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：	常州微宙电子科技有限公司
Commissioner:	Changzhou Weizhou Electronic Technology Co., Ltd.

TRURON TESTING TECHNOLOGY CO., LTD. 上海储融检测技术股份有限公司 报告专用章

上海储融检测技术股份有限公司

Shanghai Truron Testing Technology Co., Ltd

材料安全数据表

Material Safety Data Sheet

Section 1. 产品名称及企业标识

CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

样品名称 Name of goods	锂离子电池 Lithium-ion Battery
样品型号 Type/Mode	MC78130A
额定电压 Nominal Parameter:	3.82V
额定容量 Nominal Capacity:	64mAh
生产单位 Manufacturer	常州微宙电子科技有限公司 Changzhou Weizhou Electronic Technology Co., Ltd.
生产单位地址 Manufacturer address	江苏省常州市金坛区萍湖路 111 号 NO.111 Pinghu Road, Jintan District, Changzhou City, Jiangsu Province
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”
应急电话 Emergency telephone call	0519-82205868
-	接样日期：2023-12-25 签发日期：2024-01-09 Received date: 2023-12-25 Issue date：2024-01-09

SHANGHAI TRURON TESTING TECHNOLOGY CO.,LTD. 上海储融检测技术股份有限公司 报告专用章

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Section 2. 危险性概述

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,0.24448 瓦时，属于 IMDG CODE 和 IATA DGR 和 ADR Convention 中的第九类危险品 This article is Lithium-ion cell, Watt hour rate 0.24448Wh, which belong to the miscellaneous dangerous goods, as is described in IMDG CODE and IATA DGR and ADR Convention.

Section 3. 成分/组成信息

COMPOSITION INFORMATION

化学成分 Chemical Composition	化学式 Chemical Formula	CAS 号 CAS No.	重量百分比 (约) Weight (%)(About)
Lithium cobaltate 钴酸锂	LiCoO2	12190-79-3	25.1
Graphite 石墨	C	7782-42-5	14.8
Aluminum 铝	Al	7429-90-5	3.4
Copper 铜	Cu	7440-50-8	9.0
Polyethylene 聚乙烯	C2H4	9002-88-4	1.9
Poly(vinylidene fluoride) 聚偏二氟乙烯	-(CH2-CF2)n-	24937-79-9	0.3
Stainless Steel 不锈钢	/	12597-68-1	28.9
Electrolyte 电解液	/	/	14.1
Acrylic Resin 丙烯酸树脂	C3H4O2	9003-01-4	0.4
Polyimide 聚酰亚胺	C35H28N2O7	62929-02-6	0.2
Polythylene terephthalate 聚对苯二甲酸乙二醇酯树脂	C10H8O5	25038-59-9	1.9

Section 4. 急救措施

First aid measures

食入：引用两杯牛奶或水。如果当事人仍然清晰可以采取催吐的方法，并且立即就医。
Ingestion: Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician

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.

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.

Section 5. 消防措施

Fire-fighting measures

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: lots of water, CO2

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.

Section 6. 泄露应急处理

Accidental release measures

为防止电池材料泄露或释放采取的措施
Steps to be taken in case Material is Released or Spilled

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。
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 contain for disposal.

废弃物处置方法
Waste Disposal Method

电池的循环寿命是有限的，充满电后的电池使用时间比较短时，需要更换新的电池。
Despite being rechargeable, the battery has a limited life span, Replace when usage time between charges becomes short.

请提供所有电池用于回收符合当地的指导和监管。禁止扔入垃圾箱。
Please offer all used batteries for recycling according with local guidelines and regulation. Do not throw in the trash.

Section 7. 操作处置和储存

Handling and storage

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 any liquids.

操作处置和储存中的防范措施

Precautions to be taken during handling and storage

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、通风等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。
Avoid mechanical or electrical abuse. Preferably storage 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.

其他防范措施
Other Precautions

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。
The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short circuit or install with incorrect polarity.

Section 8. 接触控制/个人防护

Exposure controls/personal protection

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.

其他防护服装或设备: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要准备的。
Personal Protection is recommended for venting battery: Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

Section 9. 理学特性

Physical and chemical properties

外形：银色圆柱状金属外壳
Appearance: Silver cylindrical metal shell
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

Section 10. 稳定性和反应活性

Stability and reactivity

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、短路或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 or expose.

应避免的材料：氧化剂，碱，水。
Materials to avoid: Oxidizing 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、强碱或卤代烃接触。
If leaked, forbidden to contact with strong oxidizers、mineral acids、strong alkalis or halogenated hydrocarbons.

Section 11. 毒理学资料

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.

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 severe irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.

Section 12. 生态学资料

Ecological information

正常使用时，电芯/电池不会有生态和环境方面的影响。
There is no influence to ecology and environment when used properly.

Section 13. 废弃处置

Disposal consideration

废弃电芯不能直接当作普通垃圾处理，用塑料袋装好密封放入回收电池的垃圾桶或当作特殊垃圾处理。废弃电芯不能丢进火中和置于高温环境，不要拆卸，同时不能刺穿和挤压等等。电芯的包装纸盒和塑料盒可作为普通垃圾处理。
Depleted batteries shouldn’t be treated as ordinary trash. Worn out batteries must be discharged, placed in plastic bags and then put into recycle bin. Shouldn’t be thrown into fire or placed in high temperature. Shouldn’t be dissected, pierced, crushed or treated similarly. The package and plastic box which contain batteries could be treated as ordinary trash. Best way is recycling.

Section 14. 运输信息

Transport information

运输标签 Label for conveyance	第 9 类锂电池危险品标签 class 9 lithium battery hazard label
UN 编号 UN Number	UN 3480
正确运输名称 UN Proper shipping name	锂离子电池（包括锂离子聚合物电池） Lithium ion batteries (Including lithium ion polymer batteries)
包装类别 Packing group	II
海洋污染物 Marine pollutant	NO
EmS 编号： EmS No:	F-A , S-I F-A , S-I

危害分类：货物符合 IATA 第 65 版《危险品规则》包装说明 965 第 IB 节规定，《国际海运危险货物规则》特殊规定 188（Amdt. 41-22）（2022版），包括通过 UN38.3 测试手册要求。

Hazard Classification: The goods are complied with the requirements of Section IB of Packing Instructions 965 of 65th DGR Manual of IATA, IMDG CODE (Amdt.41-22) (2022 Edition), including the passing of the UN38.3 test.

Section 15. 法规信息

Regulation information

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.

Section 16. 其他信息

Other information

本 MSDS 中的信息不对常州微宙电子科技有限公司生产的所有电芯有效。本文信息来源可靠，但我们不保证来源描述的完整性、精确性等。使用者须掌握正确使用电芯的方法并对电池的使用负责，上海储融检测技术有限公司对由于电池的滥用而造成的伤害和损失不承担责任。

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