

Material Safety Data Sheet

物质安全数据表

Section 1 - Chemical Product and Company Identification

第一部分：化学产品和公司标识

Product Name: LR03 ,LR6 ,LR14 ,LR20 ,LR1, 6LR61, 12V 23A, 12V 27A Alkaline battery

产品名称： LR03 ,LR6 ,LR14 ,LR20 ,LR1, 6LR61, 12V 23A, 12V 27A Alkaline battery 碱性锌锰干电池

Trade Name: RICHLIGHT / EXNNALL Battery

品牌：RICHLIGHT Battery

Sample Code: /

样品编号：

Manufacture: SHENZHEN RICHLIGHT TECHNOLOGY CO.,LTD

生产商：深圳鑫辉智能电子有限公司

Address: Rm411, No.2 Building, Minle Science & Technology Park, Minzhi Street, Longhua District, Shenzhen, CHINA

地址：深圳市龙华新区民治街道民乐科技园2栋411号

Post Code: 518109

邮编：518109

Tel: 0755-21008159

电话：0755-21008159

Emergency Telephone: 0755-21008159

紧急联系电话：0755-21008159

Fax: 0755-21008159

传真：0755-21008159

E-mail: Sales@richlight.net

Section 2 – Composition/Information on Ingredient

第二部分：组分信息

Chemical Name 化学名称	Molecular Formula 分子式	CAS No.	Weight (%) 重量百分比
Zinc 锌	Zn	7440-66-6	25~31
Manganese Dioxide 二氧化锰	MnO ₂	1313-13-9	25~35
ZNO 氧化锌	C	7440-44-0	9~12
Zinc Chloride 氯化锌	ZnCl ₂	7646-85-7	6
ELECTROLYTE(PR OPRITARY KOH) 氢	NH ₄ Cl	12125-02-9	1.3

氧化钾			
Copper 铜	Cu	7440-50-8	1
STEEL Shell钢壳	Fe	7439-89-6	12.6
Water 水	H ₂ O	7732-18-5	13~17
Polypropylene 聚丙烯	(C ₃ H ₆) _n	9003-07-0	2~3

Section 3 - Hazards Identification

第三部分：危险标识

No specific health hazards for normal use.

正常使用无特定的健康风险

Routes of Entry 摄入的途径

Eyes, Skin, Inhalation, Ingestion.眼睛，皮肤，吸入，下咽。

Health Hazards 健康危险

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is acute exposure when a battery vents. Leaking material exposure to skin, eyes may cause irritation. Inhalation of fumes may cause respiratory irritation.

这些化学物质装在密封容器中，仅当不正确使用电池时可能会产生泄漏，最有可能的风险是从电池排气孔中出现的突然的喷射。皮肤、眼睛暴露在泄漏物质中受到刺激，吸入这些物质可能会刺激呼吸道。

Sign/Symptoms of Exposure 泄漏

May be a reproductive hazard. Leaking can cause thermal and chemical burns upon contact with the skin.

可能产生再生的危害，泄漏可能会灼伤皮肤表面。

Section 4 - First Aid Measures

第四部分：急救措施

Eyes 眼睛

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

用大量清水冲洗至少15分钟，并不时眨眼，严重时请就医。

Skin 皮肤

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

移除污染衣物并用清水冲洗皮肤表面15分钟，严重时请就医。

Inhalation 吸入

Remove from exposure and move to fresh air immediately. Use oxygen if available. Get medical aid.

立即从泄漏场地移到空气清新的地方，如有可能，使用氧气，严重时请就医。

Ingestion 吞咽

Do not induce vomiting. Call a physician immediately.
请勿诱导呕吐，紧急就医。

Section 5 - Fire Fighting Measures

第五部分：消防措施

Flash Point: N/A.

闪点：N/A.

Auto-Ignition Temperature: N/A.

自燃点：N/A.

Extinguishing Media: CO₂, dry chemical.

灭火剂：CO₂, 干粉

Special Fire-Fighting Procedures: 特殊灭火过程

Self-contained breathing apparatus. 自吸式呼吸器

Unusual Fire and Explosion Hazards:

非常规火灾或爆炸危害

Cell may vent when subjected to excessive heat-exposing battery contents.

在暴露在高温环境下，电池可能会穿孔爆炸。

Hazardous Combustion Products 危险性可燃产品

Carbon monoxide, carbon dioxide, and other metal oxide fumes.

一氧化碳、二氧化碳及其他金属氧化物

Section 6 - Accidental Release Measures

第六部分：意外泄漏措施

Steps to Be Taken in Case Material is Released or Spilled

材料意外泄漏采取的措施

If the battery is accidental broken and leaks out, 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 batteries to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled material with absorbent.

如果电池意外破裂或泄漏,用布擦拭它,把它放在一个塑料袋里并放置在铁桶里。最好的反应就是离开这个区域,让电池冷却蒸汽消散。提供最大的通风。避免接触皮肤和眼睛或吸入蒸气。用吸收剂清理泄漏的材料。

Waste Disposal Method 废弃物处理

It is recommended to discharge the battery to the end, handing in the abandoned battery to related department to dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

建议电池彻底放电，把废弃的电池交由有关部门根据当地的法律法规统一处置，或咨询国家环保部门。

Section 7 - Handling and Storage

第七部分搬运和储存

The batteries 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 charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

电池不可以打开、破损或焚烧，因为他们可能会泄漏或破裂，释放密封容器中的电池组分到环境中。不可以短路、充电、过放电、扔入火中。不要撞击、击打或浸入水中。

Precautions to be taken in handling and storing

搬运和储存注意事项

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.

防止安装错误或乱用，储存在干燥、阴凉和通风的地方，电池对温度变化敏感，不要储存在高温环境下，不要存放在加热设备附近，不要长时间暴露在阳光下。

Other Precautions 其他注意事项

Do not short or install with incorrect polarity.

不可以短路或正负极安装错误。

Section 8 - Exposure Controls, Personal Protection

第八部分泄漏控制，人员防护

Respiratory Protection 呼吸防护

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory Protection is not necessary under conditions of normal use.

由于电池有通风孔，应提供足够的通风，避免放置在狭窄的区域；在正常使用状态下无需呼吸防护。

Other Protective Clothing or Equipment 其他防护服或设备

Not necessary under conditions of normal use. personal protection is recommended for venting batteries: respiratory protection, protective gloves, protective clothing and safety glass with side shields.

在正常使用状态下不需要，在电池通风时建议做好个人防护、呼吸防护，使用保护手套、防护服和防护眼镜。

Section 9 - Physical and Chemical Properties

Nominal Voltage: 1.5V

第九部分：理化性质

标称电压：1.5V

Appearance characters: Black with odorless columned battery.

外观：黑色无味圆柱状电池

Section 10 - Stability and Reactivity

第十部分：稳定性和反应

Stability 稳定性

Stable for normal.

正常状态下稳定

Conditions to Avoid 避免的情形

Heating, fire, mechanical abuse and electrical abuse.

加热、明火、安装错误和使用不当

Hazardous Decomposition Products 危险变质产品

When exposed to fire or extreme heat, batteries may emit toxic fumes.

如果暴露在火中或急剧加热，电池可能会释放出有毒烟雾。

Section 11 - Toxicological Information

第十一部分毒素信息

Inhalation, skin contact and eye contact are possible when the battery is opened. Exposure to internal contents, the corrosive fumes will be irritation to skin, eye and mucous membranes. Overexposure can cause symptoms of non-fibroid lung injury and membrane irritation.

当电池打开后，可能会出现吸入、皮肤接触和眼睛接触。如果接触内部的物质，腐蚀性烟雾可能会刺激皮肤、眼睛和粘膜。过度接触可能会导致肺纤维化和粘膜刺激。

Section 12 - Ecological Information

第十二部分生态学信息

When promptly used or disposed the battery does not present environmental hazard.

When disposed, keep away from water, rain and snow.

当迅速使用或处置后，电池不会对环境产生危害，处置时不要接近水。

Section 13 - Disposal Considerations

第十三部分处置注意事项

Appropriate Method of Disposal of Substance or Preparation

处置的恰当措施或准备

Dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency.

按照国家有关法律法规规定处置电池，或咨询国家环保部门。

Section 14 - Transport Information

第十四部分运输要求

RICHLIGHT / EXNNALL batteries are considered to be "Dry cell

batteries and are unregulated for purpose of transportation by the U.S. DOT,

ICAO, IATA and IMDG. The only DOT

requirement for shipping these batteries is special provision 130 which states:

"Batteries, dry are not subject to the requirements of this sub chapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals). The only

requirement for shipping these batteries by ICAO and IATA is Special Provision A123 which states: "An electrical battery or battery powered device having the potential of

dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transportation." The international Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says : Batteries, dry , containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits. Example of such batteries is: alkali-manganese, zinc carbon, nickel metal hydride and nickel-cadmium batteries. Such batteries have been packed in inner packaging in such a manner as to effectively prevent short circuit and movement that could lead to short-circuit.

RICHLIGHT / EXNNALL电池为干电池，U.S. DOT, ICAO, IATA and IMDG没有对其运输作出特别要求。DOT仅130号条款对电池运输作出了特别要求：当运输途中采取了防止热聚积的措施，干电池运输不受该节条款约束（例如对暴露的电池极端采取隔热保护）。ICAO 和IATA只有A123条款对此类干电池运输作出要求：没有采取措施防止电池极端热量聚积和短路的干电池（例如，对于干电池，暴露的极端进行有效的隔热防护，对于设备，断开电池连接，保护电池极端）不得进行运输。国际海洋危险商品运输规则

304条款规定：干电池，在电池外箱破裂的情形下，电池里面的腐蚀性电解液不会随电池流出的，只要电池包装牢固，极端保护良好，则受本规定的约束。此类电池有碱性锌锰电池、碳性电池、镍氢和镍镉电池，这些电池都包装在内箱里，防止短路，或者在移动中的短路。

Transport Mode: By air, by sea, by railway, by highway.

运输方式: 海运、空运、铁路、公路。

Section 15 - Regulatory Information

第十五部分适用法律

Law Information

Dangerous Goods Regulation

Recommendations on the Transport of Dangerous Goods Model Regulations

International Maritime Dangerous Goods

Technical Instructions for the Safe Transport of Dangerous Goods

Classification and code of dangerous goods

Occupational Safety and Health Act (OSHA)

Toxic Substances Control Act (TSCA)

Consumer Product Safety Act (CPSA)

Federal Environmental Pollution Control Act (FEPCA)

The Oil Pollution Act (OPA)

Superfund Amendments and Reauthorization Act Title III

(302/311/312/313) (SARA)

Resource Conservation and Recovery Act (RCRA)

Safety Drinking Water Act (CWA)

California Proposition 65

Code of Federal Regulations (CFR)

In accordance with all Federal, State and Local laws.

Section 16 - Additional Information

第十六部分其他信息

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

以上信息基于数据准确的基础上，因为此信息可能在我们无法控制的情况下被应用，或被修改，对此我们不负担任何责任。此信息在收件人决定对材料的专有目的的情况下而配置。

MSDS Creation Date: January 1, 2024

