

Material Safety Data Sheet

材料安全数据表

Name of Products: Lithium ion Battery

产品名称: 锂离子电池

Model/type reference: YTY-18650-3.7V

型号:

Applicant: Dongguan YaTaiYuan Electronics Co., Ltd

申请商 东莞市亚太源电子有限公司

Address of Applicant: Room 601, Building 1, No. 19, Guanglong Road, Huangjiang Town,

申请商地址:

广东省东莞市黄江镇田心村广龙路 19 号 1 栋 601

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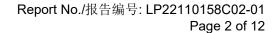
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Section 1- Identification of the product and supplier

第一部分-产品及供应商标识

Product Name: Lithium ion Battery

产品名称: 锂离子电池

Model No./型号: YTY-18650-3.7V Nominal Voltage/标称电压: 3.7V

Rated Capacity/额定容量: 1500mAh, 5.55Wh

Manufacturer's / Supplier Name: Dongguan YaTaiYuan Electronic Co., Ltd

制造商/供应商:东莞市亚太源电子有限公司

Address: Room 601, Building 1, No. 19, Guanglong Road, Huangjiang Town, Dongguan City, Guangdong

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Section 2-Hazards Identification

第二部分-危害识别

Preparation	Not dangerous with normal use. Do not dismantle, open or shred theBattery ingredients
hazards and classification	contained within or their ingredients products could be harmful.
危害分类	正常使用没有危险,不能拆解、打开或分解电池,里面的材料或成分是有害的
Apperance,	Solid object with no odor, no color.
Color, and Odor 外观、颜色及气味	无色、无味、固态
Primary Route(s)	These chemicals are contained in a sealedenclosure. Risk of exposure occurs only if
of Exposure 主要暴露途径	the cell is mechanically, thermally or electrically abused to the point of compromising
工文条码及江	the enclosure. If this occurs, exposure to the electrolyte solution contained within can
	occur by Inhalation, Ingestion, Eye contact and Skin contact
	这些化学药品装在密封的容器里。暴露的风险只有在电池受到机械、加热或滥用电时危及
	外壳才会发生。如果发生这种情况,接触电解液所包含的可能发生吸入、食入、皮肤接触、
	眼睛接触。
Potential Health	ACUTE (short term): See Section 8 for exposure controls In the event that this battery
Effects 潜在的健康影响	has been ruptured, the electrolyte solution contained within the battery would be
1日111111111111111111111111111111111111	corrosive and can cause burns.
	接触控制请看第8章节。在这种情况下,电池破裂,电池中包含的电解液具有腐蚀性,可
	以引起烧伤。
	Inhalation: Inhalation of materials from a sealed battery is not an expected route of
	exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.
	吸入:从密封电池吸入材料不是预期的接触途径。破裂电池散发出来的气雾会引起呼吸道
	刺激。
	Ingestion: Swallowing of materials from a sealed battery is not an expected route of
	exposure. Swallowing the contents of an open battery can cause serious chemical



Page 3 of 12 burns of mouth, esophagus, and gastrointestinal tract. 食入: 从密封电池中吞咽材料并不是一种预期的接触途径。吞咽破裂电池的组成成分可以 引起嘴,食道和胃肠道严重的化学烧伤。 Skin: Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin. 皮肤: 完整的电池与皮肤接触不会造成任何伤害。皮肤接触了破裂电池内部物质可能引起 严重的刺激或烧伤皮肤。 Eye: Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye. 眼睛: 完整的电池与眼睛之间的接触不会造成任何伤害。眼睛接触了破裂电池内部物质可 能引起严重的刺激或烧伤眼睛。 CHRONIC (long term): See Section 11 for additional toxicological data 慢性(长期):请看第11章节 Medical Not applicable Conditions 不适用 Aggravated by Exposure 身体状况因暴露 而恶化 Reported as Not applicable carcinogen 不适用 致癌物质

Section 3 – Composition/Information on Ingredients 第三部分-主要成分/组成信息

Information about the chemical nature of product/产品的化学性质信息:

Chemical Name	Concentration or concentration	CAS Number
化学名称	ranges (%)	CAS 号(化学文摘索引登记号)
	浓度或浓度范围(%)	
Lithium cobaltate 钴酸锂	40-45	12190-79-3
Graphite 石墨	20-23	7782-42-5
Carbon nanotubes 碳纳米管	4-5	1333-86-4
Methyl ethyl carbonate 碳酸甲乙酯	2-3	623-53-0
Lithium hexafluorophosphate	2-3	21324-40-3
六氟磷酸锂	2-3	21324-40-3
Copper 铜	6-8	7440-50-8
Aluminum 铝	3-5	7429-90-5
Nickel 镍	2-3	7440-02-0
Polyvinylidene fluoride	2-3	24027 70 0
聚偏氟乙烯树脂	2-3	24937-79-9
Other 其它	Remainder	N/A



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Test Report Form No.:MSDS-C

Labeling according to EC directives.

标签需根据 EC 指令

No symbol and risk phrase are required.

不需要任何符号和风险短语。

Note: CAS number is Chemical Abstract Service Registry Number.

注意: CAS 号是化学文摘服务注册号

N/A=Not applicable/不适用

Section 4 – First-aid Measures 第四部分-急救措施

Inhalation	If contents of an opened battery are inhaled, remove source of contamination or move	
吸入	victim to fresh air. Obtain medical advice.	
	如果吸入了破裂电池内部物质,移除污染源或将受害者移至新鲜空气处,寻求医生建议。	
Ingestion	If ingestion of contents of an open battery occurs, never give anything by mouth if victim	
食入	is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth	
R/	thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 60 to 240 mL (2-8)	
	oz.) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of	
	aspiration. Have victim rinse mouth with water again. Quickly transport victim to an	
	emergency care facility.	
	如果食入了破裂电池内部物质,受害者正在迅速失去意识,或昏迷或抽搐,千万不要给他	
	们任何食物。让患者用水彻底冲洗口腔。不要催吐。让患者喝 60 - 240 毫升(2-8 盎司)的水。	
	如果呕吐是自然发生的,请让患者身体前倾,以减少误吸的风险。让患者再次用水漱口。	
	迅速将受害者送往急救中心。	
Skin contact		
皮肤接触	If skin contact with contents of an open battery occurs, as quickly as possible remove	
及从安陆	contaminated clothing, shoes and leather goods. Immediately flush with lukewarm, gently flowing water for at least 30 minutes. If irritation or pain persists, seek medical attention.	
	Completely decontaminate clothing, shoes and leather goods before reuse or discard.	
	如果接触到破裂电池的内部物质,应尽快去除被污染的衣服、鞋子和皮革制品。立即用温	
	和的流动水冲洗至少30分钟。如果刺激或疼痛持续,立即就医。衣物、鞋及皮具必须彻底	
	去污,方可再用或弃置。	
Eye contact	If eye contact with contents of an open battery occurs, immediately flush the	
眼睛接触	contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes while	
100円100円	holding the eyelids open. Neutral saline solution may be used as soon as it is available. If	
	necessary, continue flushing during transport to emergency care facility. Take care not to	
	rinse contaminated water into the unaffected eye or onto face. Quickly transport victim to	
	an emergency care facility.	
	如果眼睛接触了破裂电池内部物质,立即用温水轻轻流动的水将被污染的眼睛冲洗至少 30	
	分钟,同时保持眼睑打开。一旦有了中性盐水溶液,可以立即使用。如有必要,在运送到	
	为	
	意教 以應期 问 继续 作 疣 。 在 悬 个 安 符 支 行 架 的 小 作 疣 到 木 文 影 啊 的 眼 萌 或 应 工 。 也 逐 符 支 害 者 送 往 急 救 中 心 。	
	自有心压心软干证。	

Section 5 – Fire-fighting Measures



第五部分-消防措施

Flammable	In the event that this battery has been ruptured, the electrolyte solution contain within the
Properties	battery would be flammable. Like any sealed container, battery cells may rupture when
易燃的特性	exposed to excessive heat; this could result in the release of flammable or corrosive
	materials.
	在电池已经破裂情况下,电池中的电解液中是易燃的。像任何密封容器一样,电池暴露在
	过热环境下可能会破裂;这可能导致易燃或腐蚀性材料的释放。

Suitable extinguishing Media 合适的灭火媒	Use extinguishing media suitable for the materials that are burning. 使用适合于正在燃烧的材料的灭火介质。
Unsuitable extinguishing Media 不合适的灭火 媒介	Not available 不适用
Explosion Data 爆炸系数	Sensitivity to Mechanical Impact: This may result in rupture in extreme cases 对机械冲击的敏感性: 在极端情况下,这可能导致破裂 Sensitivity to Static Discharge: Not Applicable 对静电放电的敏感性: 不适用
Specific Hazards arising from the chemical 由化学物质引 起的特定危害	Fires involving Batteryare controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended to extinguish the fire 涉及电池的火灾是用水控制的。当使用水时,然而可能会产生氢气。在密闭空间,氢气能形成爆炸性混合物。在这种情况下,建议使用窒息剂灭火
Protective Equipment and precautions for firefighters 消防队员的防护设备和注意	As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Use NIOSH/MSHA approved full-face self-contained breathing apparatus(SCBA) with full protective gear. 如果发生火灾,撤离该区域并在安全距离内灭火。戴上需要压力的自给式呼吸器和全套防护装备。在有保护的地方或安全的距离灭火。使用NIOSH/MSHA认可的全面自给式呼吸器 (SCBA)和全套防护装备。
NFPA 消防协会	Health: 0 Flammability: 0 Instability: 0 健康: 0 易燃性: 0 不稳定性: 0



Section 6 – Accidental Release Measures

第六部分-泄露应急处理

Personal Precautions,	Restrict access to area until completion of clean-up. Do not touch the
protective equipment, and	spilled material. Wear adequate personal protective equipment as
emergency procedures	indicated in Section 8.
个人预防措施、防护装备和应	在清理工作完成之前,禁止任何人进入该区域。请勿触摸泄露的材料。穿戴
急程序	足够的个人防护装备,如第8章节所示。
Environmental Precautions	Prevent material from contaminating soil and from entering sewers or
环境保护措施	waterways.
	防止物质污染土壤和进入下水道或水道。
Methods and materials for	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or
Containment	earth. Clean up spills immediately.
方法和材料控制	处于安全,阻止泄露,可以用干砂或沙土来遏制液体泄露,立即清理泄漏。
Methods and materials for	Absorb spilled material with an inert absorbent (dry sand or earth). Scoop
cleaning up	contaminated absorbent into an acceptable waste container. Collect all
清理的方法和材料	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(干燥的沙子或泥土)吸收溢出的材料。将被污染的吸收剂舀到
	可接受的废物容器中。收集所有被污染的吸收剂,并按照第 13 章节的说明
	处理。用清洁剂和水擦洗该区域;收集所有被污染的洗涤水,以适当的方式处
	理。

Section 7 – Handling and Storage 第七部分—操作处置与存储

Handling 操作	Don't handleBatterywith metalwork. Do not open, dissemble, crush or burn battery. Ensure good ventilation/exhaustion at the workplace.Prevent formation of dust.Information about protection against explosions and fires: Keep ignition sources away- Do not smoke. 请勿用金属制品处理电池。请勿打开、分解、挤压或燃烧电池。确保工作场所通风良好。防止灰尘的形成。关于防止爆炸和火灾的信息:远离点火源-不要吸烟。
Storage 存储	If theBatteryis subject to storage for such a long term as more than 3 months, it is recommended to recharge the Batteryperiodically. 如果电池长期存放超过 3 个月,建议定期对电池充电。 3 months: -10°C~+40°C, 45 to 85%RH 3 个月: -10°C~+40°C, 相对湿度 45%-85%RH And recommended at 0°C~+35°C for long period storage. 长期存储在 0°C~+35°C 环境下 The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more. 存储后交付状态(满电时容量为 50%)的容量保持率为 80%以上 Do not store Batteryhaphazardly in a box or drawer where they may



short-circuit each other or be short-circuited by other metal objects. 请勿将电池随意存放在盒子或抽屉中,以免电池之间相互短路或被其他金属物体短路。
Keep out of reach of children. 请置于儿童接触不到的地方。
Do not exposeBatteryto heat or fire. Avoid storage in direct sunlight. 请勿将电池置于高温或火中。避免储存在阳光直射的地方。
Do not store together with oxidizing and acidic materials.

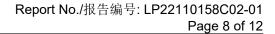
Section 8 – Exposure Controls and Personal Protection 第八部分-接触控制和个人防护

请勿与氧化性和酸性物质存放。

Engineering Controls	Use local exhaust ventilation or other engineering controls to control
工程控制	sources of dust, mist, fumes and vapor.
	使用当地的排气通风或其他工程控制,以控制灰尘,雾,烟雾和蒸汽的来源。
	Keep away from heat and open flame. Store in a cool, dry place.
	远离热源和明火。储存在阴凉、干燥的地方。
Personal Protective	Respiratory Protection: Not necessary under normal conditions.
Equipment	呼吸保护:正常情况下不需要。
个人防护装备	Skin and body Protection: Not necessary under normal conditions, Wear
	neoprene or nitrile rubber gloves if handling an open or leaking battery.
	皮肤和身体的保护:正常情况下不需要,处理打开或漏水的电池时,应戴氯丁
	橡胶或丁腈橡胶手套。
	Hand protection: Wear neoprene or natural rubber material gloves if
	handling an open or leaking battery.
	手保护:在处理打开或泄漏的电池时,戴氯丁橡胶或天然橡胶材料的手套。
	Eye Protection:Not necessary under normal conditions, Wear safety
	glasses if handling an open or leaking battery.
	眼睛保护:正常情况下不需要,如果处理打开或泄漏的电池,请佩戴安全眼镜。
Other Protective Equipment	Have a safety shower and eye wash fountain readily available in the
其他防护设备	immediate work area.
	在直接的工作区域有一个安全的淋浴和洗眼喷泉.
Hygiene Measures	Do not eat, drink, or smoke in work area. Maintain good housekeeping.
卫生措施	请勿在工作区域内进食、饮水或吸烟。维护好管家.

Section 9 – Physical and Chemical Properties 第 9 部分–理化特性

Dhysical	Form: Solid
Physical State	形态: 固体
物理状态	Color: Blue
初垤扒芯	颜色: 蓝色





Codor: Odorless 任味: 大气味		r age o or iz
Change in condition		
受化条件: 天数据可提供 PH, with indication of the concentration pH,有浓度指示 Melting point/freezing point		
pH, with indication of the concentration pH.有浓度指示	Change in condition	Not available.
pH,有溶度指示 不适用 Melting point/freezing point 熔点/凝固点 Not available. 无数据可提供 Boiling Point, initial boiling point and Boiling range: 沸点、初沸点 Not available. 无数据可提供 Flash Point Qualified Date Initial Experiments Not available. 无数据可提供 Upper/lower flammability or explosive limits Not available. 无数据可提供 L/下燃烧或爆炸限值 Not applicable 不适用 Vapor Pressure: 蒸汽密度. Not applicable 不适用 基充密度. Q空气=1) Not applicable 不适用 Density/relative density Not available. 不透析可提供 Solubility in Water: 水溶性 Not available. 不能溶解 n-octanol/water partition coefficient 正辛醇/水分配系数 人数据可提供 Not available. 工業解可提供 Not available. 工数据可提供 Decomposition temperature 自然温度 人数据可提供 人数据可提供 Odout threshold	变化条件:	无数据可提供
Melting point/freezing point 熔点凝固点 Boiling Point, initial boiling point and Boiling range: 沸点、初沸点 Flash Point 闪点 Upper/lower flammability or explosive limits 上/下燃烧或爆炸限值 Not available. 无数据可提供 Not applicable 蒸汽压 Not applicable 蒸汽医 Vapor Density: (Air = 1) 蒸汽密度: (空气=1) Not applicable 蒸汽度用 Ponsity/relative density	pH, with indication of the concentration	Not applicable
勝点「凝固点 无数据可提供 Boiling Point, initial boiling point and Boiling range: 沸点、初沸点 Flash Point 内点 无数据可提供 Upper/lower flammability or explosive limits 无数据可提供 Vapor Pressure: Not applicable 不适用 Vapor Density: (Air = 1)	pH,有浓度指示	不适用
Boiling Point, initial boiling point and Boiling range:	Melting point/freezing point	Not available.
Boiling range: 沸点、初沸点 Flash Point 风点 Upper/lower flammability or explosive limits 上/下燃烧或爆炸限值 Vapor Pressure: 蒸汽压 Vapor Density: (Air = 1) 蒸汽密度: (空气=1) Density/relative density 密度/相对密度 Solubility in Water: 水溶性 不能溶解 Not available. 无数据可提供 Solubility in Water: 水溶性 不能溶解 Not available. 正辛醇/水分配系数 无数据可提供 Auto-ignition temperature 自然温度 Decomposition temperature 自然温度 Odout threshold 溴阈 无数据可提供 Evaporation rate 蒸发速率 Not available. 无数据可提供	熔点/凝固点	无数据可提供
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Upper/lower flammability or explosive limits 上下燃烧或爆炸限值 Vapor Pressure: 蒸汽压 Vapor Density: (Air = 1) 蒸汽密度: (空气=1) Density/relative density 密度/相对密度 Solubility in Water: 水溶性 n-octanol/water partition coefficient 正辛醇/水分配系数 无数据可提供 Auto-ignition temperature 自然温度 Decomposition temperature 分解温度 Codout threshold 溴阈 无数据可提供 Evaporation rate 素发速率 Not available. 无数据可提供 Rot available.	Flash Point	Not available.
Ilmits 上/下燃烧或爆炸限值 Vapor Pressure: 蒸汽压 Vapor Density: (Air = 1) 蒸汽密度: (空气=1) Density/relative density 密度/相对密度 Solubility in Water: 水溶性 n-octanol/water partition coefficient 正辛醇/水分配系数 Auto-ignition temperature 自然温度 Decomposition temperature 自然温度 Decomposition temperature 分解温度 Codu threshold 溴阈 Evaporation rate 蒸发速率 Not available. 无数据可提供 Not available. 无数据可提供 Not available. 无数据可提供	闪点	无数据可提供
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上子ト然院或摩拝限値 Vapor Pressure: 蒸汽压 Vapor Density: (Air = 1) 素汽密度: (空气=1) Density/relative density 密度/相对密度 Solubility in Water: 水溶性 n-octanol/water partition coefficient 正辛醇/水分配系数 Auto-ignition temperature 自然温度 Decomposition temperature 自然温度 Decomposition temperature 分解温度 Odout threshold 決勝 C数据可提供 Not available. 元数据可提供 Evaporation rate 素发速率 Not available. 表数据可提供 Not available. 表数据可提供 Evaporation rate 素发速率 不透期可提供	limits	
ボ汽压	上/下燃烧或爆炸限值	/ · · · · · · · · · · · · · · · · · · ·
Vapor Density: (Air = 1)Not applicable蒸汽密度: (空气=1)不适用Density/relative densityNot available.密度/相对密度无数据可提供Solubility in Water:Insoluble水溶性不能溶解n-octanol/water partition coefficientNot available.正辛醇/水分配系数无数据可提供Auto-ignition temperature 自然温度130°CDecomposition temperature 分解温度Not available.分解温度无数据可提供Odout threshold 溴阈Not available.表数据可提供无数据可提供Evaporation rate 蒸发速率无数据可提供	Vapor Pressure:	Not applicable
蒸汽密度: (空气=1)不适用Density/relative density 密度/相对密度Not available. 无数据可提供Solubility in Water: 水溶性Insoluble 不能溶解n-octanol/water partition coefficient 正辛醇/水分配系数Not available. 无数据可提供Auto-ignition temperature 自然温度130°CDecomposition temperature 分解温度Not available. 无数据可提供Odout threshold 溴阈Not available. 无数据可提供Evaporation rate 蒸发速率Not available. 	蒸汽压	不适用
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密度/相对密度	蒸汽密度: (空气=1)	不适用
Solubility in Water: 水溶性 不能溶解 n-octanol/water partition coefficient 正辛醇/水分配系数 无数据可提供 Auto-ignition temperature 自然温度 Decomposition temperature 分解温度 Odout threshold 溴阈 无数据可提供 Evaporation rate 素发速率 Insoluble 不能溶解 Not available. 无数据可提供 Not available. 无数据可提供 Not available. 无数据可提供	Density/relative density	Not available.
水溶性 不能溶解 n-octanol/water partition coefficient 正辛醇/水分配系数 无数据可提供 Auto-ignition temperature 自然温度 130°C Decomposition temperature	密度/相对密度	无数据可提供
n-octanol/water partition coefficient 正辛醇/水分配系数 无数据可提供 Auto-ignition temperature 自然温度 Decomposition temperature Not available. 分解温度 无数据可提供 Odout threshold Not available. 溴阈 无数据可提供 Evaporation rate 素发速率 无数据可提供	Solubility in Water:	Insoluble
正辛醇/水分配系数无数据可提供Auto-ignition temperature 自然温度130°CDecomposition temperature 分解温度Not available. 无数据可提供Odout threshold 溴阈Not available. 无数据可提供Evaporation rate 蒸发速率Not available. 无数据可提供	水溶性	不能溶解
Auto-ignition temperature 自然温度130°CDecomposition temperature 分解温度Not available. 无数据可提供Odout threshold 溴阈Not available. 无数据可提供Evaporation rate 蒸发速率Not available. 无数据可提供	n-octanol/water partition coefficient	Not available.
自然温度130°CDecomposition temperatureNot available.分解温度无数据可提供Odout thresholdNot available.溴阈无数据可提供Evaporation rateNot available.蒸发速率无数据可提供	正辛醇/水分配系数	无数据可提供
自然温度Not available.分解温度无数据可提供Odout threshold 溴阈Not available.Evaporation rate 蒸发速率Not available.无数据可提供无数据可提供	Auto-ignition temperature	130°C
分解温度无数据可提供Odout thresholdNot available.溴阈无数据可提供Evaporation rateNot available.蒸发速率无数据可提供	自然温度	130 C
Odout threshold 溴阈Not available. 无数据可提供Evaporation rate 蒸发速率Not available. 无数据可提供	Decomposition temperature	Not available.
溴阈无数据可提供Evaporation rateNot available.蒸发速率无数据可提供	分解温度	无数据可提供
Evaporation rateNot available.蒸发速率无数据可提供	Odout threshold	Not available.
蒸发速率	溴阈	无数据可提供
	Evaporation rate	Not available.
Flammability (soil, gas) Not available.	蒸发速率	无数据可提供
	Flammability (soil, gas)	Not available.
易燃性(土壤,其他) 无数据可提供	易燃性 (土壤, 其他)	无数据可提供
Viscosity Not applicable	Viscosity	Not applicable
粘度 不适用	粘度	不适用

Section 10 – Stability and Reactivity 第十部分-稳定性和反应性

Stability	The product is stable under normal conditions.
稳定性	该产品在正常条件下是稳定的。



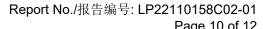
Conditions to Avoid (e.g. static discharge, shock or vibration) 应避免的条件(如静电放电、冲击或振动)	Do not subject Batteryto mechanical shock. Vibration encountered during transportation does not cause leakage, fire or explosion. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse. 请勿对电池进行机械冲击。运输过程中遇到的振动不会引起泄漏、火灾或爆炸。不要拆解、挤压、短路或安装错误的极性。避免机械或电气滥用。
Incompatible Materials	Not Available
异种材料	无数据可提供
Hazardous Decomposition Products	This material may release toxic fumes if burned or exposed to
危害分解物	fire
	这种材料如果被燃烧或暴露于火中,可能会释放出有毒气体
Possibility of Hazardous Reaction	Not Available
危险反应的可能性	无数据可提供

Section 11 – Toxicological Information 第十一部分–毒理学信息

Irritation	Risk of irritation occurs only if the cell is mechanically, thermally
刺激	or electrically abused to the point of compromising the enclosure.
	If this occurs, irritation to the skin, eyes and respiratory tract may
	occur.
	只有当电芯是受到机械,加热或电气滥用达到刺激点的风险。如果
	发生这种情况,皮肤、眼睛和呼吸道可能会受到刺激。
Sensitization	Not Available
敏化作用	无数据可提供
Neurological Effects	Not Available
神经系统的影响	无数据可提供
Teratogenicity	Not Available
致畸性	无数据可提供
Reproductive Toxicity	Not Available
再生毒性	无数据可提供
Mutagenicity (Genetic Effects)	Not Available
诱变(遗传效应)	无数据可提供
Toxicologically Synergistic Materials	Not Available
协同材料毒理学	无数据可提供

Section 12 – Ecological Information 第十二部分–生态学信息

General note:	Water hazard class 1(Self-assessment): slightly hazardous for
通用信息	water.
	Do not allow undiluted product or large quantities of it to reach
	ground water, water course or sewage system.





水危险等级 1(自评):对水有轻微危险。
不允许未经稀释的产品或大量的产品进入地下水、水道或污水系
统。
Not Available
无数据可提供
Not Available
无数据可提供

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

Product disposal recommendation	Observe local, state and federal laws and regulations.
产品处理建议	遵守当地、州和联邦法律法规。
Packaging disposal recommendation	Be aware discarded batteries may cause fire, tape the battery
包装处理建议	terminals to insulate them. Don't disassembly the battery.
	Completely discharge containers (no tear drops, no powder rest,
	scraped carefully). Containers may be recycled or re-used.
	Observe local, state and federal laws and regulations.
	废弃的电池可能引起火灾,请用胶带将电池端子绝缘。请勿拆卸电
	池。完全卸除容器(无泪滴,无粉歇,刮拭小心)。容器可以回收或
	重复使用。遵守当地、州和联邦的法律法规

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

Label for conveyance	Miscellaneous Lithium BATT	
运输标签	杂项锂电池	
UN number	UN3480 or UN3481	
联合国货物编码		
Proper shipping name	1) Lithium ion batteries;	
运输名称	Lithium ion batteries packed with equipment;	
	3) Lithium ion batteries contained in equipment.	
	1) 锂离子电池单独运输;	
	2) 锂离子电池和设备包装在一起;	



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	3) 锂离子电池内置于设备中
Packing Group	N/A
包装类别	不适用
EmS No.	F-A, S-I
Ems 编号	F-A, 3-1
Marine polluation	No
海洋污染	无
ICAO/IATA	Can be shipped by air in accordance with international Civil Aviation
国际民间航空组织/国际航空	Organization (ICAO), TI or International Air Transport Association (IATA)
运输协会	DGR Manual 64th Packing Instruction Section II (or Section IB) of Packing
	Instruction 965~967 for transportation.
	可根据民用航空组织(ICAO),TI 或国际航空运输协会(IATA)DGR 手册
	64 版本中 PI965~967 包装说明 Section II(或 Section IB)的规定进行空运。
IMDG CODE	Shipping may be done in accordance with the IMDG CODE (Amdt 40-20)
国际海运危险货物规则	Edition.
	可根据 IMDG CODE(Amdt 40-20)版的相关规定进行海运。
DOT	Other requirements for the US Department of Transportation (DOT)
美国运输部	Subchapter C, Hazardous Materials Regulations if shipped in compliance
	with 49 CFR 173.185.
	美国运输部(DOT)有害物质规则 C 分章节中的其他规定,运输符合要求 49
	CFR 173.185。
ADR/ADN	Transport Requirements for United Nations Economic Commission for
欧洲国际陆运危险货物协定/	Europe (UNECE) ADR/ADN, Applicable as from 1 January 2019.
关于陆水道国际运输危险货	自 2019 年 1 月 1 日起需符合联合国欧洲经济委员会 (UNECE) ADR/ADN 的
物的欧洲协定	运输要求。

In addition, to be permitted in transport each lithium cell and battery types must have passed the applicable tests set out in Subsection 38.3 of the UN Manual of Tests and Criteria.

此外每个电芯和电池类型都必须通过联合国《关于危险货物运输的建议书试验和标准手册》第 38.3 章节规定的适用测试。

Section 15 - Regulation Information

第十五部分-法规信息

Law information:

法律信息:

《Dangerous Goods Regulations》

《危险货物规则》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《关于危险货物运输的建议书规章范本》

《Recommendations on the Transport of Dangerous Goods Manual of Tests and Criteria》

《关于危险货物运输的建议书试验和标准手册》

《International Maritime Dangerous Goods》

《国际海运危险货物规则》

《Technical Instructions for the Safe Transport of Dangerous Goods》



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《危险货物安全运输技术指南》

《Classification and code of dangerous goods》

《危险货物分类和品名编码》

《Occupational Safety and Health Act》(OSHA)

《职业安全与健康法》(OSHA)

《Toxic Substance Control Act》(TSCA)

《有毒物质控制法》(TSCA)

《Consumer Product Safety Act》(CPSA)

《消费品安全法》(CPSA)

《Federal Environmental Pollution Control Act》(FEPCA)

《联邦环境污染控制法》(FEPCA)

《Resource Conservation and Recovery Act》(RCRA)

《资源保护与恢复法案》(RCRA)

In accordance with all Federal, State and local laws.

符合所有联邦,州和地方法律。

Section 16 – Other Information 第十六部分—其他信息

The information above is believed to be accurate and represents the best information currently available to us. However, Dongguan Lepont Testing Service Co., Ltd. makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

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