



## Material Safety Data Sheet

## 物质安全技术说明书

**Applicant/申请商** : TECNO MOBILE LIMITED

**Address/地址** : FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT

**Product Name/产品名** : Rechargeable Li-ion Polymer Battery  
可充电锂离子聚合物电池

**Issue date/签发日期** : 2021.07.19

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## Section 1-Chemical Product and Company Identification

### 第1部分-化学品及企业标识

Product Name:	Rechargeable Li-ion Polymer Battery
样品名称:	可充电锂离子聚合物电池
Model No. 型号:	BL-49FT
Ratings 额定值:	3.85V 4900mAh/5000mAh 18.86Wh/19.25Wh
Weight 重量:	66.37g
Manufacturer:	Dong Guan Amperex Technology Limited
制造商:	东莞新能源科技有限公司
Address:	Songshan Lake Industry Park, Dongguan City, Guangdong Province, P.R. China
地址:	东莞市松山湖北部工业园
Tel. 电话:	+86-755-61803856
Emergency Telephone 应急电话:	0755-68103856
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Email 邮箱:	tac.qm@tecno-mobile.com

## Section 2- Hazards Identification

### 第2部分-危险标识

Hazard Description 危险性描述	Not dangerous with normal use. Do not dismantle, open or shred the battery ingredients contained within or their ingredients products could be harmful. 正常使用没有危险，不能拆解、打开或分解电池，里面的材料或成分是有用的。
Primary Route (s) of Exposure 接触途径	Inhalation, Ingestion, Skin contact and Eye contact. 吸入、食入、皮肤接触、眼睛接触。
Potential Health Effects 潜在健康影响	Inhalation: Vapors or mists from a ruptured battery may cause respiratory irritation. 吸入：破裂的电池散发出来的气雾会引起呼吸道刺激。 Ingestion: The battery ingredients contained within or their ingredients products can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. 食入：电池的组成成分或原料可以导致嘴，食道和胃肠道的严重化学烧伤。 Skin: Skin contact with contents of an open battery can cause severe irritation or burns to the skin.





	<p>皮肤：皮肤接触到电池的內部化学材料可能会导致严重的刺激或烧伤皮肤。</p> <p>Eye: Eye contact with contents of an open battery can cause severe irritation or burns to the eye.</p> <p>眼睛：眼睛接触到电池的應供学材料可能会导致严重的刺激或烧伤眼睛。</p>
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### Section 3- Composition/Information on Ingredient 第3部分-成分组成/成分信息

Chemical Composition 化学成分	Molecular Formula 分子式	CAS No. CAS号	Weight (%) 重量比
Lithium cobaltate	LiCoO <sub>2</sub>	12190-79-3	38.2
Aluminum(Anode)	Al	7429-90-5	6.4
Graphite	C	7782-42-5	19.6
Copper	Cu	7440-50-8	12.1
Lithium hexafluorophosphate	F <sub>6</sub> LiP	21324-40-3	0.9
Dimethyl carbonate	C <sub>3</sub> H <sub>6</sub> O <sub>3</sub>	616-38-6	10.6
Ethyl methyl carbonate	C <sub>4</sub> H <sub>8</sub> O <sub>3</sub>	623-53-0	3.5
Polyethylene	(C <sub>2</sub> H <sub>4</sub> ) <sub>n</sub>	9002-88-4	2.2
Ethylene carbonate	C <sub>3</sub> H <sub>4</sub> O <sub>3</sub>	96-49-1	3.5
Nickel	Ni	7440-02-0	3.0

Note: CAS number is Chemical Abstract Service Registry Number.

注：CAS号是化学文摘登记号。

N/A=Not apply. N/A=不适用





## Section 4 - First Aid Measures 第4部分-急救措施

Inhalation 吸入	Remove source of contamination or move victim to fresh air. Obtain medical advice. 移除污染源或者将受害者移至新鲜空气处。寻求医生建议。
Ingestion 食入	Please rinse mouth thoroughly with water. Induce vomiting under the guidance of professional personage. Please seek medical treatment in time. 立即用清水漱口，在专业人士的指导下催吐，速就医。
Skin contact 皮肤接触	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid. 脱下已污染衣服，用大量的水冲洗至少15分钟，速就医。
Eye contact 眼睛接触	Irrigate with flowing water for 15 minutes. If irritation persists, consult a physician. 用流动水冲洗15分钟如刺激持续发生，请求助于医生。

## Section 5 - Fire Fighting Measures 第5部分-消防措施

Characteristics of Hazard 危险特性	Toxic fumes, gases or vapors may evolve on burning. 火灾时可释放有害浓烟、气体或者蒸汽。
Hazardous Combustion Products: 燃烧产生的危险物品	Carbon monoxide, carbon dioxide, lithium oxide fumes and so on. 一氧化碳，二氧化碳，锂氧化物烟等等。
Fire-extinguishing Methods and Extinguishing Media 灭火方法及灭火剂	Please use dry powder fire extinguisher and other proper fire extinguishing media. 请使用干粉灭火器等合适的灭火介质。
Attention in Fire-extinguishing 灭火注意事项	The firemen should put on antigas masks and full fire-fighting suits. 消防人员须佩戴防毒面具、穿全身消防服。





**Section 6 – Accidental Release Measures**  
**第6部分-泄漏应急处理**

Personal Precautions, protective equipment, and emergency procedures 个人预防措施、防护装备和应急程序	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8. 限制区域，直到完成清理工作。请勿触摸泄漏的材料。穿戴适当的个人防护设备，如第8部分所示。
Environmental Precautions 环境保护措施	Prevent material from contaminating soil and from entering sewers or waterways. 防止泄漏物质污染土壤、进入污水道或水道。
Methods and materials for Containment 方法和材料控制	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately. 出于安全，阻止泄漏，可以用干砂或沙土来遏制液体泄露，立即清理泄漏。
Methods and materials for cleaning up 清除方法及处置材料	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 according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal. 用惰性吸收剂（干燥沙子或泥土）吸收溢出的物质，将受污染的吸收剂铲到装废物的容器里。收集所有被污染的吸收剂并按第13部分的指南处理。用清洁剂和清水刷洗该区域，收集所有被污染的水进行适当处理。

**Section 7 – Handling and Storage**  
**第7部分-操作处置与储存**

Handling 操作	Don't handling Rechargeable Li-ion Polymer Battery with metalwork. Do not open, disassemble, crush or burn battery. Ensure good ventilation/ exhaustion at the workplace. Prevent formation of dust. Information about protection against explosions and fires: Keep ignition sources away- Do not smoke. 不用金属制品处置电池。不打开、拆卸、挤压或燃烧电池。确保工作场所通风/排气良好。防止形成粉尘。为防止爆炸和火灾应：远离火源-不吸烟。
Storage 储存	If the batteries are subject to storage for such a long term as more than 3 months, it is recommended to recharge the Rechargeable Li-ion Polymer Battery periodically. Storage Temperature A month: -20~+60°C, 75%RH Max Short period less than 3 months: -20~+45°C, 75%RH Max Long period more than 3 months: +5°C~+35°C, 75%RH Max





	<p>A year: -20~28℃, 75%RH Max</p> <p>Do not storage the batter/ haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.</p> <p>Keep out of reach of children.</p> <p>Do not expose the battery to heat or fire. Avoid storage in direct sunlight.</p> <p>Do not store together with oxidizing and acidic materials.</p> <p>如果电池的储存期限在3个月以上, 建议定期对可充电锂离子聚合物电池充电。</p> <p>储存温度</p> <p>一个月: -20~+60℃, 最大75%RH</p> <p>不超过3个月: -20~+45℃, 最大75%RH</p> <p>超过3个月: +5~+35℃, 最大75%RH</p> <p>一年: -20~28℃, 最大75%RH</p> <p>不要将电池随意丢在盒子或抽屉里, 以免电池之间或电池与其他金属物质发生短路。</p> <p>储存在小孩接触不到的地方。</p> <p>不要将电池暴露在火源和热源附近, 避免在阳光直射下存储。</p>
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## Section 8 – Exposure Controls, Personal Protection 第8部分-接触控制和个体防护

<p>Engineering control: 工程控制</p>	<p>Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keep away from heat and open flame. Store in a cool, dry place.</p> <p>使用局部排气通风或其他工程控制方法控制粉尘、雾、烟雾和蒸汽的来源。远离高温和明火。储存在阴凉干燥的地方。</p>
<p>Respiratory protection: 呼吸系统防护</p>	<p>Not necessary under normal conditions. 正常条件下不需要。</p>
<p>Skin and body Protection: 皮肤和身体防护</p>	<p>Not necessary under normal conditions. Wear neoprene or nitrile rubber gloves if handling an open or leaking battery. 正常条件下不需要。处理拆解过的电池或漏液电池需要戴氯丁橡胶或丁腈橡胶</p>





Eye protection: 眼睛防护	手套。 Not necessary under normal conditions. Wear safety glasses if handling an open or leaking battery. 正常条件下不需要。处理拆解过的电池或漏液电池需要戴安全眼睛。
Hands protection: 手防护	Wear neoprene or natural rubber material gloves if handling an open or leaking battery. 处理拆解过的电池或漏液电池需要戴氯丁橡胶手套或天然橡胶手套。
Others protection: 其他防护	Have a safety shower and eye wash fountain readily available in the immediate work area. 在接近工作区的地方要有便捷可用的安全淋浴装置和洗眼喷泉。

### Section 9-Physical and Chemical Properties 第9部分-理化特性

Physical State 物理状态	Form: Solid 物态: 固体
	Color: Silvery 颜色: 银色
	Odour: Monotony 气味: 无味
Change in condition 变化条件:	
pH, with indication of the concentration pH, 有浓度指示	Not applicable. 不适用
Melting point/freezing point 熔点/凝固点	Not applicable. 不适用
Boiling Point, initial boiling point 沸点, 初沸点	Not applicable. 不适用
Flash Point 闪点	Not applicable. 不适用
Upper/lower flammability	Not applicable.





or explosive limits 上/下燃烧或爆炸限值	不适用
Vapor Pressure 蒸汽压	Not applicable. 不适用
Vapor Density: (Air = 1) 蒸汽密度: (空气=1)	Not applicable. 不适用
Density/relative density 密度/相对密度	Not applicable. 不适用
Solubility in Water 水溶性	Not applicable. 不适用
n-octanol/water partition coefficient 正辛醇/水分配系数	Not applicable. 不适用
Auto-ignition temperature 自燃温度	Not applicable. 不适用
Decomposition temperature 分解温度	Not applicable. 不适用
Odour threshold 嗅阈	Not applicable. 不适用
Evaporation rate 蒸发速率	Not applicable. 不适用
Flammability (soil, gas) 易燃性 (土壤, 气体)	Not applicable. 不适用
Viscosity 粘度	Not applicable. 不适用

### Section 10 - Stability and Reactivity

#### 第10部分-稳定性和反应性

Stability 稳定性	Stable under normal temperatures and pressures. 常温常压下是稳定的。
Conditions to Avoid 应避免的条件	Heat above 70°C or incinerate, deform, mutilate, crush, disassemble, overcharge, short circuit, Expose over a long period to humid conditions. 加热70°C以上或者焚烧、变形、毁坏、粉碎、拆卸、过充电、短路, 长时间暴







	露在潮湿条件下。
Hazardous Decomposition Products 危险的分解产物	Toxic Fumes,and may form peroxides 有毒烟雾、并可能形成过氧化物。
Possibility of Hazardous Reaction 危险反应的可能性	If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons. 如果发生泄露，避免与强氧化剂，无机酸，强碱，卤代烃接触。

## Section 11- Toxicological Information

### 第11部分-毒理学信息

Irritation 刺激性	In the event of exposure to internal contents, vapor fumes may be very irritating to the eyes and skin. 内部物质暴露的情况下，蒸汽烟雾可能对眼睛和皮肤产生刺激性。
Sensitization 致敏性	Not applicable. 不适用
Reproductive Toxicity 再生毒性	Not applicable. 不适用
Toxicologically Synergistic Materials 协同材料毒理学	Not applicable. 不适用

## Section 12- Ecological Information

### 第12部分-生态信息

General note 通用信息	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. 不允许未稀释或大量的产品到达地下水、水道或污水系统
Anticipated behavior of a chemical product in environment/possible environmental impact/ecotoxicity	Not applicable. 不适用





化学产品对环境/可能的环境预期的行为的一种生态毒性	
Mobility in soil 土壤中移动性	Not applicable. 不适用
Persistence and Degradability 持久性和降解性	Not applicable. 不适用

### Section 13- Disposal Considerations 第13部分-废弃处置

Product disposal recommendation: Observe local laws and regulations.

物品废弃处置建议：遵守当地法律法规。

Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassembly the battery. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local laws and regulations.

包装废弃处置建议：注意废弃电池可能会引起火灾，用胶带包住电池端子以隔离它们。完全清空容器（无水珠、无粉末，要仔细擦拭）。容器可循环使用或二次利用。遵守当地法律法规。

For purpose of protecting environment and human health, do not throw batteries as municipal waste, and sort the batteries for recycling.

为保护环境和人群健康，不要将电池当城市垃圾丢弃，将电池分类以回收。

### Section 14- Transport Information 第14部分-运输信息

This report applies to by sea, by air and by land;

本报告适用于海运、空运和陆路。

The Rechargeable Li-ion Polymer Battery (model: BL-49FT) has passed the test the UN manual of tests and Criteria, Part III, subsection 38.3, according to the report ID: WSCT-CNAS-BATT-210600104A-UN

该可充电锂离子聚合物电池（型号：BL-49FT）已通过UN38.3测试，依据的报告编号为：

WSCT-CNAS-BATT-210600104A-UN

The Rechargeable Li-ion 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;





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该可充电锂离子聚合物电池已加以保护防止短路。这包括防止同一包装件内可能导致短路的导电材料与电池直接接触。

The Rechargeable Li-ion Polymer Battery according to Section II/Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966~967 of the 2021 IATA Dangerous Goods regulations 62<sup>th</sup> Edition may be transported, and applicable U.S. DOT regulations for the safe transport of Rechargeable Li-ion Polymer Battery.

该可充电锂离子聚合物电池依据2021 IATA危险品运输条例62版中965II/965IB或966-967II方式可进行运输，也符合美国锂离子安全运输要求。

More information concerning shipping, testing, marking and packaging can be obtained from label master at <http://www.labelmaster.com/>.

更多关于航运、测试、标记和包装的信息可从 label master 上获取：<http://www.labelmaster.com/>。

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.

包装件在运输、搬运和堆放过程中应合理放置以避免机械损坏。包装材料选取和包装设计应能防止意外电传导、电池端子腐蚀以及湿气侵入。

The package must be handled with care and that a flammability hazard exists if the package is damaged;

包装件必须小心搬运，包装件损坏会有燃烧危险。

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.

关于运输要求，引用参考下列规定：

- 国际民用航空组织（ICAO）技术说明；
- 国际航空运输协会（IATA）关于危险货物的规定。

UN number of lithium battery: UN3480 or UN3481

锂电池的UN编号是：UN3480或UN3481

Marine pollutant(Y/N): N;

海洋污染物（是/否）：否

- The International Maritime Dangerous Goods (IMDG) Code.

- 国际海运危险货物（IMDG）法规。

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

锂电池的海运，须用坚固包装以及防止电池短路。

Special Provision: International maritime dangerous goods code (IMDG) 188, 230, 310, 348, 957;

特殊规定：国际海运危险危险品法规（IMDG）188、230、310、348、957；





## Section 15 – Regulatory Information 第15部分-法规信息

《Dangerous Goods Regulations》

《危险物品规则》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《危险货物运输的建议模型规定》

《International Maritime Dangerous Goods》

《国际海上危险货物运输》

《Technical Instructions for the Safe Transport of Dangerous Goods》

《危险货物安全运输技术指南》

《Classification and code of dangerous goods》

《危险货物分类与代码》

《Occupational Safety and Health Act》 (OSHA)

《职业安全与健康法案》 (OSHA)

《Toxic Substance Control Act》 (TSCA)

《有毒物质控制法》 (TSCA)

《Consumer Product Safety Act》 (CPSA)

《消费者产品安全法案》 (CPSA)

《Federal Environmental Pollution Control Act》 (FEPCA)

《联邦环境污染控制法》 (FEPCA)

《The Oil Pollution Act》 (OPA)

《石油污染法》 (OPA)

《Superfund Amendments and Reauthorization Act Title III(302/311/312/313)》 (SARA)

《超级基金修正案和再授权法案 Title III(302/311/312/313)》 (SARA)

《Resource Conservation and Recovery Act》 (RCRA)

《资源保护和恢复法案》 (RCRA)

《Safety Drinking Water Act》 (CWA)

《安全饮用水法》 (CWA)

《California Proposition 65》

《加州65号提案》

《Code of Federal Regulations》 (CFR)

《联邦条例》 (CFR)

In accordance with all Federal, State and local laws.

符合所有联邦、州和地方法律。





**Section16 – Additional Information**  
**第16部分-其他信息**

<p>Additional Information: 其他信息</p>	<p>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.</p> <p>以上信息是目前我们获得最精确且标示最好的信息。然而，对于此信息编写是没有商品性能的保证或其他的保证、明示或暗示，我们将不承担由于它的使用造成的后果。使用者应当采取他们自己的分析来决定对他们特定用途信息的适用性。尽管合理的预防措施已经考虑收录到准备数据中，但是此信息仅供您参考、研究。此材料数据安全表格提供安全操作和此产品使用的指导，它没有且不能对所有可能方面提出建议；因此您对于此产品的特殊使用是否要求额外注意应该做出评估决定。此处包含的数据或信息已经被评估并允许一般的发布，此文件的基本理论不包含出口控制的信息。</p>
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