

化学品安全技术说明书

Material Safety Data Sheet 1.

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:				
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V1.0	/	2022-01-04	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	锂离子电芯 Li-ion cell	样品型号 Sample Model	502530
收样日期 Sample Receiving Date	2022-01-01	规格 Rating	3.7V 300 mAh 1.11Wh
<p>APPLICATIONS: For Stock No. : 28346 BEANIE TORCH&HEADPHONES BLACK 28351 BEANIETORCH & HEADPHONES GREY 28340 HEADBAND WITH WIRELESS HEADPHONES 28344 HEADBAND TORCH & HEADPHONES</p> <p>SUPPLIER: Draper Tools Ltd Hursley Road Chandlers Ford Eastleigh Hampshire SO53 1YF</p> <p>Draper Helpline +44 (0) 2380 494344 Opening hours 8:30-17:00 Monday – Friday.</p>			

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

爆炸危险性 Explosive risk	该物品不属于爆炸危险品 This article does not belong to the explosion dangerous goods
易燃危险性 Flammable risk	该物品不属于易燃危险品 This article does not belong to the flammable material
氧化危险性 Oxidation risk	该物品不属于氧化危险品 This article does not belong to the oxidation of dangerous goods
毒害危险性 Toxic risk	该物品不属于毒害危险品 This article does not belong to the toxic dangerous goods
放射危险性 Radioactive risk	该物品不属于放射危险品 This article does not belong to the radiation of dangerous goods
腐蚀危险性 Mordant risk	该物品不属于腐蚀危险品 This article does not belong to the corrosion of dangerous goods
其他危险性 other risk	该物品为锂离子电芯, 瓦时率为1.11Wh This article is Li-ion cell, Watt hour rate 1.11Wh

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

化学名称 Chemical Composition	CAS No.	百分含量 Weight (%)
镍钴锰酸锂 $\text{LiNi}_{0.8}\text{Co}_{0.1}\text{Mn}_{0.1}\text{O}_2$	182442-95-1	27.642
聚偏氟乙烯 PVDF	24937-79-9	0.368
石墨 C	7782-42-5	15.682
丁苯橡胶 Styrene-Butadiene Rubber	61789-96-6	0.726
羧甲基纤维素 CMC	9000-11-7	0.297
铜 Cu	7440-50-8	8.767
铝 Al	7429-90-5	4.343
尼龙 12 Nylon 12	24937-16-4	20.313

化学名称 Chemical Composition	CAS No.	百分含量 Weight (%)
六氟磷酸锂 LiPF_6	21324-40-3	18.268

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.

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($> 150^\circ\text{C}$ (302°F))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($>150^\circ\text{C}$ (302°F)), 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。有关个人防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.

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

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: 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。

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.

通风条件: 正常使用条件下不需要。

Ventilation: Not necessary under conditions of normal use.

个体防护设备 Personal Protection

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	近长方体 Almost Cuboid
气味 Odour	无味 Odorless

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.

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: 有毒烟雾, 并可能形成过氧化物。

Hazardous Combustible Products: toxic fumes and may form peroxides.

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

标志及症状：无，除非电池破裂。

Signs & symptoms: None, unless battery ruptures.

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。

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

吸入：对肺有刺激性。

Inhalation: Lung irritant.

皮肤接触：对皮肤刺激性。

Skin contact: Skin irritant.

眼睛接触：对眼睛有刺激性。

Eye contact: Eye irritant.

食入：吞下中毒。

Ingestion: Poisoning if swallowed.

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

对哺乳动物的影响：目前未知。

Mammalian effects: None known at present.

生态毒性：目前未知。

Eco-toxicity: None known at present.

生物体内积累：慢慢地生物降解。

Bioaccumulation potential: Slowly Bio-degradable.

环境危害：目前没有已知的环境危害。

Environmental fate: None known environmental hazards at present.

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	UN3480 UN3481	UN3480 UN3481
UN 运输专用名称 UN Proper shipping name	锂离子电池 Lithium Ion Batteries	锂离子电池 Lithium Ion Batteries

	锂离子电池与设备打包 Lithium Ion Batteries Packed With Equipment 锂离子电池装在设备中 Lithium Ion Batteries Contained In Equipment	锂离子电池与设备打包 Lithium Ion Batteries Packed With Equipment 锂离子电池装在设备中 Lithium Ion Batteries Contained In Equipment
运输危险等级 Transport hazard class(es)	9	9
包装组别 Packing group	II	II
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（502530 3.7V 300mAh）已通过UN38.3测试。

Transport information: The Lithium Battery (502530 3.7V 300mAh) has passed the test UN38.3.

电池包装（502530 3.7V 300mAh）应遵守IATA DGR 63版包装说明965/966/967的运输要求。

The package of battery (502530 3.7V 300mAh) should be complied with the requirements of Packing Instruction 965/966/967 of IATA DGR 63rd Edition for transportation.

电池包装（502530 3.7V 300mAh）应遵守IMDG（40-20）或“关于危险货物运输的规章范本”21的特殊规定188。

The package of battery (502530 3.7V 300mAh) should be complied with the requirements of 188 of IMDG (40-20) or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (21).

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，电池与设备打包运输)。

Note: Batteries weight in the package<5kg(By air, Batteries packed with equipment).

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
镍钴锰酸锂 LiNi _{0.8} Co _{0.1} Mn _{0.1} O ₂	182442-95-1	列入 Listed	列入 Listed	未列入 Not Listed	未列入 Not Listed
聚偏氟乙烯 PVDF	24937-79-9	列入 Listed	列入 Listed	DSL	未列入 Not Listed
石墨 C	7782-42-5	列入 Listed	列入 Listed	DSL	列入 Listed
丁苯橡胶 Styrene-Butadiene Rubber	61789-96-6	列入 Listed	未列入 Not Listed	未列入 Not Listed	未列入 Not Listed
羧甲基纤维素 CMC	9000-11-7	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
尼龙 12 Nylon 12	24937-16-4	列入 Listed	未列入 Not Listed	未列入 Not Listed	未列入 Not Listed
六氟磷酸锂 LiPF ₆	21324-40-3	列入 Listed	列入 Listed	NDSL	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

注意 Declare to reader:

上述信息是基于现有的数据信息，在实际应用过程中可能出现其他未预料的情况，其相应信息可能需要修改，我方不承担此项责任。在操作中请根据实际情况作出相应的正确的处置。

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

主检人 Prepared by

审核人 Checked by

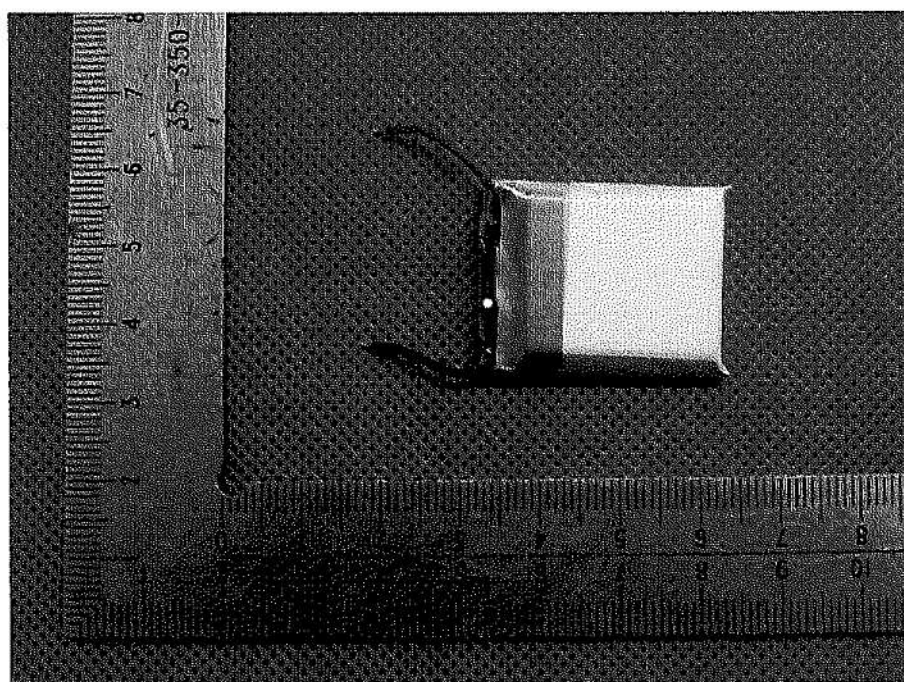
批准人 Approved by

肖旭东

叶良兵

祝志伟

样品图片:
Sample Photos:



仅对原报告照片中的样品负责
authenticate the photo on original report only

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8. 若需要在法院审理程序或仲裁过程中使用测试报告, 客户必须在提交测试样品前将该意图告知本公司。Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
9. 电子版报告更改后将不被追回, 客户有义务将更改后的报告提供给使用原报告的相关方。The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
10. 该测试报告的支持数据和信息本公司保存 6 年。个别评审机构有特别要求的, 检测数据和报告的保存期可依情况变动。一旦超过上述提交的保存期限, 数据和信息将被处理掉。任何情况下, 本公司不必提供任何被处理的过期数据或信息。即使本公司事先被告知可能会发生相关的损害, 本公司在任何情况下也不必承担任何损害, 包括(但不限于)补偿性赔偿、利润损失、数据遗失、或任何形式的特殊损害、附带损害、间接损害、从属损害或任何违反约定、违反承诺、侵权(包括疏忽)、产品责任或其他原因的惩罚性损害。Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

化学品安全技术说明书

Material Safety Data Sheet 2

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	/	2022-01-11	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	聚合物锂电池 Li-ion Polymer Battery	样品型号 Sample Model	042030
收样日期 Sample Receiving Date	2021-10-29	规格 Rating	3.7V 200mAh 0.74Wh
<p>APPLICATIONS: For Stock No. 28346 BEANIE TORCH&HEADPHONES BLACK 28351 BEANIETORCH & HEADPHONES GREY 28340 HEADBAND WITH WIRELESS HEADPHONES 28344 HEADBAND TORCH & HEADPHONES</p> <p>SUPPLIER: Draper Tools Ltd Hursley Road Chandlers Ford Eastleigh Hampshire SO53 1YF</p> <p>Draper Helpline +44 (0) 2380 494344 Opening hours 8:30-17:00 Monday – Friday.</p>			

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

爆炸危险性 Explosive risk	该物品不属于爆炸危险品 This article does not belong to the explosion dangerous goods
易燃危险性 Flammable risk	该物品不属于易燃危险品 This article does not belong to the flammable material
氧化危险性 Oxidation risk	该物品不属于氧化危险品 This article does not belong to the oxidation of dangerous goods
毒害危险性 Toxic risk	该物品不属于毒害危险品 This article does not belong to the toxic dangerous goods
放射危险性 Radioactive risk	该物品不属于放射危险品 This article does not belong to the radiation of dangerous goods
腐蚀危险性 Mordant risk	该物品不属于腐蚀危险品 This article does not belong to the corrosion of dangerous goods
其他危险性 other risk	该物品为单芯锂离子电池, 瓦时率为0.74Wh This article is Single cell lithium ion battery, Watt hour rate 0.74Wh

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

化学名称 Chemical Composition	CAS No.	百分含量 Weight (%)
镍钴锰 Nickel cobalt manganese	---	45.38
聚偏氟乙烯 PVDF	24937-79-9	0.86
铝 Aluminum	7429-90-5	6.98
石墨 C	7782-42-5	27.34
丁苯橡胶 SBR	9003-55-8	0.74
羧甲基纤维素 CMC	9000-11-7	0.57
铜 Cu	7440-50-8	10.62
镍 Ni	7440-02-0	0.47
六氟磷酸锂 LiPF6	21324-40-3	4.7
聚乙烯 Polyethylene	9002-88-4	2.04

化学名称 Chemical Composition	CAS No.	百分含量 Weight (%)
尼龙 12 Nylon 12	24937-16-4	0.3

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.

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, CO₂。

Suitable extinguishing agents: Use extinguishing agent suitable for local conditions and the surrounding environment. Such as dry powder, CO₂.

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°C (302°F))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°C(302°F)), 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。有关个人防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.

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

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: 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。



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.

通风条件: 正常使用条件下不需要。

Ventilation: Not necessary under conditions of normal use.

个体防护设备 Personal Protection

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	近长方体 Almost Cuboid
气味 Odour	无味 Odorless

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.

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: 有毒烟雾, 并可能形成过氧化物。

Hazardous Combustible Products: toxic fumes and may form peroxides.

第十一部分 毒理学资料

Section 11 - Toxicological Information

标志及症状: 无, 除非电池破裂。

Signs & symptoms: None, unless battery ruptures.

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。

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

吸入: 对肺有刺激性。

Inhalation: Lung irritant.

皮肤接触: 对皮肤刺激性。

Skin contact: Skin irritant.

眼睛接触: 对眼睛有刺激性。

Eye contact: Eye irritant.

食入: 吞下中毒。

Ingestion: Poisoning if swallowed.

第十二部分 生态学资料

Section 12 - Ecological Information

对哺乳动物的影响: 目前未知。

Mammalian effects: None known at present.

生态毒性: 目前未知。

Eco-toxicity: None known at present.

生物体内积累: 慢慢地生物降解。

Bioaccumulation potential: Slowly Bio-degradable.

环境危害: 目前没有已知的环境危害。

Environmental fate: None known environmental hazards at present.

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	UN3480 UN3481	UN3480 UN3481
UN 运输专用名称 UN Proper shipping name	锂离子电池 Lithium Ion Batteries 锂离子电池与设备打包 Lithium Ion Batteries Packed With Equipment 锂离子电池装在设备中 Lithium Ion Batteries Contained In Equipment	锂离子电池 Lithium Ion Batteries 锂离子电池与设备打包 Lithium Ion Batteries Packed With Equipment 锂离子电池装在设备中 Lithium Ion Batteries Contained In Equipment
运输危险等级 Transport hazard class(es)	9	9
包装组别 Packing group	II	II
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 (042030 3.7V 200mAh) 已通过UN38.3测试。

Transport information: The Lithium Battery (042030 3.7V 200mAh) has passed the test UN38.3. 电池包装 (042030 3.7V 200mAh) 应遵守IATA DGR 63版包装说明965/966/967的运输要求。

The package of battery (042030 3.7V 200mAh) should be complied with the requirements of Packing Instruction 965/966/967 of IATA DGR 63rd Edition for transportation.

电池包装 (042030 3.7V 200mAh) 应遵守IMDG (40-20) 或《关于危险货物运输的规章范本》21的特殊规定188。

The package of battery (042030 3.7V 200mAh) should be complied with the requirements of 188 of IMDG (40-20) or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (21).

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, 电池与设备打包运输)。

Note: Batteries weight in the package<5kg(By air, Batteries packed with equipment).

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
聚偏氟乙烯 PVDF	24937-79-9	列入 Listed	列入 Listed	DSL	未列入 NOT Listed
铝 Aluminum	7429-90-5	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
丁苯橡胶 SBR	9003-55-8	列入 Listed	列入 Listed	DSL	未列入 NOT Listed
羧甲基纤维素 CMC	9000-11-7	列入 Listed	列入 Listed	DSL	未列入 NOT Listed
铜 Cu	7440-50-8	列入 Listed	列入 Listed	DSL	列入 Listed
镍 Ni	7440-02-0	列入 Listed	列入 Listed	DSL	列入 Listed
六氟磷酸锂 LiPF6	21324-40-3	列入 Listed	列入 Listed	NDSL	列入 Listed
聚乙烯 Polyethylene	9002-88-4	列入 Listed	列入 Listed	DSL	列入 Listed
尼龙 12 Nylon 12	24937-16-4	列入 Listed	未列入 NOT Listed	未列入 NOT Listed	未列入 NOT 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

注意 Declare to reader:

上述信息是基于现有的数据信息, 在实际应用过程中可能出现其他未预料的情况, 其相应信息可能需要修改, 我方不承担此项责任。在操作中请根据实际情况作出相应的正确的处置。

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

主检人 Prepared by

肖旭东

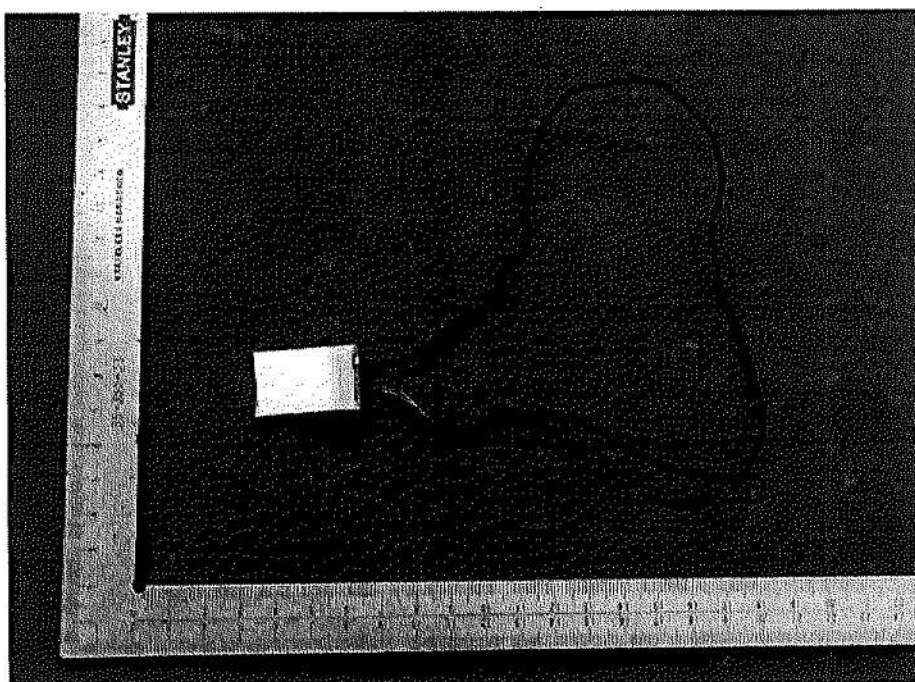
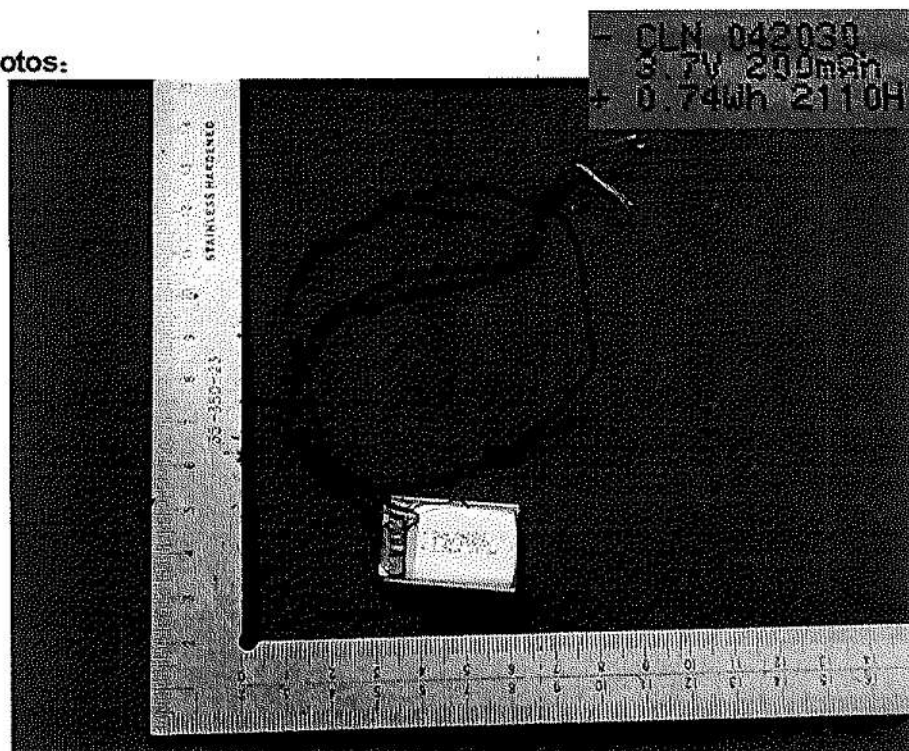
审核人 Checked by

叶文兵

批准人 Approved by

张宏伟

样品图片:
Sample Photos:



仅对原报告照片中的样品负责
: authenticate the photo on original report only

签发测试报告条款 Conditions of Issuance of Test Reports

1. (以下简称[本公司])为提供符合下述条款的测试和报告, 而接受有关样品和货品。本公司基于下述条款提供服务, 下述条款为本公司与申请服务的个人、企业或公司(以下简称[客户])的协议。All samples and goods are accepted by the [Company] solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the [Clients]).
2. 由此测试申请所发出的任何报告(以下简称[报告]), 本公司会严格为客户保密。未经本公司的书面同意, 报告的整体或部分不得复制, 也不得用于广告或授权的其他用途。然而, 客户可以将本公司印制的报告或认可的副本, 向其客户、供货商或直接相关的其他人出示或提交。除非相关政府部门、法律或法规要求, 否则未经客户同意, 本公司不得将报告内容向任何第三方讨论或披露。Any report issued by Company as a result of this application for testing services (the [Report]) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. 除非相关政府部门、法律或法院要求, 否则未经公司预先书面同意, 本公司毋需也无义务到法院对有关报告作证。The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. 无 CMA 标志的报告, 仅供使用方内部参考, 不具有对社会的证明作用。The non-CMA report issued by is only permitted to be used by the client as internal reference use and shall not be used for public demonstration purpose.
5. 如果本公司确定报告被不当使用, 本公司保留撤回报告的权利, 并有权要求其它适当的额外赔偿。In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
6. 本公司接受样品进行测试的前提是, 该测试报告不能作为针对本公司法律行动的依据。Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
7. 如因使用本公司任何报告内的资料, 或任何传播信息所描述与之有关的测试或研究导致的任何损失或损害, 本公司概不负责。The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
8. 若需要在法院审理程序或仲裁过程中使用测试报告, 客户必须在提交测试样品前将该意图告知本公司。Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
9. 电子版报告更改后将不被追回, 客户有义务将更改后的报告提供给使用原报告的相关方。The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
10. 该测试报告的支持数据和信息本公司保存 6 年。个别评审机构有特别要求的, 检测数据和报告的保存期可依情况变动。一旦超过上述提交的保存期限, 数据和信息将被处理掉。任何情况下, 本公司不必提供任何被处理的过期数据或信息。即使本公司事先被告知可能会发生相关的损害, 本公司在任何情况下也不必承担任何损害, 包括(但不限于)补偿性赔偿、利润损失、数据遗失、或任何形式的特殊损害、附带损害、间接损害、从属损害或任何违反约定、违反承诺、侵权(包括疏忽)、产品责任或其他原因的惩罚性损害。Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.