Sheet –LiPo MSDS –S&A)
(Date of Issue: 1-February-2024)

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1. Identification of the Product and of the Company undertaking

[Product]

Product Name: IPBT Lithium-ion Polymer Battery
System: Rechargeable Lithium-ion Polymer Battery

[Company]

Company Name: Intellect Battery Co., Ltd.
Company Address: Unit 824, 8/F.,Nan Fung Commercial Centre, 19 Lam Lok Street, Kowloon Bay, Kowloon, Hong Kong.

Emergency Telephone Number of supplier: 91 8689992258

Emergency Telephone Number of Local authority (India only) :

FIRE	101 , 022-23085991 / 992
GAS LEAKAGE	1906, 011-1906
ANTI POISION (DELHI)	1066
AMBULANCE	102 ,108, 1298 , 022-24308888

Don’t Puncture- Don’t Short-circuit- Don’t Throw in Fire

2. Hazards Identification

The batteries herein are defined as “articles” under 29 CFR 1910.1200, and are not subject to OSHA’s requirements for material safety data sheets under its Hazard Communication Standard, 29 CFR 1910.1200.

The batteries are not classified as hazardous according to Regulation (EC) No. 1272/2008.

The battery ingredients are contained in a sealed enclosure. Therefore, it is not classified as dangerous or hazardous under normal use. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of dismantling the enclosure. If this occurs, exposure to the electrolyte solution within can occur by Inhalation, Ingestion, Eye contact and Skin contact. Damaged or opened cells or batteries may result in rapid heat release, and the release of flammable vapors.

3. Composition / Information on Ingredients

Ingredient	CAS Number	Percent of Content	Classification & Hazard labeling
Lithium Cobalt oxide	12190-79-3	20-40%	Eye, Skin, Respiratory irritant
Carbon, as Graphite	7782-42-5	10-30%	Eye, Skin, Respiratory irritant
Aluminum metal	7429-90-5	5-15%	Inert
Copper metal	7440-50-8	5-15%	Inert
Electrolyte		10-25%	Mixture (flammable; reactive;
Ethylene carbonate	96-49-1		sensitizer; eye, skin,
Dimethyl carbonate	616-38-6		respiratory irritant.)
Ethyl methyl carbonate	623-53-0		
Li-Hexafluorophosphate	21324-40-3		

The materials contained in the battery may only become a hazard if the battery or the cell is disintegrated or if the battery is mechanically, thermally or electrically abused.

4. First Aid Measures

In case of contacting the materials from a damaged or ruptured cell or battery:

Eye contact: Washing immediately with plenty of water and soap or for at least 15 minutes. Get medical attention.

Skin Contact: Washing immediately with water and soap.

Inhalation of Vented Gas: Remove to fresh air. Get medical attention.

Ingestion: Get medical attention immediately.

5. Fire Fighting Measures

Extinguishing Media:Dry chemicals (for small fire), large amount of water (for large fire).

Fire-Fighting Procedures:

Use self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards:

Toxic gases (HF, PF_6) will be formed if cells or battery are involved in a fire. Cells or battery may flame or leak potentially hazardous organic vapors if exposed to excessive heat, fire or over-voltage conditions. Damaged or opened cells or batteries may result in rapid heat and the release of flammable vapors.

6. Accidental release measures

The material contained within the batteries would only be expelled under abusive conditions.

Using shovel or broom, cover battery or spilled substances with dry sand or vermiculite, place in approved container (after cooling if necessary) and dispose in accordance with local regulations.

7. Handling and Storage

Do not store batteries in a manner that allows terminals to short circuit.

Do not place batteries near heating sources, nor exposed to direct sunlight for long periods.

Elevated temperatures can result in reduced battery service life.

Charging Battery

Use only approved chargers and procedures. Improperly charging a cell or battery may cause the cell or battery to flame or damage.

Battery Disassembly

Never disassemble a battery.

Should a battery unintentionally be crushed, thus releasing its contents, rubber gloves must be used to handle all battery components. Avoid inhalation of any vapors that may be emitted.

Battery Short Circuit

Do not short-circuit a battery. A short circuit can result in over-heating of the terminals and provide an ignition source.

More than a momentary short circuit will generally reduce the cell or battery service life and can lead to ignition of surrounding materials or materials within the cell or battery if the seal integrity is damaged.

Extended short-circuiting creates high temperature in the cell and at the terminals. Physical contact to high temperatures can cause skin burns. In addition, extended short-circuit may cause the cell or battery to flame.

Avoid reversing cell polarity within a battery assembly. Reversing cell polarity may cause the cell or battery to flame or to emit gases.

Mixed Batteries and Types

Avoid to use old and new cells or cells of different sizes; different chemistry or types in the same battery assembly.

8. Exposure Controls/Personal Protection

Respiratory protection : *Not necessary under normal use.* In case of battery rupture, use self-contained full-face respiratory equipment.

Hand protection : *Not necessary under normal use.* Use Viton rubber gloves if handling a leaking or ruptured battery.

Eye protection : *Not necessary under normal use.* Wear safety goggles or glasses with side shields if handling a leaking or ruptured battery.

Skin protection : *Not necessary under normal use*. Use rubber apron and protective working in case of handling of a ruptured battery.

9. Physical and Chemical Properties

Appearance : square shape.
Relative Density : n/a
Odor : if leaking, smell like ether.
pH : not applicable as supplied
Flash Point : not applicable unless individual components being exposed.
Flammability : not applicable unless individual components being exposed.
Solubility (water) : not applicable unless individual components being exposed.
Solubility (other) : not applicable unless individual components being exposed.

10. Stability and Reactivity

Conditions to avoid : Heat above 70°C or incinerate. Do not deform, mutilate, crush, pierce, disassemble, or short-circuit the battery. Avoid prolonged exposure to humid conditions.
Materials to avoid : N/A.
Hazardous decomposition products : Corrosive/Irritant Hydrogen fluoride (HF) is produced in case of reaction of *lithium hexafluorophosphate(LiPF6)* with water. Combustible vapors and formation of Hydrogen fluoride (HF) and phosphorous oxides during fire.

11. Toxicological Information

The batteries do not contain toxic materials under normal conditions. In case of accidental release of content, refer to Section 2, 3, & 4 above.

12. Ecological Information

When properly used or disposed, the batteries do not present environmental hazard.

13. Disposal Considerations

The batteries contain no toxic metals, only naturally occurring trace elements. To avoid short circuit and heating, the used batteries should not be stored or transported in bulk. It is advisable to consult with local authorities as disposal regulations may vary depending on location.

14. Transportation Information

The Lithium-ion Polymer cells and batteries are manufactured under Quality Management Program ISO 9001:2015 [assessed by Sira Certification Service (UK); Certificate No. 115010.], meeting the Provisions of 3.9.2.6(e).
This document refers to the Lithium-ion Polymer Cells of not more than 20 Watt-hour and Batteries of not more than 100 Watt-hour. Cells or batteries are of the type proven to meet the requirements of each test in the UN Manual of Test and Criteria, Part III, Subsection 38.3, meeting the Provisions of 3.9.2.6(a).
The Lithium-ion cells and batteries are packaged as below :

1. the cells or batteries are designed to preclude a violent rupture upon transport accident [3.9.2.6(b)];
2. the cells or batteries are with individual package to avoid short-circuit [3.9.2.6(c)];
3. the batteries, in case with cells connected in parallel, would be equipped with effective means to prevent dangerous reverse current flow (e.g. diodes, fuses, etc.) [3.9.2.6(d)]
4. the export packing is marked with a Lithium Battery Mark (and/or the Class 9 hazard label, and/or CAO label), and must be quarantined, inspected and repacked if damaged;

Subject to the Packing List information against individual shipping consignment, they are packaged in

compliance with ONE of the followings :

A. the **Section IB** of Packing Instruction (PI) 965 (under UN3480 Lithium-ion Batteries) requirement of shipping as **"Partially Regulated" Class 9** Dangerous Goods, per INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO) and the INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA) **DGR 61st** edition [2020]

B. the **Section II** of Packing Instruction (PI) 965 (under UN3480 Lithium-ion Batteries) requirement of shipping as **"Not Restricted"** Dangerous Goods, per INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO) and the INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA) **DGR 61st** edition [2020]

C. the **Section II** of Packing Instruction (PI) 966 (under UN3481 Lithium-ion Batteries) requirement of shipping as **"Not Restricted"** Dangerous Goods, per INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO) and the INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA) **DGR 61st** edition [2020]

D. the **Section II** of Packing Instruction (PI) 967 (under UN3481 Lithium-ion Batteries) requirement of shipping as **"Not Restricted"** Dangerous Goods, per INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO) and the INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA) **DGR 61st** edition [2020]

E. the requirement of shipping as **"Not Restricted" Cargo**, per INTERNATIONAL MARITIME ORGANISATION (IMO) **- IMDG Special Provision 188 & 230** (under UN3480 Lithium-ion Batteries).

14. Transportation Information (cont'd)

They do not contain any prototype, heavy, recalled and/or defective batteries.
Put following sticker on outside the package, Should be clearly visible. Class 9 Hazardous Material

IMPORTANT NOTE as according to the IATA regulation from 1st April, 2016 onwards. The Lithium-ion Polymer cells and batteries are offered for transport at a state of charge (SoC) **NOT exceeding 30%** of their rated design capacity.

15. Regulatory information

The batteries are not classified as hazardous according to Regulation (EC) No. 1272/2008.
Keep out of the reach of children.

16. Other Information

Manufacturer Disclaimer :

The information contained herein is based on the data available to us and believed to be correct. However, Intellect Battery Co., Ltd. makes no warranty, expressed or implied. Users should consider the data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

12. Model wise Battery Specification

SPACIFIC MODEL WISE BATTEY DETAIL		
Battery model	Specifications	
KP- 503450 (Launch Date 10-12-2023)	Capacity - 1500 mAh, Size W51- H34- Thick 05 Size in MM Weight 18 Gr	
KP- 503450 (Launch Date 10-12-2023)	Capacity - 1800 mAh, Size W51- H34- Thick 05 Size in MM Weight 18 Gr	
Battery Technical's		
Items	Parameter	
Nominal voltage	3.7V	
Charging voltage	4.2V	
Discharging cut-off voltage	2.75V	
Standard charging	0.2C /4.2V	
Max charging	1.0C /4.2V	
Standard discharging	0.2C/3.0V	
Max discharging	continuous discharge	
Discharge rate	0.2C discharge	
Shipment voltage	non-continuous discharge	
Battery pack impedance	≥3.85V	
Operating temperature	≤80mΩ	1.0C/3.0V
	Charging: 0°C ~ 45°C	2.0C/3.0V
Storage (At 50% SOC and specified temp, recoverable capacity in % vs time)	Discharging: -20°C ~60°C	
Visual Inspection	-10℃~25℃	

Reference standard	-10℃~45℃	
	-10℃~55℃	
	20±5℃is the recommended storage temperature	(12 months ≥85%)
	There should not be any remarkable scratches, cracks, bolts, cauterization, deformations, swelling, leakage and so on the surface of the cell.	(6 months ≥85%)
	GB/T 18287-2013,KC CE ROHS IEC/EN61960, UL164	(1 month ≥90%)

1. BATTERY PARAMETERS

Customizable PCM and connector, Wire length
Discharge cut-off voltage: 2.75V
Maximum charging voltage: 4.2V
Continuous work current:(0.2C)
Maximum charge current:(0.5C) 1C/2C Can be customizedWorking temperature (discharge):-10℃-60℃
Working temperature (charging):0℃-45℃

2. APPLICATION

1) DVD
2) Power Bank
3) DIY Products
4) MP3/MP4
5) GPS tracker
6) Smart wearable equipment
7) Beauty Instrument
7） Project Applications

3.OUR ADVANTAGE:

1) 12 Years + experience in lithium battery production and research and development;
2) 25 A level lithium battery R&D engineers;
3) We pay more attention to environmental protection and safety performance of lithium batteries, all products meet ROHS standards, safe and non-explosive;
4) We pay more attention to product quality and customer service. After we receive the consultation at any time, we will reply to our customers within 48 hours.
5) Customized Batteries for your products .

For more details contact.
kporiginalbattery@gmail.com
www.kporiginal.in