MSDS 报告 Report

报告编号 Report No.: AGC01493180906UA03

样品名称 Samples	锂离子电池 Lithium-ion Battery
样品型号 Model	902030
委托单位 Applicant	深圳市国巨能源有限公司 SHENZHEN GUOJU ENERGY CO., LTD
签发日期 Issue Date	2018-10-19

深圳市鑫宇环检测有限公司

Attestation of Global Compliance (Shenzhen) Co., Ltd.

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化学品安全技术说明书
Material Safety Data Sheet

依据 GB/T16483-2008&ISO11014:2009 编制
According to GB/T16483-2008&ISO11014:2009

Report Revise Record:
报告修订记录：

Report Version 版本号	Revise Time 修改次数	Issued Date 签发日期	Valid Version 有效性	Notes 备注
V1.0	/	2018-10-19	Valid 有效	Original report 原始报告

第一部分 化学品及企业标识
Section 1 - Chemical Product and Company Identification

化学品信息 Chemical product information			
样品名称 Sample Name	锂离子电池 Lithium-ion Battery	**样品型号 Sample Model**	902030
收样日期 Sample Receiving Date	2018-09-28	**产品推荐及限制用途 Sample Uses**	---
单位信息 Company information			
委托单位 Applicant	深圳市国巨能源有限公司 SHENZHEN GUOJU ENERGY CO., LTD		
委托单位地址 Client address	深圳市光明新区百花村第一工业区一号路 B8A 栋 1-2 楼 1-2F/B8A Buiding, No. 1Road, First IndustrialZone, Baihua Village, Guangming New District, SHenzhen, China		
生产单位 Manufacturer	深圳市国巨能源有限公司 SHENZHEN GUOJU ENERGY CO., LTD		
生产单位地址 Manufacturer address	深圳市光明新区百花村第一工业区一号路 B8A 栋 1-2 楼 1-2F/B8A Buiding, No. 1Road, First IndustrialZone, Baihua Village, Guangming New District, SHenzhen, China		
联系电话 Telephone	0755-27524279		
传真号码 Fax number	0755-27524279		
邮政编码 Post code	518000		
应急电话 Emergency telephone	0755-27524279		
电子邮件 E-mail	346192864@qq.com		

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第二部分 危险性概述
Section 2 - Hazards Identification

紧急情况概述：无相关详细资料。
Emergency overview： No information available.
GHS 危险性分类：根据化学品全球统一分类与标签制度(GHS)的规定，不是危险物质。
Classification according to GHS： Not a dangerous substance according to GHS.

GHS 标签要素 **Label elements**	
危害类型象形图 **Hazard pictogram(s)**	无数据 No available
警示词 **Signal word**	无数据 No available
危险性说明 **Hazard statement(s)**	无数据 No available
防范说明 **Precautionary statement(s)**	
预防措施 **Prevention**	无数据 No available
事故响应 **Response**	无数据 No available
安全储存 **Safe storage**	无数据 No available
废弃处置 **Disposal**	无数据 No available

物理和化学危险：无相关详细资料。
Physical and chemical risk: No information available.
健康危害：无相关详细资料。
Health hazard: No information available.
环境危害：无相关详细资料。
Environmental hazards: No information available.
其它危害：无相关详细资料。
Other hazards: No information available.

第三部分 成分/组成信息
Section 3 - Composition, Information on Ingredients

该物质或混合物的分类：☐物质 ☒混合物
Classification of the substance or mixture: ☐substance ☒mixture

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化学名称 Chemical Composition	CAS No.	EC#	百分含量 Weight（%）
钴酸锂 $LiCoO_2$	12190-79-3	235-362-0	30
聚偏氟乙烯（CH_2CF_2）n	24937-79-9	200-867-7	2
石墨 C	7782-42-5	231-955-3	25
六氟磷酸锂 $LiPF_6$	21324-40-3	244-334-7	2
电解质 EC	96-49-1	202-510-0	11
碳酸二乙酯 DEC	105-58-8	212-786-4	7
碳酸丙烯酯 PC	108-32-7	203-572-1	2
铜 Cu	7440-50-8	231-159-6	14
铝 Al	7429-90-5	231-072-3	7

注Note：CAS：化学文摘社Chemical Abstracts Service (Division of the American Chemical Society).
EC#：欧洲现有商业化学品目录European Inventory of Existing Commercial Chemical Substances
"---"：无数据No Data

第四部分 急救措施
Section 4 - First Aid Measures

总说明：正常情况下，不需要特别的措施。
General information: No special measures required.
吸入：立即将人员移至通风处，如果呼吸困难，速进行人工呼吸抢救。如症状持续，速就医。
After inhalation: Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.
皮肤接触：脱去污着衣物，用大量的水清洗，然后清洗双手，衣物清洗后再使用。如果症状持续，速就医。
After skin contact: Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.
眼睛接触：张开眼睛在流水下冲洗数分钟，如果症状仍然持续，请咨询医生。
After eye contact: Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.
食入：禁止催吐，速就医。
After swallowing: Do not induce vomiting. Get medical attention.
急性和迟发效应
Acute and delayed effects
主要症状：无相关详细资料。
The main symptoms: No relevant details information.
健康影响：无相关详细资料。
Health effects: No relevant details information.
对保护施救者的忠告：无相关详细资料。
To protect the rescuers advice: No relevant details information.
对医生的建议：需要及时的医疗处理及特别处理的症状，无相关详细资料。

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To the doctor's advice: Need timely medical treatment and special symptoms, no relevant details information.

第五部分 消防措施
Section 5 - Fire Fighting Measures

灭火剂：使用适合当地情况和周围环境的灭火剂，如干粉，CO_2。
Suitable extinguishing agents: Use extinguishing agent suitable for local conditions and the surrounding environment . Such as dry powder , CO_2.
特别危险性：在起火条件下，电池可能会破裂，释放出有害的分解产物。在经受高温(> 150℃(302℉))时，含有易燃电解液的电池，可能泄漏，点燃，产生火花，当损坏或滥用(如机械损伤或过度充电)时，可能燃烧迅速与耀斑燃烧效果，也可能引燃其他在电池附近衣服。
Special hazards arising from the substance or mixture: Battery may burst and release hazardous decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150℃(302℉)), when damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.
灭火方法注意事项及防护措施：如起火，佩戴自主呼吸机和防护服。
Attention extinguishing method and protective measures: Wear self-contained respirator. Wear fully protective impervious suit.

第六部分 泄露应急处理
Section 6 - Accidental Release Measures

作业人员防护措施、防护装备和应急处置程序：穿上保护装备，疏散人群，确保有足够的通风。
Homework personnel protective measures, protective equipment and emergency disposal procedures: Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
环境保护措施：若无政府许可，勿将材料排入周围环境。
Environmental precautions: Do not allow material to be released to the environment without proper governmental permits.
泄漏化学品的收容、清除方法及所使用的处置材料：从泄露区移除所有的火源，隔离人员。用一个不产生粉尘的方法打扫处理泄漏物，尽可能多地收集泄漏处理物于有标签的合适的容器中。泄露处理物禁止倒入下水道，沟渠或水源。所有废弃物必须参照联合国，国家，地方性法规进行处置。
Steps to be taken in case material is spilled or released and Waste disposal method: Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water. All waste must refer to the United Nations, the national and local regulations for disposal.
防止次生灾害的预防措施：有关安全处理的资料请参阅第七部分。有关个人保护装备的资料请参阅第八部分。有关弃置的资料请参阅第十三部分。
To prevent the secondary disasters prevention measures: See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

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第七部分 操作处置与储存
Section 7 - Handling and Storage

操作注意事项：储存时远离食物和水源。吃饭喝水前彻底清洗双手。储有化学物的容器搬用时需防止静电的产生和积聚。

Precautions for safe handling: Consumption of food and beverage should be avoided in work areas. Wash hands with soap and water before eating, drinking. Ground containers when transferring liquid to prevent static accumulation and discharge.

有关火灾及防止爆炸的资料：电池在拆开、挤压、遇火或高温情况下，会引起起火或爆炸，严禁短路或非正确操作。

Information about fire and explosion protection: Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

储存注意事项：储存在一个低温，干燥，通风良好的环境。远离热源，避免长时间阳光照射。未使用时密封容器。

Conditions for safe storage, including any incompatibilities: Requirements to be met by storerooms and receptacles. Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the long time of sunlight.

第八部分 接触控制/个体防护
Section 8 - Exposure Controls, Personal Protection

职业接触限值Occupational exposure limit

在工作场需要监控的限制成分 Ingredients with limit values that require monitoring at the workplace:	
12190-79-3 钴酸锂 Lithium Cobalt Oxide	
TLV (USA)	0.02mg/m^3.
MAK(Germany)	0.1mg/m^3.

Note:TLV：Threshold Limit Value

生物限值：无相关详细资料。

Biological limit: no relevant details information.

检测方法：无相关详细资料。

Detection: no relevant details information.

工程控制

Engineering control

一般保护和卫生措施：当处理化学物品时，应遵循一般的预防措施。远离食物和水源。立即脱掉所有脏衣服或被污染的衣物。在休息之前和工作结束之后洗手。

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work.

呼吸防护：高浓度的情况时，使用适当的呼吸器。

Respiratory Protection: Use suitable respirator when high concentrations are present.

个体防护设备Personal Protection

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手防护 Hand protection	眼睛防护 Eye protection
 *Protective gloves*	 *Tightly sealed goggles*

第九部分 理化特性
Section 9 - Physical and Chemical Properties

有关基本物理及化学特性的信息 Information on basic physical and chemical properties	
外观 Appearance	银色 Silvery
形状Form	方形 Prismatic
气味 Odour	无味 Odorless
电性能信息 Electrical properties information	
电压 Voltage	3.7V
电芯电压 Cell Voltage	3.7V
电容量 Electric capacity	500mAh
功率 Watt-hour	1.85Wh

第十部分 稳定性和反应活性
Section 10 - Stability and Reactivity

稳定性：正常情况下稳定。
Chemical stability： Stable in normal circumstances.
危险反应：无资料。
Possibility of hazardous reactions： Data not available.
应避免条件：火焰，火花和其他热源，禁忌物。
Conditions to Avoid: Flames, sparks, and other sources of ignition, incompatible materials.
禁配物：氧化剂，酸，碱。
Incompatibilities: Oxidizing agents, acid, base.
危险的分解产物：二氧化碳，一氧化碳。
Hazardous Combustible Products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

第十一部分 毒理学资料
Section 11 - Toxicological Information

对毒理学影响的信息
Information on toxicological effects

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急性毒性LC50/LD50：无相关详细资料。
Acute toxicity LD/LC50 Values relevant for classification: Not available.
注：LC50：半数致死浓度（lethal concentration, 50 percent kill）
LD50：半数致死剂量（lethal dose, 50 percent kill）
皮肤刺激/腐蚀：无相关详细资料。
Skin irritation/corrosion: No further relevant information available.
眼睛刺激/腐蚀：无相关详细资料。
Eyes stimulus/corrosion: No further relevant information available.
呼吸或皮肤过敏：无相关详细资料。
Breathing or skin irritation: No further relevant information available.
生殖细胞突变性：无相关详细资料。
Germ cell respectively: No further relevant information available.
致癌性：无相关详细资料。
Carcinogenicity: No further relevant information available.
生殖毒性：无相关详细资料。
Reproductive toxicity: No relevant details information.
特异性靶器官系统毒性——一次性接触：无相关详细资料。
Specific target organ system toxicity disposable contact: No further relevant information available.
特异性靶器官系统毒性——反复接触：无相关详细资料。
Specific target organ system toxicity, repeated contact: No further relevant information available.
吸入危害：无相关详细资料。
Inhalation hazard: No further relevant information available.
潜在的有害效应：无相关详细资料。
Potentially harmful effects: No further relevant information available.

第十二部分 生态学资料
Section 12 - Ecological Information

生态毒性
Ecological toxicity
水生毒性：无相关详细资料。
Aquatic toxicity: No further relevant information available.
持久性和降解性：无相关详细资料。
Persistence and degradability: No further relevant information available.
环境系统习性
Behaviour in environmental systems
潜在的生物累积性：无相关详细资料。
Bioaccumulative potential: No further relevant information available.
土壤内移动性：无相关详细资料。
Mobility in soil: No further relevant information available.
生态学资料
Ecological effects
额外的生态学资料：无相关详细资料。
Additional ecological information : No further relevant information available.
总括注解：若无政府许可，勿将材料排入周围环境。
General notes: Do not allow material to be released to the environment without proper governmental permits.

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其他副作用：无相关详细资料。
Other adverse effects: No further relevant information available.

第十三部分 废弃处置
Section 13 - Disposal Considerations

废弃处置方法建议：请参考国家和地方的相关法规正确进行处理。
Waste treatment methods and Recommendation: Consult state, local or national regulations to ensure proper disposal.
受污染的容器和包装建议：必须根据官方的规章来丢弃。
Uncleaned packaging and Recommendation: Disposal must be made according to official regulations.

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

	IATA	IMDG
联合国危险货物编号 UN Number	N/A	N/A
UN 运输专用名称 UN Proper shipping name	N/A	N/A
运输危险等级 Transport hazard class(es)	N/A	N/A
包装组别 Packing group	N/A	N/A
海运污染物质 Marine pollutant	**否 No**	

注：IATA：国际空运联合会（International Air Transport Association）
IMDG：国际海运危险货物（International Maritime Dangerous Goods）

运输信息：该锂电池（902030 3.7V 500mAh）已通过UN38.3测试，报告编号：AGC01493180906UA01。
Transport information: The Lithium Battery (902030 3.7V 500mAh) has passed the test UN38.3, according to the report ID: AGC01493180906UA01.
运输过程中请根据危险品规则DGR第59版包装规定967第Ⅱ部分执行。
According to the Packing Instruction 967 section Ⅱ of IATA DGR 59th Edition for transportation.
运输过程中请根据海运危险品规则IMDG (38-16)特殊规定188，或者《联合国危险货物运输的建议书规章范本》(20th)执行，该产品属于非限制货物。
According to the special provision 188 of IMDG (38-16) or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (20th). The package is subjected to non-restricted goods.

更多关于锂离子电池运输，测试，包装等相关规定请参见网址http://www.labelmaster.com.
More information concerning shipping, testing, marking and packaging can be obtained from Label master at http://www.labelmaster.com.
电池相互隔开并防止短路，泄露，并装放在结实的容器内运输。
注：该电池在运输过程中应防止剧烈振动、冲击或挤压，防止日晒雨淋。具体细节请参照本文第七

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部分操作处置与储存。
Separate Lithium-ion batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain.
备注：电池净重＜5kg(空运，电池装在设备中运输)。
Note: Batteries weight in the package＜5kg(By air, Batteries installed in equipment).
运输方式：空运，海运，铁路，公路。
Transport Fashion: By air, by sea, by railway, by road.

第十五部分 法规信息
Section 15 - Regulatory Information

此MSDS符合法规（EC）No. 1907/2006.
This Material Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006.
下列法律、法规、规章和标准对该物质或混合物的管理做了相应的规定：
The following laws, regulations, rules and standards of the substance or mixture of management to do the corresponding provisions:

组成 Composition	CAS No.	IECSC	TSCA	DSL/NDSL	EINECS/ ELINCS/ NLP
钴酸锂 $LiCoO_2$	12190-79-3	列入 Listed	列入 Listed	DSL	列入 Listed
聚偏氟乙烯（CH_2CF_2）n	24937-79-9	列入 Listed	列入 Listed	DSL	列入 Listed
石墨 C	7782-42-5	列入 Listed	列入 Listed	DSL	列入 Listed
六氟磷酸锂 $LiPF_6$	21324-40-3	列入 Listed	列入 Listed	NDSL	列入 Listed
电解质 EC	96-49-1	列入 Listed	列入 Listed	DSL	列入 Listed
碳酸二乙酯 DEC	105-58-8	列入 Listed	列入 Listed	DSL	列入 Listed
碳酸丙烯酯 PC	108-32-7	列入 Listed	列入 Listed	DSL	列入 Listed
铜 Cu	7440-50-8	列入 Listed	列入 Listed	DSL	列入 Listed
铝 Al	7429-90-5	列入 Listed	列入 Listed	DSL	列入 Listed

注：EINECS：欧盟现有化学物质名录（European Inventory of Existing Chemical Substances）
ELINCS：欧洲已申报化学物质名录（European List of Notified Chemical Substances）
DSL：加拿大国内化学物质名录（Canadian Domestic Chemical Substances）
IECSC：中国现有化学物质名录（Inventory of Existing Chemical Substances in China）
NDSL：加拿大非国内化学物质名录（Canadian non-domestic Chemical Substances）
NLP：欧盟不被认为是聚合物的名录
TSCA：美国TSCA物质名录（Toxic Substances Control Act of USA）

第十六部分 其他信息
Section 16 - Additional Information

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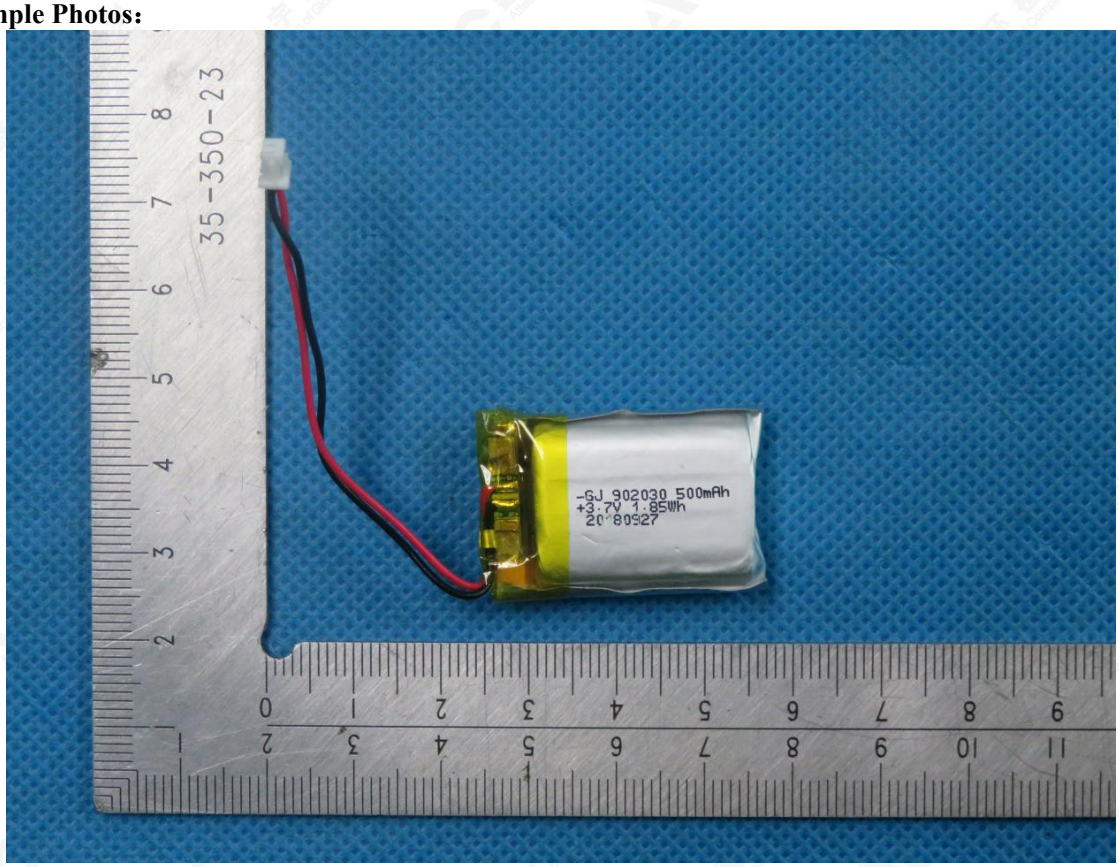
样品图片：
Sample Photos：



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主检人 Prepared by	审核人 Checked by	批准人 Approved by
黄[illegible]	薛[illegible]	[illegible]

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