

MSDS Report

Applicant: 申请商:	Cre8tek(Shenzhen)Company Limited 科为尔光电技术（深圳）有限公司
Manufacturer: 制造商:	F3 East, F4, Building A2, Xin Jian Xing Industry City, Guangqiao Road, Guangming District, Shenzhen, 518132, P.R.China 深圳市光明区新湖街道楼村社区光侨大道 3333 号新健兴科技工业园 A2 栋 4 层、 3 层东
Product Name: 产品名称:	Lithium Ion Battery 锂电池
Model 型号:	CEL504561-1850mAh
Inspection according to 鉴定依据	UN “Recommendations on the TRANSPORT OF DANGEROUS GOODS” 联合国《关于危险品货物运输的建议书》
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Inspected by 审核



Approved by 批准: Noah shaw

Date 日期: 2026.01.24

Material Safety Data Sheet

化学品安全技术说明书

1. Chemical Product & Company Information (化学品名称和制造商信息)	
Product Name: 产品名称:	Lithium Ion Battery 锂电池
Model: 型号:	CEL504561-1850mAh
Rating: 规格:	3.7V 1850mAh 6.845Wh
Battery Size: 电池尺寸:	(61.5×45.3×5.1)mm
Weight: 重量:	31.591g
Manufacturer: 制造商:	Cre8tek(Shenzhen)Company Limited 科为尔光机电技术(深圳)有限公司
Manufacturer address: 制造商地址:	F3 East, F4, Building A2, Xin Jian Xing Industry City, Guangqiao Road, Guangming District, Shenzhen, 518132, P.R.China 深圳市光明区新湖街道楼村社区光侨大道 3333 号新健兴科技工业园 A2 栋 4 层、3 层东
Emergency telephone call: 紧急联系电话:	13480126216
E-mail: 邮箱:	qiuming.li@cre8tek.com.cn

2. Hazards Identification (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 接触途径	Inhalation, Ingestion, Skin contact and Eye contact. 吸入、食入、皮肤接触、眼睛接触。
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 Hazard of rupture, fire, heat, leakage of internal components, which could cause casualty loss. Abuses including 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、起火、发烫、内部成分泄漏的危险，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、投入火中、硬物撞击、尖物刺破、破碎，和破裂。

3. Composition/Information on Ingredients (成分/组成信息)

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

N/A=Not applicable.

N/A 表示不适用。

4. First Aid Measures (急救措施)

Inhalation 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。
Ingestion 食入	Induce vomiting unless patient is unconscious. Call a physician. 如果当事人仍然清醒可以采取催吐的方法，并且立即就医。
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	Flush eyes with plenty of water for 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。

5. Fire Fighting Measures (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，锂氧化物烟气等。
Fire-extinguishing Methods and Extinguishing Media 灭火方法及灭火剂	Please use water, dry sand and other proper fire extinguishing media. 请使用水，干燥沙等合适的灭火介质。
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。

6. Accidental Release Measures (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 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>

7. Handling and Storage (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. Do not open, disassemble, crush or burn battery. 不要以让接头短路的方式对电池进行操作。不要打开，分解，挤压或燃烧电池。</p>
<p>Storage 储存</p>	<p>If the battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the battery periodically. 如果电池长期存放超过 3 个月，建议定期对电池充电。 Do not storage the battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects. 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。 Keep out of reach of children. 储存在小孩接触不到的地方。 Do not expose the battery to heat or fire. Avoid storage in direct sunlight. 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。 Do not store together with oxidizing and acidic materials. 不要与氧化和酸性物质存储在一起。</p>

8. Exposure Controls/Personal Protection (接触控制和个体防护)

Engineering Controls 工程控制	<p>No engineering controls are required for handling batteries that have not been damaged. Personal protective equipment for damaged batteries should include chemical resistant gloves and safety glasses.</p> <p>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>
Personal Protective Equipment 个人防护设备	<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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>当电池排气阀打开时，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>

9. Physical and Chemical Properties (物理和化学特性)

Physical State 物理状态	<p>Form: Solid 形态：固体</p>
	<p>colour : Silver 颜色：银色</p>
	<p>Odour: Odorless 气味：无气味</p>
pH 酸碱度	<p>Not applicable as supplied 不适用</p>
Flash Point 燃点	<p>Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用</p>
Flammability 可燃性	<p>Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用</p>
Relative density 相对密度	<p>Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用</p>

Solubility (water) 溶解性（水溶性）	Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用
Solubility (other) 溶解性（其他）	Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用
Vapor Density: (Air = 1) 蒸汽密度: (空气= 1)	Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用
Density/relative density 密度/相对密度	Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用
Solubility in Water 水溶性	Not applicable unless individual components exposed 除单个电芯暴露试验外其他不适用

10. Stability and Reactivity（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 危害分解物	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。

11. Toxicological Information（毒理学信息）

Irritation 刺激	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	No data is available 无数据可提供
Reproductive Toxicity 再生毒性	No data is available 无数据可提供
Toxicologically Synergistic Materials 协同材料毒理学	No data is available 无数据可提供

12. Ecological Information (生态学信息)

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 化学产品对环境/可能的环境预期的行为的一种生态毒性	No data is available 无数据可提供
Mobility in soil 土壤中移动性	No data is available 无数据可提供
Persistence and Degradability 持久性和降解性	No data is available 无数据可提供

13. Disposal Considerations (废弃处置)

Waste Treatment 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。
Attention for Waste Treatment 废弃注意事项	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。

14. Transport Information (运输信息)	
Label for conveyance 运输标签	Lithium Battery Mark 锂电池操作标签
UN Number UN 编号	UN3480 or UN3481 UN3480 或 UN3481
Packing Group 包装等级	N/A 不适用
EmS No EmS 编号	F-A, S-I
Marine pollutant(Y/N) 海洋污染物 (Y / N)	N
Proper Shipping name 正确的装运名称	1) Lithium ion batteries; 2) Lithium ion batteries packed with equipment; 3) Lithium ion batteries contained in equipment. (including Lithium ion polymer batteries) 1) 锂离子电池; 2) 锂离子电池伴随设备包装在一起; 3) 锂离子电池装在设备中。(包括锂离子聚合物电池)
Hazard Classification 危险分类	The goods shall be complied with the requirements of Section II (or Section IB) of Packing Instructions 965~967 of 67 th DGR Manual of IATA (2026 Edition) and Special Provision 188 of IMDG CODE (Amdt. 42-24), including the passing of the UN38.3 test. 货物应遵守 IATA 第 67 版 DGR 手册包装说明 965-967 第 II 节(或者 IB 节)规定(2026 年版), 和特殊规定 188 海运危险货物规则(Amdt. 42-24), 包括通过 UN38.3 测试手册要求。
ADR/ADN: 欧洲国际陆运危险货物协定/关于内陆水道国际运输危险货物的欧洲协定:	The batteries are not subject to the provisions of United Nations Economic Commission for Europe (UNECE) ADR/ADN. 自 2025 年 1 月 1 日起适用于联合国欧洲经济委员会 (UNECE) ADR / ADN。

15. Regulatory Information (法规信息)

《Dangerous Goods Regulations》
 《危险物品规则》
 《Recommendations on the Transport of Dangerous Goods Model Regulations》
 《对危险货物运输的有关规定的建议》
 《International Maritime Dangerous Goods》
 《国际海运危险货物规则》
 《Technical Instructions for the Safe Transport of Dangerous Goods》
 《危险货物安全运输技术指令》
 《Classification and code of dangerous goods》
 《危险货物分类和品名编号》
 《Occupational Safety and Health Act》 (OSHA)
 《职业安全卫生法》 (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)
 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。

16. Additional Information (其他信息)

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy of 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。

STATEMENT

声 明

1. The test report is invalid without the official stamp of YILINK.
本报告无检测单位印章无效。
2. Nobody is allowed to photocopy or partly photocopy this test report without official permission of YILINK.
未经本检测单位书面同意，不得复制或部分地复制本报告。
3. This test report is invalid without the signatures of the Approver, Reviewer, and Tester.
本报告无批准人、审核人、及主检人签名无效。
4. The test report is invalid if altered.
本报告涂改无效。
5. Any objection to the test report should be submitted to the YILINK within 15 days from the date of receipt of the test report.
对报告若有异议，应于收到报告之日起 15 天内向本检测单位提出。
6. The test report is valid for the tested samples only.
本报告仅对测试样品有效。

*****End of report 报告结束*****