MATERIAL SAFETY DATA SHEET

材料安全数据表

Report No.: 报告编号：	ET-26073136B04
Name of Goods: 物品名称：	Rechargeable Li-ion Battery 可充电锂离子电池
Model: 型号：	DTP472428
Applicant: 申请商：	Dongguan Data Power Technology Ltd. 东莞市德泰能源有限公司
Address: 地址：	Room 401, Building 4, No. 235, Luomu Road, Qingxi Town, Dongguan City, Guangdong Province 广东省东莞市清溪镇罗马路 235 号 4 号楼 401 室

Written by: 编制：	Alvin Xian 洗文江 Alvin Xian/Testing Engineer 洗文江/测试工程师	Reviewed by: 审核：	Silen Peng 彭天宇 Silen Peng/Project Engineer 彭天宇/项目工程师
Approved by: 批准：	Iain Glen 廖世兵 Iain Glen/Technical Manager 廖世兵/技术总监	Date of Issue: 签发日期：	2026.08.07

Shenzhen ETR Standard Technology Co., Ltd.

深圳市亿通标准技术有限公司

深圳市亿通标准技术有限公司 检测专用章

** The MSDS is prepared based on the information provided by client. The contents and formats of this MSDS are revised as per client's request.*
这份材料安全数据表是根据客户提供的信息编辑，其内容和格式按客户要求来修订。

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

Name of Goods 产品名称	Rechargeable Li-ion Battery 可充电锂离子电池	Weight (g) 重量（g）	6.313
Model 型号	DTP472428	Dimension (mm) L×W×T 尺寸（mm）L×W×T	30.5×24.5×4.9
Ratings 额定参数	3.8V, 400mAh, 1.52Wh	Trade Mark/ Identification 商标/识别码	--
Manufacturer 制造商	Dongguan Data Power Technology Ltd. 东莞市德泰能源有限公司		
Address of Manufacturer 制造商地址	Room 401, Building 4, No. 235, Luomu Road, Qingxi Town, Dongguan City, Guangdong Province 广东省东莞市清溪镇罗马路235号4号楼401室		
E-mail 邮箱	lgh1314666@163.com	24-Hour Emergency Hotline 24小时紧急联络电话	+86-13088806939
Fax 传真	--	Web 网址	--

Section 2 - Composition Information
第二部分 – 成分信息

Chemical composition 化学成分	CAS No. CAS号	Concentration ranges (%) 浓度范围（%）	Chemical composition 化学成分	CAS No. CAS号	Concentration ranges (%) 浓度范围（%）
Lithium Cobalt Oxide 钴酸锂	12190-79-3	32.45	Copper Foil 铜箔	7440-50-8	9.02
Graphite 石墨	7782-42-5	21.3	Separator 隔离膜	9002-88-4	0.95
Lithium Hexafluorophosphate 六氟磷酸锂	21324-40-3	14.56	Aluminium Foil 铝箔	7429-90-5	8.77
Nickel 镍	7440-02-0	1.83	Ethylene Glycol Dimethyl Ether 乙二醇二甲醚	110-71-4	9.02
Polypropylene 聚丙烯	9003-07-0	2.0	Others 其他	-	0.1

Section 3 - Hazards Identification 第三部分 – 危险性概述	
Emergency Overview 紧急情况概述	Not applicable 不适用
Classification According to GHS GHS分类	Not a dangerous substance according to GHS 不属于GHS危险物品
Label Elements 标签元素	
Hazard Pictogram(s) 危险标签图	Not applicable 不适用
Signal Word 提示语	Not applicable 不适用
Hazard Statement(s) 危险声明	Not applicable 不适用
Precautionary Statement(s) 预防声明	
Prevention 预防	Not applicable 不适用
Response 反应	Not applicable 不适用
Disposal 废弃处理	Not applicable 不适用
Environmental Hazards 环境危害	No relevant information 无相关信息
Important Symptoms 重要症状	See section 11 for more information 见第11部分更多信息

Section 4 - First Aid Measures 第四部分 – 急救措施	
Eye Contact 眼睛接触	Flush eyes with plenty of water for least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. 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。
Skin Contact 皮肤接触	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid. 万一接触，用大量的水冲洗至少15分钟，同时除去污染的衣物和鞋子，迅速就医。
Inhalation 吸入	Remove from exposure and move to fresh air immediately. Use oxygen if available. 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。
Ingestion 摄入	Induce vomiting unless patient is unconscious. Call a physician. 如果当事人仍然清晰可以采取催吐的方法，并且立即就医。

Section 5 - Fire Fighting Measures 第五部分 – 消防措施	
Characteristics of Hazard 危险特性	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. 该产品会导致眼睛，皮肤和粘膜灼伤。热分解可能导致释放刺激性气体和蒸汽。
Hazardous Combustion Products 燃烧产生的危险物品	Carbon monoxide, Carbon dioxide, Lithium oxide fumes. 一氧化碳，二氧化碳，锂氧化物烟气
Fire-extinguishing Methods and Extinguishing Media 灭火方法及灭火剂	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. 使用适合当地情况和周围环境的灭火措施。
Attention in Fire-extinguishing 灭火注意事项	Wear self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. 因为压强关系，要穿戴可呼吸式全身防护装备，MSHA/NIOSH（经认证或等效的），以及佩戴全套防护装置。

Section 6 - Accidental Release Measures 第六部分 – 泄露应急处理	
Personal Precautions, Protective Equipment and Emergency Procedures 个人预防措施、保护设备和应急程序	In case of rupture. Attention! Corrosive material. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Refer to protective measures listed in Sections 7 and 8. 万一破裂。注意！腐蚀性物质。避免接触皮肤，眼睛或衣服。确保空气流通。根据需要使用个人防护装备。将人员撤离到安全区域。让人们远离溢出/泄漏处和处于逆风。参考第七部分和第八部分中列出的防护措施。
Environment Precautions 环境预防措施	Prevent product from contaminating soil and from entering sewers or waterways. 防止产品污染土壤和进入下水道或水道。
Methods And Material for Containment 方法和材料控制	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately. 出于安全，阻止泄漏，可以用干砂或泥土来遏制液体溢出，立即清理溢出物。
Methods and Materials for Cleaning Up 清理的方法和材料	Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all 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（干砂或泥土）吸收溢出的材料。污染物转移到可接受的废物容器中。收集所有受污染的吸收剂，按照第十三部分的说明进行处理。用洗涤剂和水清洁污染区域，收集所有受污染的洗涤水，妥善处理。

Section 7 - Handling and Storage 第七部分 – 操作处置和储存	
Handling 操作处置	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. 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。禁止短路或将电池正负极错误的安装在设备中。
Storage 储存	Store in a cool, dry, well-ventilated area away from incompatible substances. Store locked up. Keep out of the reach of children. 储藏于阴凉，干燥，通风处，远离接触会发生反应的材料。存储锁定。放在儿童无法接触的地方。
Other Precautions 其他注意事项	In case of rupture. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection equipment. 万一破裂。按照良好的工业卫生和安全规范进行操作。避免接触皮肤，眼睛或衣服。使用个人防护设备。

Section 8 - Exposure Controls/Personal Protection 第八部分 – 接触控制和个体防护	
Engineering Controls 工程控制	Use adequate ventilation to keep airborne concentrations low. If used under conditions that generate particulates, the ACGIH TLV-TWA of 3mg/m^3 respirable fraction (10mg/m^3 total) should be observed. 保证空气流通使空气密度保持在低水平。如果在会生成微粒的情况下使用，应仔细观察 3mg/m^3 ACGIH TLV-TWA 3 的吸入量（总量为 10mg/m^3）。
Personal Protective Equipment 个人防护装备	Eye and Face Protection: None required for consumer use. If there is a Hazard of contact: Tight sealing safety goggles. Face protection shield. Skin and Body Protection: None required for consumer use. If there is a Hazard of contact: Wear protective gloves and protective clothing. Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. 眼睛和脸部保护：消费者无需使用。如果有接触危险：密封安全护目镜。面部防护罩。 皮肤和身体防护：消费者无需使用。如果有接触危险：穿戴防护手套和防护服。 呼吸系统防护：正常使用条件下不需要防护设备。如果超过暴露限值或发生刺激，可能需要通风和疏散。
Hygiene Measures 卫生措施	Do not eat, drink, or smoke in work area. Maintain good housekeeping. 在工作区域不得进食，饮水或吸烟。

Section 9 - Physical and Chemical Properties 第九部分 – 物理和化学特性	
Shape 形状	Cuboid 长方体
Color 颜色	Silver 银色
Odur 气味	If leaking, smells of medical ether. 泄漏时，医用乙醚的气味。
pH Value 酸碱度	Not applicable 不适用
Melting Point/Freezing Point 熔点/凝固点	Not applicable 不适用
Boiling Point and Boiling Range 沸点、沸点范围	Not applicable 不适用
Flash Point 易燃度	Not applicable 不适用
Upper/Lower Flammability or Explosive Limits 自燃或爆炸的上、下极限	Not applicable 不适用
Vapor Pressure 蒸汽压	Not applicable 不适用
Vapor Density 蒸汽密度	Not applicable 不适用
Relative Density 相对密度	Not applicable 不适用
Solubility in Water 水溶性	Not applicable 不适用
Auto-Ignition Temperature 自燃温度	Not applicable 不适用
Decomposition Temperature 分解温度	Not applicable 不适用
Evaporation Rate 蒸发速率	Not applicable 不适用
Flammability (Soil, Gas) 易燃性（土壤、天然气）	Not applicable 不适用

Section 10 - Stability and reactivity 第十部分 – 稳定性和反应活性	
Chemical Stability 化学稳定性	Stable under recommended storage conditions. 在推荐的储存条件下可以保持稳定。
Conditions to Avoid 应避免的条件	Incinerate. Deform, Mutilate, Crush, Disassemble, Overcharge, Short circuit, Expose over a long period to humid conditions. 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。
Incompatible Materials 不兼容的材料	Oxidizing agents, acid, base. 氧化剂，酸，碱。
Hazardous Decomposition Products 危险分解物	Carbon monoxide, carbon dioxide, lithium oxide fumes. 一氧化碳、二氧化碳、氧化锂烟雾。
Possibility of Hazardous Reaction 危险反应的可能性	Not applicable 不适用

Section 11 – Toxicological Information 第十一部分 – 毒理学资料	
Irritation 刺激	In the event of exposure to internal contents, vapor fumes may be very irritating to the eyes and skin. 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。
Sensitization 致过敏	Not applicable 不适用
Neurological Effects 影响神经系统	Not applicable 不适用
Reproductive Toxicity 再生毒性	Not applicable 不适用
Mutagenicity (Genetic Effects) 诱变（遗传效应）	Not applicable 不适用
Toxicologically Synergistic Materials 附带材料毒理性	Not applicable 不适用

Section 12 - Ecological Information 第十二部分 – 生态学资料	
General Note 通用信息	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. 不允许未稀释或大量的产品接触地下水、水道或污水处理系统。
Ecological Toxicity 生态毒性	Not applicable 不适用
Mobility in Soil 在土壤中的流动性	Not applicable 不适用
Persistence And Degradability 持久性和分解性	Not applicable 不适用
Bioaccumulation Potential 生物聚积	Not applicable 不适用
Other Adverse Effects 其他不利影响	Not applicable 不适用

Section 13 - Disposal Considerations 第十三部分 – 废弃处置	
Product Disposal Recommendation 产品废弃处理建议	Observe local, state and federal laws and regulations. 遵守当地、州和联邦法律和法规。
Packaging Disposal Recommendation 包装处理建议	Disposal must be made according to official regulations 废弃处理必须根据当地法规

Section 14 – Transport Information 第十四部分 – 运输信息	
UN Number 联合国货物编号（UN编号）	UN 3480 or UN 3481 UN 3480 或 UN 3481
UN Proper Shipping Name 联合国运输专用名称	Lithium ion Batteries (Including lithium ion polymer batteries) (limited to a maximum of 30% SoC) or; 锂离子电池（包括锂离子聚合物电池）（荷电状态不得超过其额定容量的 30%）或； Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) or; 与设备一起包装的锂离子电池（包括锂离子聚合物电池）或； Lithium ion Batteries contained in equipment (Including lithium ion polymer batteries). 包含在设备中的锂离子电池（包括锂离子聚合物电池）。
Label(s) / Placard Required 标签/标牌要求	Miscellaneous Lithium BATT 杂项锂电池
LCAO/IATA 国际民间航空组织/国际航空运输协会	Can be shipped by air in accordance with international Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA) DGR Packing Instructions (PI) 965 Section IB, PI 966 Section II and PI 967 Section II appropriate of IATA DGR 67th for transportation. 可根据国际民用航空组织（ICAO），TI 或国际航空协会（IATA），DGR 67版本包装说明（PI）965第 IB 节规定或 PI 966～PI 967第II节规定进行空运。
IMDG CODE 国际海运危险货物规则	The batteries are not restricted to IMDG CODE AMDT 42-24 according to special provision 188. 根据特殊规定 188，该电池不受 IMDG CODE AMDT 42-24 限制。
DOT 美国运输部	Other requirements for the US Department of Transportation (DOT) 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 分章中的其他规定，运输符合要求 49 CFR 173.185。
ADR/AND 欧洲国际陆运危险货物协定/关于内陆水道国际运输危险货物的欧洲协定	Not Restricted as per IMDG CODE Special Provision 188. 根据 IMDG CODE 特殊规定 188 不受限制。
The dangerous goods regulations require that each battery design be subject to tests contained in Section 38.3 of the UN Manual of Tests and Criteria prior to being offered for transport. 危险品规例规定，运输前，每一个电池设计须通过联合国试验和标准手册 38.3 节所载的测试。	

Section 15 - Regulatory information
第十五部分 – 法规信息

《Dangerous Goods Regulations》

《危险物品规则》

《Recommendations on the Transport of Dangerous Goods》

联合国《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

联合国《关于危险货物运输的建议书试验和标准手册》

International Air Transport Association

《国际航空运输协会》

International Maritime Dangerous Goods

《国际海运危险货物规则》

Technical Instructions for the Safe Transport of Dangerous Goods

《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号》

2012 OSHA Hazard Communication Standard

2012《职业安全与健康标准》危险通信标准

Toxic Substance Control Act

《有毒物质控制法》

Toxic Substance Control Act (TSCA)

《消费产品安全法》

Resource Conservation and Recovery Act (RCRA)

《安全饮用水法》

Code of Federal Regulations

《联邦条例》

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 – 其它信息

The information in this MSDS is compiled based on the relevant material information provided by the client and the manufacturer. This report describes the health, safety and environmental information of the product, solely to better assist users in understanding this product. All the information in this MSDS is for reference, research and investigation purposes only. This report cannot serve as a guarantee for achieving any specific purpose through the use of this product. It is recommended that the use of this product should be evaluated first to determine if it meets your usage requirements.

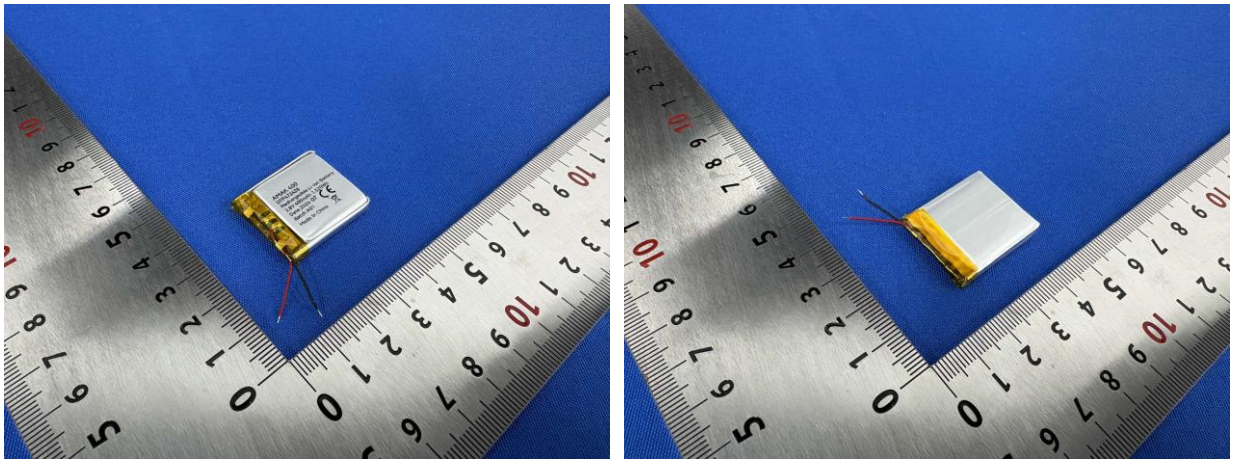
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如在实际使用过程中出现其他未预料的情况，导致其相应信息被修改，或因使用不当造成的损害或损失，本单位将不承担任何责任。

Photo of the sample

样品照片



-- End of Report --

-- 报告结束 --