

材料安全数据表

Material Safety Data Sheet

样品名称: 锂二氧化锰电池 3.0V
Name of Product: Primary Li-MnO₂ Battery 3.0V

生产厂家: 武汉昊诚锂电科技股份有限公司
Manufacturer: HCB Battery Co., Ltd

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1. 化学品及企业标识 Product and Company Identification

型号 Type/Model	CR123A 3.0V 1500mAh 4.5Wh
生产厂家 Manufacturer	武汉昊诚锂电科技股份有限公司 HCB BATTERY CO., LTD
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2. 成分信息 Composition Information

化学成分 Ingredient	重量百分比 Concentration %	CAS号 CAS No.	备注 Remarks
锂 Lithium	1.0~2.0(0.43g)	7439-93-2	—
碳 Carbon	0.5~1.0	7440-44-0	—
二氧化锰 Manganese Dioxide	30.0~40.0	1313-13-9	—
乙二醇二甲醚 1,2-Dimethoxyethane	3.0~4.0	110-71-4	—
碳酸丙烯酯 Propylene Carbonate	3.0~4.0	108-32-7	—
高氯酸锂 Lithium perchlorate	0.5~1.0	9971-03-9	—
不锈钢 Stainless Steel	25.0~35.0	12597-68-1	—
其他 Others	10.0~20.0	Not specified	—

3. 危险性描述 Hazards Identification

危险货物类别:第9类, 杂类。

暴露方式:眼睛和皮肤接触, 吸入电池泄放的有害气体。

健康危害:没有专门的毒理学研究。避免与电池材料直接接触。避免吸入。

环境危害:无已知环境危害。

燃烧危险:不得加热超过85°C, 不得损毁、破坏、拆卸、过充、短路, 以免引起爆炸

Hazard classification: Class 9, miscellaneous.

Exposure way: Eye and skin contact, inhalation of the battery materials.

Health hazard: No specific toxicological study. Avoid direct contact with the battery materials. Avoid inhalation.

Environmental hazard: No known environmental hazard.

Combustion hazard: Do not heat over 85°C, do not deform, destroy, disassemble, overcharge, short-circuit which may cause explosion.

4. 急救措施 First-aid measures

皮肤: 万一接触, 用大量清水冲洗至少15分钟, 同时除去污染的衣物和鞋子, 迅速就医。

眼睛: 万一接触, 立即用大量清水冲洗至少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。

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。

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。

Skin contact: In case of skin contact with the battery materials, wash the exposed area with soap and rinse with plenty of fresh water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately.

Eye contact: In case of eye contact with the battery materials, lift the upper and lower eyelids, and immediately rinse the eyes with plenty of fresh water for at least 15 minutes to remove all the chemical residues. Get medical attention.

Inhalation: In case of inhalation of the battery materials, take the exposed person outside. If breathing is irregular, provide oxygen and get medical attention immediately.

Ingestion: In case of ingestion of the battery materials, do not induce vomiting. Get medical attention.

5. 消防措施 Fire fighting measures

灭火介质: 干化学品, 沙土, 二氧化碳。不要用水或泡沫。

消防: 防护装置: 佩戴自给式呼吸器和防护服, 防止皮肤和眼睛接触。从上风侧灭火。

Extinguishing media: Dry chemical, Sandy soil, Carbon dioxide. Do not use water or foam.

Firefighting: Protective Equipment: Wear self-contained breathing apparatus and protective clothes to prevent contact with skin and eyes. Put out the fire from windward side.

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: 如果电池内容材料泄露, 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。

Measures against accidental leakage of the battery electrolyte: For accidental leakage of the materials in the battery, use a clean shovel to collect the spill in a dry, clean, and capped disposable container. The disposal worker should wear appropriate protective clothing.

7. 操作处置和存储 Handling and Storage

操作注意事项:包装电池时, 注意正负极不能相互接触, 也不能接触其他金属。箱内或塑料袋内单个绝缘, 以防止短路和避免任何移动可能造成短路。包装车间严禁烟火, 并保持通风。

储存注意事项:将电池储存在阴凉通风的仓库中。请远离火源和热源。避免直接暴露在阳光下。将电池与强氧化剂和腐蚀性物质分开存放。在存储区域提供消防设备和意外泄漏处理设备。贮存温度: $\leq 30^{\circ}\text{C}$, 湿度: $\leq 75\% \text{RH}$ 。

Precautions for handling: When packaging the battery, the anode tab and the cathode tab should not contact each other, nor through other metal. Separate packaging is applied in the box or the plastic bag, so as to prevent short circuit and avoid any mobility that may cause short circuit. No smoking at the workplace. Provide ventilation system and equipment at the workplace.

Precautions for storage: Store the battery in a cool and ventilated warehouse. Keep it away from fire and heat sources. Avoid exposure to direct sunlight. Store the battery separated from strong oxidant and corrosives. Provide fire-fighting equipment and accidental leakage handling devices in the storage area. Storage temperature: $\leq 30^{\circ}\text{C}$, humidity: $\leq 75\% \text{RH}$.

8. 接触控制/个人防护 Exposure control/PPE

最大浓度:无标准。

监测方法:不适用。

工程控制:提供通风系统和设备。提供安全的淋浴和洗眼设备。

呼吸保护:在正常工作条件下, 无需进行呼吸保护。当电池泄放时, 尽量将通风设备开到最大功率。避免将漏液电池置于封闭的狭小空间内。

眼睛保护:在正常工作条件下, 不需要保护眼睛。如有必要, 请戴上护目镜。

身体防护:一般操作中应穿防护服。

手部保护:正常工作条件下手部不需要保护。如有必要, 请戴上安全手套。

其他保护措施:禁止在工作场所吸烟或进食。

Maximum concentration: No standard.

Monitoring method: Not applicable.

Engineering control: Provide ventilation system and equipment. Provide safe shower and eyewash equipment.

Respiratory protection: Respiratory protection is unnecessary under normal operating conditions. When the exhaust valve of the battery is on, try to turn on the ventilation equipment to the maximum power. Avoid cells in the exhaust valve confined in a narrow space.

Eye protection: Eye protection is unnecessary under normal operating conditions. If necessary, wear goggles.

Body protection: Wear protective clothing for general jobs.

Hand protection: Hand protection is unnecessary under normal operating conditions. If necessary, wear safety gloves.

Other protection: No smoking or eating at the workplace.

9. 物理和化学性能 Physical and chemical properties

外形: 圆柱形

气味: 无气味

燃点: 除单个电芯暴露试验外, 其他不适用

溶解性: 除单个电芯暴露试验外, 其他不适用

Product appearance: cylindrical.

Odor: odorless.

Flammability: Not applicable, except individual cell exposure test.

Solubility: Not applicable, except individual cell exposure test.

10. 稳定性和反应活性 Stability and reactivity

稳定性: 该产品在正常温度和大气压下稳定。

应避免的条件: 不正确的操作, 加热, 短路, 有短路风险的移动。

应避免的材料: 氧化剂, 碱, 水。

聚合危害: 不适用。

危险分解物: CO、CO₂、XO₂

Stability: The product is stable under normal temperature and pressure.

Conditions to avoid: Incorrect operation, heat, short circuit and mobility that may cause short circuit.

Incompatible materials: Oxidant, alkali, water.

Hazardous polymerization: Not applicable.

Hazardous decomposition products: CO、CO₂、XO₂

11. 毒理学资料 Toxicological information

标志及症状: 无, 除非电池破裂。

吸入: 对肺有刺激性。

皮肤接触: 对皮肤有刺激性。

眼睛接触: 对眼睛有刺激性。

食入: 吞下中毒。

Toxicity Data: Not available

Irritation Data: The internal battery materials may cause irritation to eyes and skin.

Mutagenicity: Not specified

Chronic toxicity: Not specified

12. 生态学资料 Ecological information

不适应 Not available

13. 废弃处置 Disposal consideration

在任何时候, 电池的处置都应遵守当地的规定。例如, 在中国处置电池应遵守《中华人民共和国固体废物污染环境防治法》、《废旧电池污染防治技术政策》等相关法律、法规、政策和标准。

The disposal of the battery should, at all times, comply with local regulations. For example, battery disposal in China should comply with *Law on the Prevention and Control of Environmental Pollution by Solid Wastes of the People's Republic of China*, *Pollution Prevention and Technology Policy for Spent Battery*, and other applicable laws, regulations, policies, and standards.

14. 运输信息 Transport information

正确的装运名称：锂金属电池

UN 编号：UN3090

危险等级：9

包装分类：IA

EMS 编号：F-A, S-I

空运：

货物应遵守 IATA DGR 手册包装说明 968 第 IA 章节运输条件的所有要求

海运：

本公司电池适用于《国际海上危险货物规范》IMDG 188

RID/ADR: Proper Shipping Name: Lithium metal batteries

UN Number: UN3090

Hazards Class: 9

Packing Group:IA

EmS No.: F-A, S-I

Air transportation:

The product shall meet the General Requirements and section IA of Packaging Instruction 968 (IATA DGR)

Sea transportation:

Our batteries are applicable to IMDG 188, international Maritime Dangerous Goods Code

15. 法规信息 Regulation information

IATA 危险品运输规则 62

UN38.3 运输规则

IMDG 编码：IPTPT: 4G

IATA *Dangerous Goods Regulations* Edition 62

38.3 UNITED NATIONS *Recommendations on the TRANSPORT of DANGEROUS GOODS Manual of Tests and Criteria*

IMDG Code: IPTPT: 4G

16. 其他信息 Further information

禁止焚烧

禁止长时间对电池烧焊

禁止充电

禁止过放电

未经允许禁止对电池进行串并联

禁止反极

禁止吞咽

禁止随意丢弃

发热或泄露情况下禁止使用
使用前认真阅读操作手册

- Do not incinerate.
- Do not weld the battery for long time.
- Do not recharge.
- No over-discharge.
- Do not connect the battery in series or in parallel without being authorized.
- Do not reverse.
- Do not swallow.
- Do not discard without instructions.
- Stop using it in case of heating or leakage.
- Read the manual carefully or contact the manufacturer before use.