



## 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	
<b>Name of Sample</b> 样品名称	Rechargeable Lithium-ion Cell 锂离子电芯
<b>Manufacturer's name</b> 制造商名称	Dongguan Xintongtai Industrial Co., Ltd 东莞市鑫通泰实业有限公司
<b>Manufacturer's Address</b> 制造商地址	122 Qinghu Road, Qinghutou Community, Tangxia Twon, Dongguan City, Guangdong Province, China. 东莞市塘厦镇清湖头社区清湖122号
<b>Contact Person</b> 联系人	Kelly
<b>Tel</b> 电话	+86-756-2373887
<b>Fax</b> 传真	N/A
<b>Emergency Tel</b> 应急电话	+86-756-2373887
<b>E-mail</b> 邮箱	sales01@zh-medimg.com

Section 2- Hazards Identification 第二部分 危险性概述	
<b>Classification of Danger</b> 危险性类别	See section 14. 见第十四部分。
<b>Primary Route(s) of Exposure</b> 浸入途径	Inhalation, Ingestion, Skin contact and Eye contact. 吸入、食入、皮肤接触、眼睛接触。
<b>Health Hazard</b> 健康危害	<p><b>Inhalation:</b> Vapors or mists from a ruptured battery may cause respiratory irritation. <b>吸入:</b> 破裂的电池散发出来的气雾会引发呼吸道刺激。</p> <p><b>Ingestion:</b> The battery ingredients contained within or their ingredients products can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. <b>食入:</b> 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。</p> <p><b>Skin:</b> Skin contact with contents of an open battery can cause severe irritation or burns to the skin. <b>皮肤:</b> 皮肤接触到电池的内部化学材料可能会导致严重的刺激或烧伤皮肤。</p> <p><b>Eye:</b> Eye contact with contents of an open battery can cause severe irritation or burns to the eye. <b>眼睛:</b> 眼睛接触到电池的内部化学材料可能会导致严重的刺激或烧伤眼睛。</p>

**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	35-38	12190-79-3
Graphite 石墨	20-22	7782-42-5
Phosphate(1-), hexafluoro-, lithium 六氟磷酸锂	5-6	21324-40-3
Copper 铜	9-10	7440-50-8
Aluminum 铝	5-6	7429-90-5
Ethylene carbonate 碳酸乙烯酯	14-16	96-49-1
Polypropylene 聚丙烯	5-6	9003-07-0
Carbonate,methyl ethyl 碳酸甲乙酯	4-5	623-53-0

Labeling according to EC directives.

标签根据 EC 指令。

No symbol and Hazard phrase are required.

不需要象形符号和危险短语。

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. 饮用至少两杯牛奶或水。如果当事人仍然清醒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	
<b>Characteristics of Hazard</b> 危险特性	Dusts at sufficient concentrations can form explosive mixtures with air. Combustion generates toxic fumes. 高密度粉尘遇空气会形成爆炸性混合物。燃烧生成有毒烟雾。
<b>Hazardous Combustion Products</b> 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, 锂氧化物烟气等。
<b>Fire-extinguishing Methods and Extinguishing Media</b> 灭火方法及灭火剂	For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. 对于小型火险, 可使用水枪, 干冰(也就是液态二氧化碳)或化学泡沫。
<b>Attention in Fire-extinguishing</b> 灭火注意事项	Wear self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. 因为压强关系, 要穿戴可呼吸式全身防护装备, MSHA/NIOSH(经认证或等效的), 以及佩戴全套防护装置。

Section 6- Accidental Release Measures 第六部分 泄露应急处理	
<b>Personal Precautions, protective equipment, and emergency procedures</b> 个人预防措施、防护装备和应急程序	In case of rupture. Attention! Corrosive material. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Refer to protective measures listed in Sections 7 and 8. 万一破裂。注意! 腐蚀性物质。避免接触皮肤, 眼睛或衣服。确保空气流通。根据需要使用个人防护装备。将人员撤离到安全区域。让人们远离溢出/泄漏处和处于逆风。参考第七部分和第八部分中列出的防护措施。
<b>Environmental Precautions</b> 环境保护措施	Prevent product from contaminating soil and from entering sewers or waterways. 防止产品污染土壤和进入下水道或水道。
<b>Methods and materials for Containment</b> 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, 可以用干砂或泥土来遏制液体溢出, 立即清理溢出物。
<b>Methods and materials for cleaning up</b> 清理的方法和材料	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 of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.

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	用惰性吸收剂(干砂或泥土)吸收溢出的材料。污染物转移到可接受的废物容器中。收集所有受污染的吸收剂, 按照第十三部分的说明进行处理。用洗涤剂和水清洁污染区域, 收集所有受污染的洗涤水, 妥善处理。
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<b>Section 7- Handling and Storage</b> 第七部分 操作处置与储存	
<b>Handling</b> 操作	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。禁止短路或将电池正负极错误的安装在设备中。
<b>Storage</b> 储存	Store in a cool, dry, well-ventilated area away from incompatible substances. Store locked up. Keep out of the reach of children. 储藏于阴凉, 干燥, 通风处, 远离接触会发生反应的材料。存储锁定。放在儿童无法接触的地方。
<b>Other Precautions</b> 其他要注意的防范措施	In case of rupture. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection equipment. 万一破裂。按照良好的工业卫生和安全规范进行操作。避免接触皮肤, 眼睛或衣服。使用个人防护设备。

<b>Section 8 - Exposure Controls/Personal Protection</b> 第八部分 接触控制和个体防护	
<b>Engineering Controls</b> 工程控制	Use adequate ventilation to keep airborne concentrations low. If used under conditions that generate particulates, the ACGIH TLV-TWA of 3mg/m <sup>3</sup> respirable fraction (10mg/m <sup>3</sup> total) should be observed. 保证空气流通使空气密度保持在低水平。如果在会生成微粒的情况下使用, 应仔细观察 3mg/m <sup>3</sup> ACGIH TLV-TWA 3 的吸入量(总量为 10mg/m <sup>3</sup> )。
<b>Personal Protective Equipment</b> 个人防护设备	<b>Eye and Face Protection:</b> None required for consumer use. If there is a Hazard of contact: Tight sealing safety goggles. Face protection shield. 眼睛和脸部保护: 消费者无需使用。如果有接触危险: 密封安全护目镜。面部防护罩。 <b>Skin and Body Protection:</b> None required for consumer use. If there is a Hazard of contact: Wear protective gloves and protective clothing. 皮肤和身体防护: 消费者无需使用。如果有接触危险: 穿戴防护手套和防护服。 <b>Respiratory Protection:</b> No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, 柱

	ventilation and evacuation may be required. 呼吸系统防护：正常使用条件下不需要防护设备。如果超过暴露限值或发生刺激，可能需要通风和疏散。
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Section 9- Physical and Chemical Properties 第九部分 理化特性	
<b>Physical State</b> 物理状态	Form: Solid 形态：固体
	Color: Blue 颜色：蓝色
	Odour: Odorless. 气味：无气味。
<b>Change in condition:</b> 变化的条件：	
pH 酸碱度	No data is available. 无数据可提供。
Melting point /freezing point 熔点/凝固点	No data is available. 无数据可提供。
Boiling point,initial boiling point 沸点，初沸点	No data is available. 无数据可提供。
Flash Point 闪点	No data is available. 无数据可提供。
Upper/lower flammability or explosive limits 上/下燃烧或爆炸限制	No data is available. 无数据可提供。
Vapor pressure 蒸汽压	No data is available. 无数据可提供。
Vapor Density:(Air =1) 蒸汽密度：(空气=1)	No data is available. 无数据可提供。
Density/relative density 密度/相对密度	No data is available. 无数据可提供。
Solubility in Water 水溶性	No data is available. 无数据可提供。
n-octanol/water partition coefficient 正辛醇/水分配系数	No data is available. 无数据可提供。
Auto-ignition temperature 自燃温度	No data is available. 无数据可提供。

Decomposition temperature 分解温度	No data is available. 无数据可提供。	<b>Material Safety Data Sheet</b>
Odour threshold 溴阈	No data is available. 无数据可提供。	
Evaporation rate 蒸发速率	No data is available. 无数据可提供。	
Flammability (soil, gas) 易燃性(土壤, 气体)	No data is available. 无数据可提供。	
Viscosity 粘度	No data is available. 无数据可提供。	

## Section 10 – Stability and Reactivity 第十部分 稳定性和反应性

<b>Chemical Stability</b> 化学稳定性	Stable under recommended storage conditions. 在推荐的储存条件下可以保持稳定。
<b>Possibility of Hazardous Reactions</b> 危险反应的可能性	None under normal processing. 正常处理下没有。
<b>Conditions to Avoid</b> 应避免的条件	Exposure to air or moisture over prolonged periods. 暴露在空气中或长时间受潮。
<b>Incompatible materials</b> 不相容材料	Acids, Oxidizing agents, Bases. 酸, 氧化剂, 碱。
<b>Hazardous Decomposition Products</b> 有危害分解物	Carbon oxides. 二氧化碳。

## Section 11 – Toxicological Information 第十一部分 毒理学信息

<b>Irritation</b> 刺激	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。
<b>Sensitization</b> 致敏	Not Available. 不适用。
<b>Reproductive Toxicity</b> 再生毒性	Not Available. 不适用。
<b>Toxicologically Synergistic Materials</b> 协同材料毒理学	Not Available. 不适用。

Section 12-Ecological Information 第十二部分 生态学信息	
<b>General note:</b> 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接触地下水、水道或污水处理系统。
<b>Anticipated behavior of a chemical product in environment/possible environmental impact/ ecotoxicity</b> 化学产品在环境/可能的环境预期的行为的一种生态毒性	Not Available. 不适用。
<b>Mobility in soil</b> 土壤中移动性	No data is available. 无数据可提供。
<b>Persistence and Degradability</b> 持久性和降解性	No data is available. 无数据可提供。

Section 13 – Disposal Considerations 第十三部分 废弃处置	
<b>Waste Treatment</b> 废弃处置方法	Recycle or dispose of in accordance with government, state & local regulations. 建议遵照国家和地方法规处置或再利用。
<b>Attention for Waste Treatment</b> 废弃注意事项	Deserted batteries shouldn't be treated as ordinary trash. Shouldn't be thrown into fire or placed in high temperature. Shouldn't be dissected, pierced, crushed or treated similarly. Best disposal method is recycling. 废电池不能被当作普通垃圾。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。最好的处理办法是回收利用。

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

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

Lithium Polymer Battery(model: 18650 2000mAh)tested according to the requirements of the UNITEDITIONS Manual of tests and criteria Part III subsection 38.3

该聚合物锂电池(型号:18650 2000mAh)经过测试符合联合国《试验和标准手册》第三部分,第383章节的要求。

The Lithium 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

该聚合物锂电池做了防短路保护。包括防止与同一封装内的导电材料接触可能导致的短路

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking  
包装应足以避免在运输,处理和堆放期间的机械损坏

The package must be handled with care and that a flammability hazard exists if the package is damaged  
包装必须小心处理,如果包装损坏,存在易燃危险

The Lithium Polymer Battery can be shipped by air in according to Section IB of PACKING INSTRUCTION965 , or Section II of PACKING INSTRUCTION 966-967 of the 2022 IATA Dangerous Goods regulations 63<sup>rd</sup> Edition.

该聚合物锂电池可以根据2022年IATA危险物品规则第63版包装指令965第IB部分或包装指令966~967第II部分运输

With regard to transport, the following regulations are cited and considered

关于运输,引用和考虑了以下法规

- The International Civil Aviation Organization(ICAO) Technical Instructions
- 国际民用航空组织(CAO)技术细则
- The International Air transport Association(IATA) Dangerous Goods Regulations
- 国际航空运输协会(ATA)危险物品规则。

UN number of lithium battery: UN3480 or UN3481;

锂电池的UN编号: UN3480或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合适的运输名称/描述(技术名称): 锂离子电池,锂离子电池内置于设备中或锂离子电池与设备包装在一起;

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UN Classification(Transport hazard class): Class 9(PI965 Section 1B)or N/A(PI966-967 Section II)

UN分类(运输危险类别):9类危险品(包表指令965第1B部分)或者不适用(包装指令966-967第II部分)

-The International Maritime Dangerous Goods( IMDG) Code.

-国际海运危险货物(IMDG)规则

UN number of lithium battery: UN3480 or UN3481;

锂电池的UN编号: UN3480或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合适的运输名称/描述(技术名称): 锂离子电池, 锂离子电池内置于设备中或锂离子电池与设备包装在一起;

UN Classification(transport hazard class): N/AUN

分类(运输危险类别):不适用

Marine pollutant(Y/N):N

海洋污染物(Y/N): N

The battery is not restricted according to IMO IMDG Code(inc Amdt 40-20)

海运按照 MO IMDG Code( inc Amdt40-20)可按普通货物条件办理

Need to meet the Special Provision: International maritime dangerous goods code(IMDG)188, 230, 348, 384.

需要符合这些特殊条款:国际海运危险货物规MDG)188.230.348.384

## Section 15 – Regulatory Information

### 第十五部分 法规信息

#### Dangerous Goods Regulations

《危险物品规则》

#### Recommendations on the Transport of Dangerous Goods Model Regulations

联合国《关于危险货物运输的建议书 规章范本》

#### 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 proposal 65

《加州65号提案》

《Code of Federal Regulations》(CFR) 49 CFR sections 100-185, 49 CFR-173.185

《联邦条例》(CFR) 49 CFR sections 100-18, 49 CFR 173.185

EU Battery Directive (2006/66EC, 2013/56/EU)

欧盟电池指令 (2006/66EC, 2013/56/EU)

Regulation (EC) No. 1907 / 2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

关于化学品的注册、评估、授权和限制(EC)第1907/2006号规例

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

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

本份 MSDS 中的信息只是基于我们当前所拥有的相关材料的信息而编制的，只是为了描述本品的健康、安全与环境需求，以使各有关方面能更好地了解和信任本产品。这些信息只是提供给您，以供考虑、研究和确认。其中的一些危害预防措施描述并非唯一的。所以本份 MSDS 不能作为使用本品实现任何特定目的的保证。各有关使用者有责任预先完成本品的安全性及其他方面的测试，以评判其是否满足您的使用目的。

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

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

\*\*\*\*\*报告结束\*\*\*\*\*

Shenzhen RCT Testing Technology Co., Ltd. 深圳市锐测检测有限公司  
2301, No.2 Building, Lixiang kewang Industrial park, No.35 Guanlan Road, Longhua district, Shenzhen, China  
广东省深圳市龙华区观澜大道35号理想科网双创基地2栋2301

Report Search Number 报告查询编号: RCT220110M005

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