Report No.:
ITB26B01000050B 004

材料安全数据表
Material Safety Data Sheet

样品名称:	锂离子电池
Name of Sample:	Lithium-ion Battery
委托单位:	深圳市朗泰格科技有限公司
Applicant:	Shenzhen Longtiger Technology Co., Ltd.
编制单位:	艾特思（东莞）检测有限公司 Itestek Testing Co., Ltd. (Dongguan).
Prepared by	广东省深圳市宝安区福海街道塘尾社区荔园路翰宇湾区创新港3号楼606、8号楼116 Room 116, Building 8, and Room 606, Building 3, Innovation Port of Hanyuwan, Liyuan Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
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Effective Date:	

主检	先荣廷	**审核**	王子棠	**批准**	艾特思(东莞)检测有限公司 检测专用章
Tested by		**Reviewed by**		**Approved by**	

艾特思（东莞）检测有限公司

Itestek Testing Co., Ltd. (Dongguan)

材料安全数据表
Material Safety Data Sheet

1. Identification of the product and supplier (产品和厂商信息)	
样品名称 **Name of Sample**	锂离子电池 Lithium-ion Battery
样品型号 **Sample Model**	18650
规格 **Rating**	3.7V 5000mAh 18.5Wh
委托单位 **Applicant**	深圳市朗泰格科技有限公司 Shenzhen Longtiger Technology Co., Ltd.
委托单位地址 **Applicant address**	深圳市龙华区大浪街道横朗社区上横朗第四工业区1号405 Room 405, No.1 of Shanghenglang 4th Industrial Zone, Henglang Community, Dalang Sub-district, Longhua District, Shenzhen City. Guangdong, P.R. China.
生产厂商 **Manufacturer**	深圳市朗泰格科技有限公司 Shenzhen Longtiger Technology Co., Ltd.
生产厂商地址 **Manufacturer address**	深圳市龙华区大浪街道横朗社区上横朗第四工业区1号405 Room 405, No.1 of Shanghenglang 4th Industrial Zone, Henglang Community, Dalang Sub-district, Longhua District, Shenzhen City. Guangdong, P.R. China.
鉴定依据 **Inspection according to**	EEC Directive 93/112/EC 联合国《关于危险品货物运输的建议书》 UN “Recommendations on the TRANSPORT OF DANGEROUS GOODS”
紧急联系电话 **Emergency telephone call**	联系电话/Phone number: +86 0755-21088879 邮件地址/Email: xfy188@ltgbattery.com

2. Hazards Identification (主要危险性鉴定)

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	该电池瓦时率为18.5Wh，属于锂离子电池（包括锂离子聚合物电池） Watt hour rate 18.5Wh, which belong to the Lithium ion batteries (including lithium ion polymer batteries)

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

化学成分 Chemical Composition	重量含量 Weight(%)	CAS编号 CAS Number
钴酸锂/ Lithium cobaltate	15 - 40	12190-79-3
铝/ Aluminium	5-10	7429-90-5
铜/ Copper	7-13	7440-50-8
镍/ Nickel	1-5	7440-02-0
石墨/ Graphite	10 - 30	7782-42-5
六氟磷酸锂/ Lithium Hexafluorophosphate	10 - 30	21324-40-3

4. First aid measures (急救措施)

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。

Eye
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. 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。

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

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。

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

食入：
引用两杯牛奶或水。如果当事人仍然清醒可以采取催吐的方法，并且立即就医。

Ingestion
Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

5. Fire-fighting measures (消防措施)

燃点：不适用

Flash Point: N/A.

自燃温度：不适用

Auto-Ignition Temperature: N/A.

灭火介质：大量水(降温)，二氧化碳

Extinguishing Media: Water, CO_2.

特殊灭火程序：自给式呼吸器

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

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。

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

燃烧产生的危险物品：一氧化碳，二氧化碳，锂氧化物烟气

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

6. Accidental release measures (泄漏应急处理)

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。

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.

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。

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.

7. Handling and storage (操作处置和储存)

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。

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.

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。

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.

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。

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.

8. Exposure controls/personal protection (接触控制/个人保护)

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.

防护手套：
正常使用条件下不需要。

Protective Gloves:
Not necessary under conditions of normal use.

其他防护服或设备：
正常使用条件下不需要。

Other Protective Clothing or Equipment:
Not necessary under conditions of normal use.

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。

Personal Protection is recommended for venting battery:
Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

9. Physical and chemical properties (物理和化学特性)

外观：蓝色近长方体

Appearance: Approximate Blue Cuboid

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气味：泄漏时，有醚的气味。

Odour: If leaking, smells of medical ether.

酸碱度：不适用。

pH: Not applicable as supplied.

燃点：除单个电芯暴露试验外其他不适用。

Flash Point: Not applicable unless individual components exposed.

可燃性：除单个电芯暴露试验外其他不适用。

Flammability: Not applicable unless individual components exposed.

相对密度：除单个电芯暴露试验外其他不适用。

Relative density: Not applicable unless individual components exposed.

溶解性（水溶性）：除单个电芯暴露试验外其他不适用。

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

溶解性（其他）：除单个电芯暴露试验外其他不适用。

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

10. Stability and reactivity (稳定性和反应活性)

稳定性：产品在第7节所述的条件下稳定。

Stability: Product is stable under conditions described in Section 7.

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。

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

应避免的材料：氧化剂，碱，水。

Materials to avoid: Oxidising agents, alkalis, water.

危险分解物：有毒烟雾，并可能形成过氧化物。

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

聚合危害：不适用

Hazardous Polymerization: N/A.

如果发生泄露，避免与强氧化剂，无机酸，强碱，卤代烃接触。

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.

11. Toxicological information (毒理性资料)

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

下列情况下健康状况会恶化：万一发生与电池内部材料接触的事故，轻微或严重的刺激，都可能使皮肤出现干燥和灼烧的感觉，并且损坏靶器官（肝脏，肾脏）的神经。

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

12. Ecological information (生态学资料)

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.

13. Disposal consideration (废弃处置)

不要焚烧，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。按照相应的地方性法规处理。

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.

14. Transport information (运输信息)[i]

运输标签：9 类电池标签、限货机标签和电池标记。
Label for conveyance: Paste Class 9—Batteries Label, Cargo Aircraft Only Label and Battery Mark.

UN编号：UN3480 或 UN3481
UN Number: UN3480 or UN3481

UN 分类（运输危险类别）：9 类危险品
UN Classification (Transport hazard class): Class 9

包装等级：N/A
Packing Group: N/A

EmS编号：F-A, S-I
EmS No: F-A, S-I

海洋污染物：无
Marine pollutant: No

正确的装运名称: 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）
Proper Shipping name: 1) Lithium ion batteries; 2) Lithium ion batteries packed with equipment; 3) Lithium ion batteries contained in equipment. (including Lithium ion polymer batteries)

危险分类：货物应遵守IATA 第67版DGR手册包装说明965~967第II（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)2024版，包括通过UN38.3测试手册要求。
Hazard Classification: The goods shall be complied with the requirements of Section II (or Section IB) of Packing Instructions 965~967 of 67th DGR Manual of IATA (2026 edition) and Special Provision188 of IMDG CODE (Amdt. 42-24) 2024 Edition, including the passing of the UN38.3 test.

15. Regulation information (法规信息)

法律信息
Law information

《危险物品规则》
《Dangerous Goods Regulations》

《对危险货物运输的有关规定的建议》
《Recommendations on the Transport of Dangerous Goods Model Regulations》

《国际海运危险货物规则》
《International Maritime Dangerous Goods》

《危险品安全运输技术指令》
《Technical Instructions for the Safe Transport of Dangerous Goods》

《危险货物分类和品名编号》
《Classification and code of dangerous goods》

《职业安全卫生法》
《Occupational Safety and Health Act》(OSHA)

《有毒物质控制法》
《Toxic Substance Control Act》(TSCA)

《消费产品安全法》
《Consumer Product Safety Act》(CPSA)

《联邦环境污染控制法》
《Federal Environmental Pollution Control Act》(FEPCA)

《石油污染法案》
《The Oil Pollution Act》(OPA)

《超级基金修正案和再授权法案III(302/311/312/313)》
《Superfund Amendments and Reauthorization Act TitleIII (302/311/312/313)》(SARA)

《资源保护及恢复法案》
《Resource Conservation and Recovery Act》(RCRA)

《安全饮用水法》
《Safety Drinking Water Act》(CWA)

《加州65提案》
《California Proposition 65》

《美国联邦法规》
《Code of Federal Regulations》(CFR)

根据所有联邦、州和地方法律。
In accordance with all Federal, State and local laws.

16. Other information (其他信息)

本文件仅对由委托方深圳市朗泰格科技有限公司提供的，并由深圳市朗泰格科技有限公司生产的电池(18650)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，艾特思（东莞）检测有限公司不承担任何责任。

This file is only effective to the batteries (18650) provided by Shenzhen Longtiger Technology Co., Ltd. which manufactured by Shenzhen Longtiger Technology Co., 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. Itestek Testing Co., Ltd. (Dongguan). doesn't assume responsibility for any damage or loss because of misuse of batteries.

注意事项
Important Notice

1. 未经本试验室书面同意，不得复制或部分地复制本报告。
Nobody is allowed to photocopy or partly photocopy this test report without written permission of Itestek.

2. 本报告无批准人、审核人及检测人签名无效。
The test report is invalid without the signatures of Approver, Reviewer and Tester.

3. 本报告涂改无效。
This report is invalid if altered.

4. 对检测报告若有异议，应于收到报告之日起十五天内向检验单位提出。
Objections to the test report must be submitted to Itestek within 15 days.

5. 本报告中以点号代替小数点。
Throughout this report a point is used as the decimal separator.

6. 本报告仅对送检样品负责。
The test report is valid for the tested samples only.

测试实验室:	艾特思（东莞）检测有限公司
Testing Laboratory:	Itestek Testing Co., Ltd. (Dongguan).
测试地址:	广东省深圳市宝安区福海街道塘尾社区荔园路翰宇湾区创新港3号楼606、8号楼116
Testing Address:	Room 116, Building 8, and Room 606, Building 3, Innovation Port of Hanyuwan, Liyuan Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
联系电话: Phone number:	+86 13549243900
邮件地址: Email:	Frank.chen@itestek.com
网址: Website:	www.itestek.com

--报告结束--
--End of Report—