



Report No. :CESMSDS180201001

# Material Safety Data Sheet

## 材料安全数据表

Name of Sample: Rechargeable Li-ion Battery

产品名称 : 可充电锂离子电池

Model Specification:

产品型号 : DTP 503030

Client : Shengzhen Data Poewr Technology Ltd.

委托单位 : 深圳市德泰能源有限公司

国家轻工业电池及储能材料质量监督检测中心  
先进储能材料国家工程研究中心有限责任公司检测中心

National Light Industry Quality Supervision and Testing Center of Battery Energy Storage Materials  
Test Center of Advanced National Engineering Research Center of Storage Materials

# 说 明

## Marking

1. 报告无“检验报告专用章”或“检验单位公章”无效。

The test report is invalid without “Special seal for inspection report” or “Inspection official seal ” of Test Center

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Objections to the test report must be submitted to Test Center within 15 days

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The test report is Valid for the tested samples only.

7. 本报告检测结论中“N/A”表示“不适用”，“P”表示“符合标准要求”，“F”表示“不符合标准要求”。

As for test result, "N/A" means is “not applicable”, “P” means “pass”, “F” means “fail”。

检测单位地址：深圳市南山区南山大道1124号南油第四工业区2栋9楼

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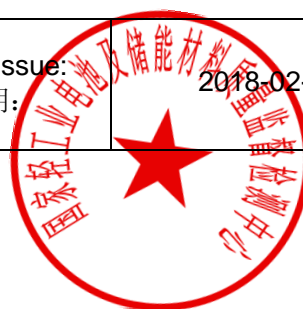
邮政编码(Post Code): 518054

E-mail: ces\_sztc@corun.com

# Material Safety Data Sheet

## 材料安全数据表

Section 1——Chemical Product and Company Identification		
化学品及企业标识		
Product Name: 产品名称:	Rechargeable Li-ion Battery 可充电锂离子电池	
Type/Mode: 样品型号:	DTP 503030 (3.7V 400mAh 1.48Wh)	
Commissioned by: 委托单位:	Shengzhen Data Poewr Technology Ltd. 深圳市德泰能源有限公司	
Commissioner address: 委托单位地址:	5F, Weidonglong Building Meilong road, longhua Town, Shenzhen City, china 深圳市龙华新区龙华街道梅龙大道194号卫东龙商务大厦A座515	
Manufacturer: 生产单位:	Shengzhen Data Poewr Technology Ltd. 深圳市德泰能源有限公司	
Inspection according to: 鉴定依据	EEC Directive 93/112/EC UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS" 联合国《关于危险品货物运输的建议书》	
Emergency telephone call 应急电话	18565613156	
Receiving Date: 接样日期:	2018-02-01	Date of issue: 签发日期: 2018-02-06



Approved by:

*Liaoyuping*

Reviewed by:

*chenyuping*

Tested by:

*Zhonghuadong*

Section 2. Composition/information on Ingredient 成分/组成信息			
Chemical Name 化学品名称	Chemical Formula 化学式	CAS No. CAS 号	Composition 成份 (in % by weight) (重量百分比)
钴酸锂/Lithium Cobalt Oxide	LiCoO <sub>2</sub>	12190-79-3	35
碳/Graphite powder	C	7782-42-5	23
铝/Aluminum	Al	7429-90-5	10
铜/Copper	Cu	7440-50-8	10
电解液/Electrolyte	LiPF <sub>6</sub>	21324-40-3	12
其它/ Other	-	-	10
Lead 铅	Pb	7439-92-1	Not Detected 无
Cadmium 镉	Cd	7440-43-9	Not Detected 无
Mercury 汞	Hg	7439-97-36	Not Detected 无

Section 3. Hazards Identification 危险性概述	
Explosive risk 爆炸危险性	This article does not belong to the explosion dangerous goods 该物品不属于爆炸危险品
Flammable risk 易燃危险性	This article does not belong to the flammable material 该物品不属于易燃危险品
Oxidation risk 氧化危险性	This article does not belong to the oxidation of dangerous goods 该物品不属于氧化危险品
Toxic risk 毒害危险性	This article does not belong to the toxic dangerous goods 该物品不属于毒害危险品
Radioactive risk 放射危险性	This article does not belong to the radiation of dangerous goods 该物品不属于放射危险品
Mordant risk 腐蚀危险性	This article does not belong to the corrosion of dangerous goods 该物品不属于腐蚀危险品
Other risk 其他危险性	This article is Li-ion Battery Watt hour rate 1.48Wh, which belong to the Lithium ion batteries. 该物品为锂离子电池，瓦时率1.48Wh，属于锂离子电池。

## Section 4. First aid measures

### 急救措施

**Eye:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**眼睛:** 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。

**Skin:** Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

**皮肤:** 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。

**Inhalation:** Remove from exposure and move to fresh air immediately. Use oxygen if available.

**吸入:** 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:** Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious.

Call a physician

**食入:** 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

### 消防措施

**Flash Point:** N/A.

**燃点:** 不适用

**Auto-Ignition Temperature:** N/A.

**自燃温度:** 不适用

**Extinguishing Media:** Water, CO<sub>2</sub>.

**灭火介质:** 大量水 (降温), 二氧化碳

**Special Fire-Fighting Procedures:** Self-contained breathing apparatus.

**特殊灭火程序:** 自给式呼吸器

**Unusual Fire and Explosion Hazards:** Cell may vent when subjected to excessive heat-exposing battery contents.

**异常火灾或爆炸:** 当电芯暴露于过热的环境中时, 安全阀可能会打开。

**Hazardous Combustion Products:** Carbon monoxide, carbon dioxide, lithium oxide fumes.

**燃烧产生的危险物品:** 一氧化碳, 二氧化碳, 锂氧化物烟气

## Section 6. Accidental release measures

### 泄露应急处理

Steps to be taken in case Material is Released or Spilled If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent

and incinerate.

为防止电池材料泄露或释放采取的措施如果电池内部材料泄露, 试验人员应立刻撤离试验区直到烟气消散。将通风设备打开吹散危险性气体。用抹布擦净试验区, 清除溢出的液体, 将泄露电池放进塑料袋中, 然后放进钢制容器。避免皮肤和眼睛接触或吸入有害气体。

**Waste Disposal Method:** It is recommended to discharge the battery to the end, to use up the metal lithium inside the battery, and to bury the discharged battery in soil..

**废弃物处置方法:** 建议将电池完全放电, 消耗电池内部的锂金属, 并且深埋于土壤中。

## Section 7. Handling and storage

### 操作处置和储存

The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

禁止打开、毁坏或焚烧电池, 因为电池有可能在这些处理过程中发生爆炸、破裂或泄露等事故。禁止将电池短路、过充、强制放电或扔入火中。禁止挤压刺穿电池或将电池浸入溶液中。

**Precautions to be taken in handling and storing** Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

操作处置和储存中的防范措施禁止物理或电滥用, 禁止高温储存, 最好将电池储存在阴凉、干燥、通风及温度变化较小的环境中。禁止将电池接触加热设备或将电池直接暴露与阳光中。

**Other Precautions** 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

其他要注意的防范措施拆解、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。

## Section 8. Exposure controls/personal protection

### 接触控制/个人防护

**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.

**呼吸防护:**

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。

**Ventilation** Not necessary under conditions of normal use.

通风条件 正常使用条件下不必考虑。

**Protective Gloves** Not necessary under conditions of normal use.

防护手套 正常使用条件下不必考虑。

**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。

**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。

## Section 9. Physical and chemical properties

### 物理和化学特性

**Appearance:** Square

外形: 方形

**Ref, No.:** DCW201504981

认证编号: DCW201504981

**Odour:** If leaking, smells of medical ether

气味: 泄漏时, 有刺激性气味。

**pH:** Not applicable as supplied.

酸碱度: 不适用

**Flash Point:** Not applicable unless individual components exposed.

闪点: 针对单个组分暴露情况, 其他不适用。

**Flammability:** Not applicable unless individual components exposed.

易燃度: 针对单个组分暴露情况, 其他不适用。

**Relative density:** Not applicable unless individual components exposed.

相对密度: 针对单个组分暴露情况, 其他不适用。

**Solubility (water):** Not applicable unless individual components exposed

溶解性 (水溶性): 针对单个组分暴露情况, 其他不适用。

**Solubility (other):** Not applicable unless individual components exposed.

溶解性 (其他): 针对单个组分暴露情况, 其他不适用。

## Section 10. Stability and reactivity

### 稳定性和反应活性

**Stability:** Product is stable under conditions described in Section

稳定性: 产品在第 7 节所述的条件下稳定。

**Conditions to Avoid :** Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.

应避免的条件: 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。

**Materials to avoid:** Oxidising agents, alkalis, water.

应避免的材料: 氧化剂, 碱, 水。

**Hazardous Decomposition Products :** Toxic Fumes, and may form peroxides.

危险分解物: 有毒烟雾, 并可能形成过氧化物。

**Hazardous Polymerization :** N/A.

聚合危害: 不适用

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

### 毒理学资料

**Signs & symptoms:** None, unless battery ruptures.

标志及症状：无，除非电池破裂。

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。

**Inhalation:** Lung irritant.

吸入：对肺有刺激性。

**Skin contact:** Skin irritant.

皮肤接触：对皮肤刺激性。

**Eye contact:** Eye irritant

眼睛接触：对眼睛有刺激性。

**Ingestion:** Poisoning if swallowed.

食入：吞下中毒。

Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to severe irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.

下列情况下会危害人员身体健康：如果与电池内部材料直接接触，皮肤可能会出现干燥、灼烧等轻微或严重的刺激，并且损坏靶器官的神经，肝脏和肾脏。

## Section 12. Ecological information

### 生态学资料

**Mammalian effects:** None known at present.

对哺乳动物的影响：目前未知。

**Eco-toxicity:** None known at present.

生态毒性：目前未知。

**Bioaccumulation potential:** Slowly Bio-degradable

生物体内积累：慢慢地生物降解。

**Environmental fate:** None known environmental hazards at present.

环境危害：目前没有已知的环境危害。

## Section 13. Disposal consideration

### 废弃处置

Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

禁止焚烧，或使电池温度超过70°C，这种滥用可导致泄漏和/或电池爆炸。应按照相应的地方性法规处理。



## Section 14. Transport information

### 运输信息

**Label for conveyance:** Class 9 Label, Cargo Aircraft Only, Lithium Ion battery Label

运输标签: 第九类危险品标签, 仅限货机标签, 锂电标签

**UN Number:** 3480

UN 编号: 3480

**Packaging Group:** N/A

包装等级: 不适用

**Marine pollutant:** No

海洋污染物: 无

**Proper Shipping name:** Rechargeable Li-ion Battery

正确的装运名称: 可充电锂离子电池

**运输信息:** 锂电池已通过联合国《试验和标准手册》第III部分 38.3 小节相应测试要求, (报告编号: DCW201504981)。

货物运输应遵守 IATA 第 59 版 DGR 手册包装说明 965 第 IB 规定 (2018 年版)。

货物运输应遵守 IMDG CODE (Amdt. 38-16) 2016 版特殊规定 188 的要求, 该货物属于非限制货物。

**Transport information:** Lithium battery is of a type proved to meet the Requirements of each test in the UN MANUAL OF TESTS AND CRITERIA, Part III, sub-section 38.3 (Report No. : DCW201504981)

The goods shall be complied with the requirements of Section IB of Packing Instruction 965 of 59<sup>th</sup> DGR (2018 Edition) Manual of IATA.

The goods shall be complied with the requirements of special provision 188 of IMDG CODE (Amdt. 38-16) 2016 , The goods to be transport as Non-restricted Goods.

## Section 15 Regulation information

### 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》

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》

《危险品安全运输技术指令》

《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》

《Toxic Substance Control Act》 (TSCA)

《有毒物质控制法》

《Consumer Product Safety Act》(CPSA)

《消费产品安全法》

《Federal Environmental Pollution Control Act》(FEPCA)

《联邦环境污染控制法》

《The Oil Pollution Act》(OPA)

《石油污染法案》

《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 III(302/311/312/313)》

《Resource Conservation and Recovery Act》(RCRA)

《资源保护及恢复法案》

《Safety Drinking Water Act》(CWA)

《安全饮用水法》

《California Proposition 65》

《加州 65 提案》

《Code of Federal Regulations》(CFR)

《美国联邦法规》

In accordance with all Federal, State and local laws

根据所有联邦、州和地方法律。

## Section 16 Other information

### 其他信息

This file is only effective to the Battery (model DTP 503030) provided by commissioner (Shenzhen Data Poewr Technology Ltd.) which manufactured by Shengzhen Data Poewr Technology Ltd. The commissioner provides the composition information of batteries, and promises its integrity and accuracy. Users should read this file carefully, and use the batteries in correct method. National Light Industry Quality Supervision and Testing Center of Battery Energy Storage Materials doesn't assume responsibility for any damage or loss because of misuse of batteries.

本文件仅对由委托方（深圳市德泰能源有限公司）提供的，并由深圳市德泰能源有限公司生产的电池（DTP 503030）型号有效。该电池的成分信息由委托方提供并承诺其完整性和准确性。用户应仔细阅读此文件，并按照正确的方法使用电池，如因电池使用不当造成的损害或损失，国家轻工业电池及储能材料质量监督检测中心（CES）不承担任何责任。

-- End of Report --