

MSDS 报告

MSDS Report

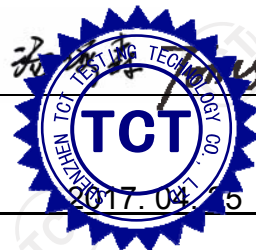
Prepared For : 申请商:	
Address: 地址:	
Product Name: 产品名称:	Lithium-ion battery 锂离子电池
Model : 型号:	BATTERY-LI-4S-18AH-R1
Nominal Voltage: 额定电压:	14.8V
Rated Capacity: 额定容量:	18000mAh, 266Wh
Weight: 重量:	1154.4g
Dimension : 尺寸:	142.5mm×74.5mm×70.0mm (L×W×T)
Prepared By : 编制单位:	Shenzhen TCT Testing Technology Co., Ltd. 深圳市通测检测技术有限公司 1F, Building 1, Yibaolai Industrial Park, Qiaotou Village, Fuyong Town, Baoan District, Shenzhen, Guangdong, China 广东省深圳市宝安区福永桥头亿宝来工业城 1 栋 1 楼
Report No.: 报告编号:	TCT170412M016

Written by 编写: 王翠 Carry Wang

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Date 日期: 2017.04.05



Material Safety Data Sheet 化学品安全技术说明书

Section 1- Chemical Product & Company Identification

第一部分 化学品及企业标识

Product Name: 产品名称:	Lithium-ion battery 锂离子电池
Manufacture: 制造商:	
Address: 地址:	
Contact Person: 联系人:	
Tel: 电话:	
Fax: 传真:	
Emergency Tel: 应急电话:	
E-mail: 邮箱:	
Item Code: 项目号:	

Section 2- Hazards Identification

第二部分 危险性概述

Classification of Danger 危险性类别	See section 14 见第十四部分。
Primary Route(s) of Exposure 浸入途径	Eye, skin contact, ingestion 眼睛, 皮肤, 食入。
Health Hazard 健康危害	The batteries are not hazardous when used according to the instructions of manufacturer under normal conditions. In case of abuse, there's risk of rupture, fire, heat, leakage of internal components, with could cause casualty loss. Abuses include but not limited to the following cases: charged for long time, short circuited, put into fire, whacked with hard object, punctured with acute object, crushed, and broken. 正常条件下根据制造商的说明使用电池不会产生危害, 使用不当的情况下, 有破裂、火灾、热、内部成分的漏出的风险, 并可能造成意外损失。使用不当的行为包括但不限于下列情况: 长时间充电、短路, 投入火灾, 硬物撞击、尖物刺破、破碎、破裂。

Section 3- Composition/Information on Ingredients

第三部分 成分/组成信息

<i>Chemical Name</i> 化学名称	<i>Concentration or concentration ranges (%)</i> 浓度或浓度范围(%)	<i>CAS Number</i> CAS 号(化学文摘索引登记号)
Lithium Cobalt Oxide 钴酸锂	15-40	12190-79-3
Graphite 石墨	10-30	7782-42-5
Phosphate(1-), hexafluoro-, lithium 六氟磷酸锂	10-30	21324-40-3
Copper 铜	7-13	7440-50-8
Aluminum foil 铝箔	5-10	7429-90-5
Nickel 镍	1-5	7440-02-0
PVC 聚氯乙烯	1-2	9002-86-2

Labeling according to EC directives.

标签根据 EC 指令。

No symbol and risk phrase are required.

不需要象形符号和风险短语。

Note: CAS number is Chemical Abstract Service Registry Number.

注意: CAS 号 是化学文摘服务注册号码。

N/A=Not apply.

N / A =不适用。

Section 4- First Aid Measures

第四部分 急救措施

<i>Eye</i> 眼睛	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. 万一接触, 立即用大量的清水冲洗至少 15 分钟, 翻起上下眼睑, 直到化学的残留物消失为止, 迅速就医。
<i>Skin</i> 皮肤	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid. 万一接触, 用大量水冲洗至少 15 分钟, 同时除去污染的衣物和鞋子, 迅速就医。
<i>Inhalation</i> 吸入	Remove from exposure and move to fresh air immediately. Use oxygen if available. 立即从暴露处移至空气清新处, 如果呼吸困难给予输氧, 立即就医。
<i>Ingestion</i> 食入	Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician. 饮用两杯牛奶或水。如果当事人仍然清晰可以采取催吐的方法, 并且立即就医。

Section 5- Fire Fighting Measures

第五部分 消防措施

<p>Characteristics of Hazard 危险特性</p>	<p>Toxic fumes; gases or vapors may evolve on burning. 在火灾时可释放有害浓烟、气体或者蒸汽。</p>
<p>Hazardous Combustion Products 燃烧产生的危险物品</p>	<p>Carbon monoxide, carbon dioxide, lithium oxide fumes. 一氧化碳, 二氧化碳, 锂氧化物烟气</p>
<p>Fire-extinguishing Methods and Extinguishing Media 灭火方法及灭火剂</p>	<p>Water, CO₂. Don't use Halon fire extinguisher. May use dry powder, sand, earth. 大量冷水、二氧化碳。不要使用卤化物灭火器。可使用干粉、沙、土。</p>
<p>Attention in Fire-extinguishing 灭火注意事项</p>	<p>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。</p>

Section 6- Accidental Release Measures

第六部分 泄露应急处理

<p>Personal Precautions, protective equipment, and emergency procedures 个人预防措施、防护装备和应急程序</p>	<p>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</p>
<p>Environmental Precautions 环境保护措施</p>	<p>Prevent material from contaminating soil and from entering sewers or waterways. 防止物质污染土壤和进入下水道或水道。</p>
<p>Methods and materials for Containment 方法和材料控制</p>	<p>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。</p>
<p>Methods and materials for cleaning up 清理的方法和材料</p>	<p>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 of 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(干砂或沙土)吸收溢出的材料。污染物转移到可吸收废物的容器。收集所有受污染的吸收剂和根据第 13 部分的指令处置。用洗涤剂和水清洁污染区域, 收集所有受污染的洗涤水进行适当处置。</p>

Section 7- Handling and Storage

第七部分 操作处置与储存

<p>Handling 操作</p>	<p>Don't handling the batteries in manner that allows terminals to short circuit 不要以让接头短路的方式对电池进行操作。</p>
<p>Storage 储存</p>	<p>Store and used far away from heat, sparks, open flame, or other heat ignition sources, and under room temperature(<30℃) in ventilating and dehumidifying environments. 储存和使用时, 要远离热、火花、明火或其他点源热, 并处于室温下 (<30℃) 通风和除湿环境。</p>
<p>Other Precautions 其他要注意的防范措施</p>	<p>The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. 拆解、挤压、直接放入火中或高温条件下, 电池可能发生爆炸和燃烧。禁止短接或将电池正负极错误的安装在设备中。</p>

Section 8 - Exposure Controls/Personal Protection

第八部分 接触控制和个体防护

<p>Engineering Controls 工程控制</p>	<p>No engineering controls are required for handling batteries that have not been damaged. Personal protective equipments for damaged batteries should include chemical resistant gloves and safety glasses. 操作未破损的电池, 没有工程控制要求。对于破损的电池, 个人防护用品应包括化学品防护手套和安全眼镜。</p>
<p>Personal Protective Equipment 个人防护设备</p>	<p>Respiratory Protection: In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use. Not necessary under conditions of normal use. 呼吸保护: 当电池排气阀打开时, 应尽量使通风设备开至最大, 避免将打开排气阀的电芯局限在某一狭窄空间内。正常操作条件下, 呼吸保护是不必要的。正常使用条件下不必考虑。</p> <p>Protective Gloves: Not necessary under conditions of normal use. 防护手套: 正常使用条件下不必考虑。</p> <p>Other Protective Clothing or Equipment: Not necessary under conditions of normal use. 其他防护服装或设备: 正常使用条件下不必考虑。</p> <p>Personal Protection is recommended for venting battery: Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields. 电池开阀试验时应做好个人防护: 呼吸防护, 防护手套, 防护服装和有护边的安全玻璃罩都是要准备的。</p>

Section 9- Physical and Chemical Properties

第九部分 理化特性

Physical State 物理状态	Appearance: Square 外形: 方形
	Color: Black 颜色: 黑色
	Odour: If leaking, smells of medical ether. 气味: 泄漏时, 有醚的气味。
Change in condition 变化的条件:	
pH 酸碱度	Not applicable as supplied. 不适用
Flash Point 闪点	Not applicable unless individual components exposed. 针对单个组分暴露情况, 其他不适用。
Flammability 易燃度	Not applicable unless individual components exposed. 针对单个组分暴露情况, 其他不适用。
Relative density: 相对密度	Not applicable unless individual components exposed. 针对单个组分暴露情况, 其他不适用。
Solubility (water) 溶解性 (水溶性)	Not applicable unless individual components exposed. 针对单个组分暴露情况, 其他不适用。
Solubility (other) 溶解性 (其他)	Not applicable unless individual components exposed. 针对单个组分暴露情况, 其他不适用。

Section 10 – Stability and Reactivity

第十部分 稳定性和反应性

Stability 稳定性	Stable under normal temperatures and pressures. 常温常压下稳定。
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 以上或焚烧、变形、毁坏、粉碎、拆卸、 过充电、短路, 长时间暴露在潮湿的条件下。
Hazardous Decomposition Products 有危害分解物	Toxic Fumes, and may form peroxides. 有毒烟雾, 并可能形成过氧化物。
If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, 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

第十一部分 毒理学信息

<p>Irritation 刺激</p>	<p>In the event of exposure to internal contents, vapour 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的刺激性。</p>
<p>Sensitization 致敏</p>	<p>Not Available 无适用</p>
<p>Reproductive Toxicity 再生毒性</p>	<p>Not Available 无适用</p>
<p>Toxicologically Synergistic Materials 协同材料毒理学</p>	<p>Not Available 无适用</p>

Section 12-Ecological Information

第十二部分 生态学信息

<p>General note: 通用信息:</p>	<p>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。</p>
<p>Anticipated behavior of a chemical product in environment/possible environmental impact/ ecotoxicity 化学产品在环境/可能的环境预期的行为的一种生态毒性</p>	<p>Not Available 不适用</p>

Section 13 – Disposal Considerations

第十三部分 废弃处置

<p>Waste Treatment 废弃处置方法</p>	<p>Recycle or dispose of in accordance with government, stat & local regulations. 建议遵照国家和地方法规处置或再利用。</p>
<p>Attention for Waste Treatment 废弃注意事项</p>	<p>Deserted batteries couldn't be treated as ordinary trash. Couldn't be thrown into fire or placed in high temperature. Couldn't be dissected, pierced, crushed or treated similarly. Best way is recycling. 废电池不能被当做普通垃圾。不能扔进火中或置于高温下。不能解体，刺穿，破碎或类似的处理。最好的办法是回收利用。</p>

Section 14 – Transport Information
第十四部分 运输信息

Transport information:

运输信息:

The goods can be shipped by air in accordance with International Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA), DGR Packing Instructions (PI) 965 Section IA, PI966 Section I and PI967 Section I appropriate of IATA DGR 58th (2017 Edition) for transportation.

货物可根据民用航空组织 (ICAO), TI 或国际航空协会 (IATA), DGR 58th (2017 年版) 包装说明 (PI) 965 Section IA, PI 966 Section I, 和 PI 967 Section I 相关规定。

Marine transport must comply with the requirements of the IMDG CODE (Amdt. 38-16) 2016 Edition Regulations.

海运必须符合 IMDG CODE (Amdt. 38-16) 2016 版规定。

Other requirements for the US Department of Transportation (DOT) Subchapter C, Hazardous Materials Regulations if shipped in compliance with 49 CFR 173.185.

美国运输部 (DOT) 有害物质规则 C 分章中的其他规定, 运输符合要求 49 CFR 173.185。

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

电池在单独运输时, 应包装牢固, 防止短路。

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以从 <http://www.labelmaster.com/> 获得。

The following information is provided for domestic and international transportation:

以下为国内和国际规定的运输信息:

Air transport ICAO-TI and IATA-DGR:

航空运输 ICAO-TI and IATA-DGR:

UN Number: 联合国货物编号 (UN 编号):	3480 or 3481	
Label: 标签:	Class 9 9 类	
Packaging group: 包装类别:	-	
Marine pollutant(Y/N): 海洋污染(是/否):	N 否	
UN Proper shipping name: 联合国运输专用名称:	Lithium ion Batteries (limited to a maximum of 30% SoC) ; 锂离子电池(荷电状态不得超过其额定容量的 30%); Lithium ion Batteries contained in equipments or Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) 与设备一起包装的锂离子电池或包含在设备中的锂离子电池(包括锂离子聚合物电池)	

Marine transport IMDG:

海上运输IMDG:

IMDG Class: IMDG 等级:	9
UN number: 联合国货物编号 (UN 编号):	3480 or 3481
Label: 标签:	Class 9 9 类
Packaging group: 包装类别:	-
EMS Number: 邮政编号:	F-A, S-I
Marine pollutant(Y/N): 海洋污染(是/否):	Y 是
Special provision: 特殊条款:	230
UN Proper shipping name: 联合国运输专用名称:	Lithium ion Batteries (limited to a maximum of 30% SoC); 锂离子电池(荷电状态不得超过其额定容量的 30%); Lithium ion Batteries contained in equipments or Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) 与设备一起包装的锂离子电池或包含在设备中的锂离子电池(包括锂离子聚合物电池)




DOT regulations:

美国交通部条例:

UN Classification (Transport Hazard class): 运输风险级别:	9
UN number: 联合国货物编号 (UN编号):	3480 or 3481
Packing group: 包装类别:	-
UN Proper shipping name: 联合国运输专用名称:	Lithium ion Batteries (limited to a maximum of 30% SoC); 锂离子电池(荷电状态不得超过其额定容量的 30%); Lithium ion Batteries contained in equipments or Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) 与设备一起包装的锂离子电池或包含在设备中的锂离子电池(包括锂离子聚合物电池)



Marine pollutant(Y/N) : 海洋污染(是/否) :	Y 是	
Label: 标签 :	Class 9 9 类	
Land transport ADR/RID: 陆地运输ADR/RID:		
ADR/RID class: ADR/RID 等级:	9	
Danger code: 危险等级:	9	
UN number: 联合国货物编号 (UN编号) :	3480 or 3481	
Packaging group: 包装类别:	-	
Marine pollutant(Y/N): 海洋污染(是/否) :	N 否	
Label: 标签:	Class 9 9 类	
Description of goods: 货物名称:	Lithium ion Batteries (limited to a maximum of 30% SoC) ; 锂离子电池(荷电状态不得超过其额定容量的 30%); Lithium ion Batteries contained in equipments or Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) 与设备一起包装的锂离子电池或包含在设备中的锂离子电池(包括锂离子聚合物电池)	

Section 15 – Regulatory Information

第十五部分 法规信息

Law information

法律信息

《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 TitleIII(302/311/312/313) 》 (SARA)

《超级基金修正案和再授权法案 TitleIII(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

Section 16 – Additional Information

第十六部分 其他信息

MSDS creation date: 2017/04 Version: 1.0

Sample photo 样品照片:



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上面的信息被认为是准确代表了目前最好的信息提供给我们。然而，飞机没有对商品性能保证或任何其他保证，包括明示或暗示，对这类信息的使用我们不承担责任。用户应作出自己的调查，以确定是否适合其特定用途的信息。虽然在此处所包含的数据的准备已经采取了合理的预防措施，这是仅为你提供的信息、考虑和调查。这个化学品安全技术说明书为本产品提供了安全操作指南和使用指南，它并不能对所有可能发生的情况提供建议，因此，您的具体使用该产品应先进行评估，以确定是否需要额外的预防措施。

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*****End of report*****

*****报告结束*****

Report No.: TCT170412M016

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Search Number: TCT170412M016C
Search System: <http://www.tct-lab.com/cn/search.asp>