



Report No. : CESMSDS211126027



Material Safety Data Sheet

材料安全数据表

Name of Sample: Alkaline Zn/MnO₂ Battery

产品名称 : 碱性锌锰电池

Model Specification:

产品型号 : MN2400 AAA(1.5V LR03)

Client: Duracell (China) Limited

委托单位 : 金霸王 (中国) 有限公司

先进储能材料国家工程研究中心有限责任公司检测中心

Test Center of Advanced National Engineering Research Center of Storage Materials



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Material Safety Data Sheet

材料安全数据表

Section 1——Chemical Product and Company Identification 化学品及企业标识					
Product Name: 产品名称:	Alkaline Zn/MnO ₂ Battery 碱性锌锰电池				
Type/Mode: 样品型号:	MN2400 AAA(1.5V LR03)				
Commissioned by: 委托单位:	Duracell (China) Limited 金霸王（中国）有限公司				
Commissioner address: 委托单位地址:	HongTu Hing & New Technology Development Zone, Nan Cheng District City, Guangdong, 523080, China 中国东莞市南城宏图高新科技开发区				
Manufacturer: 生产单位:	Duracell (China) Limited 金霸王（中国）有限公司				
Inspection according to: 鉴定依据:	EEC Directive 93/112/EC UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS" 联合国《关于危险品货物运输的建议书》				
Emergency telephone call: 应急电话:	769-22403615-373				
Receiving Date 接样日期	2021-11-26	Issue Date 签发日期	2021-12-15	Effective Date 生效日期	2022-01-01



Approved by:

Reviewed by:

Written by:

Section 2. Composition/information on Ingredient

成分/组成信息

Chemical Name 化学品名称	Chemical Formula 化学式	CAS No. CAS 号	Composition 成份 (in % by weight) (重量百分比)
Zinc 锌	Zn	7440-66-6	10-25
Manganese Dioxide 二氧化锰	MnO ₂	1313-13-9	35-40
Aqueous Potassium hydroxide 水合氢氧化钾	KOH (H ₂ O)	1310-58-3	5-10
Other 其他	--	--	25-50

Section 3. Hazards Identification

危险性概述

Important notes : Use under normal conditions, the battery is hermetically sealed.

重要提示: 在正常情况下使用，电池是密封的。

Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. Immediately see doctor .

吞食: 吞食电池是有害的。电池中的内容物会对口腔、食道和胃肠道造成严重的化学灼伤。若不慎吞食应立即看医生。

Inhalation: Contents of an open battery can cause respiratory irritation.

吸入: 吸入电池内容物可能导致呼吸道过敏。

Skin Contact: Contents of an open battery can cause skin irritation/ or chemical burns.

皮肤接触: 电池内容物可能引起皮肤刺激/或化学烧伤。

Eye Contact: Contents of an open battery can cause severe irritation and chemical burns.

眼睛接触: 电池内容物会引起严重的刺激和化学烧伤。

Section 4. First aid measures

急救措施

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately. Call National Battery Ingestion Hotline for advice.

食入: 请勿催吐或喂出食物或饮料。应立即就医。拨打全国电池摄入热线咨询。

Inhalation: If potential for exposure to fumes or dusts occurs, remove immediately to fresh air and seek medical attention.

吸入: 如暴露于烟雾或粉尘中，立即转移到新鲜空气中并寻求医疗照顾。

Skin Contact: Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

皮肤接触: 脱去被污染的衣服，用肥皂和水清洗皮肤。如果发生化学灼伤或刺激持续，应就医。

Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and

lower lids, until no evidence of the chemical remains. Seek medical attention.

眼睛接触: 立即用清水彻底冲洗眼睛至少 15 分钟, 抬起上眼睑和下眼睑, 直到没有化学物质残留。并就医。

Section 5. Fire-fighting measures

消防措施

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

在发生火灾时, 允许在这些电池或其包装材料上使用任何种类的灭火剂。如果暴露在火中, 冷却电池的外部以防止破裂。

Fire fighters should wear self-contained breathing apparatus.

消防队员应佩戴自给式呼吸器。

Section 6. Accidental release measures

泄露应急处理

To cleanup leaking batteries:

清理泄漏的电池:

Ventilation Requirements: Room ventilation may be required in areas where there are open or leaking batteries.

通风要求: 电池开启或泄漏的区域可能需要室内通风。

Eye Protection: Wear safety glasses with side shields if handling an open or leaking battery.

眼睛保护: 如果处理的是打开或泄漏的电池, 请佩戴有侧护罩的安全眼镜。

Gloves: Use neoprene or natural rubber gloves if handling an open or leaking battery. Battery materials should be collected in a leak-proof container.

手套: 使用氯丁橡胶或天然橡胶手套, 如果处理开放或泄漏的电池。电池材料应收集在一个防泄漏的容器中。

Section 7. Handling and storage

操作处置和储存

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

储存: 储存于阴凉通风处。高温会导致电池寿命缩短。

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your factory representative for precautionary suggestions.

机械密封: 如果需要在密封或水密容器中密封或密封电池, 请咨询您的工厂代表以获得预防建议。

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

处理: 意外短路数秒不会严重影响电池。长时间的短路会导致电池失去能量, 并会导致安全释放气孔打开。短路的来源包括散装容器中混杂的电池、金属首饰、金属覆盖的桌子或用于将电池组装成

设备的金属皮带。

Section 8. Exposure controls/personal protection

接触控制/个人防护

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.

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。

Ventilation Not necessary under conditions of normal use.

通风条件 正常使用条件下不必考虑。

Protective Gloves Not necessary under conditions of normal use.

防护手套 正常使用条件下不必考虑。

Other Protective Clothing or Equipment Not necessary under conditions of normal use.

其他防护服装或设备 正常使用条件下不必考虑。

Personal Protection is recommended for venting battery Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

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是要准备的。

Section 9. Physical and chemical properties

物理和化学特性

Appearance: Cylindrical

外形: 圆柱形

pH: Not applicable as supplied.

酸碱度: 不适用

Flash Point: Not applicable unless individual components exposed.

闪点: 针对单个组分暴露情况, 其他不适用。

Flammability: Not applicable unless individual components exposed.

易燃度: 针对单个组分暴露情况, 其他不适用。

Relative density: Not applicable unless individual components exposed.

相对密度: 针对单个组分暴露情况, 其他不适用。

Solubility (water): Not applicable unless individual components exposed

溶解性 (水溶性): 针对单个组分暴露情况, 其他不适用。

Solubility (other): Not applicable unless individual components exposed.

溶解性 (其他): 针对单个组分暴露情况, 其他不适用

Section 10. Stability and reactivity

稳定性和反应活性

Stability:

Unstable Conditions to Avoid.

避免不稳定的情况。

Hazardous Decomposition or Byproducts.

有害的分解或副产品。

The Alkaline Battery do not meet any of the criteria established in 40 CFR 261.2 of reactivity.

碱性电池反应活性不符合 40 CFR 261.2 中规定的任何标准。

Section 11. Toxicological information

毒理学资料

Manganese Dioxide: Harmful by inhalation or ingestion. Long term exposure to manganese compounds may reduce fertility in men.

二氧化锰：吸入或摄入是有害的。长期接触锰化合物可能降低男性的生育能力。

Toxicity data: ORL-RAT LD50 > 3478 mg/kg

毒性数据：ORL-RAT LD50 > 3478 mg/kg

Zinc: May be harmful if swallowed or inhaled. May cause gastrointestinal irritant.

锌：吞食或吸入可能是有害的。可能引起胃肠刺激。

Section 12. Ecological information

生态学资料

Environmental Precautions: This product may be non-hazardous in ordinary use and may be discarded in accordance with applicable governmental regulations and take order with the demands of the environmental protection section.

环境注意事项：本产品在普通使用中可能是无害的，可能按照适用的政府法规和环境保护部门的要求被丢弃。

Environmental Toxicity: On the basis of available information, this material is not expected to produce any significant adverse environmental effects when recommended use instructions are followed.

环境毒性：根据现有信息，当按照推荐的使用说明使用时，预计该材料不会产生任何显著的不良环境影响。

Section 13. Disposal consideration

废弃处置

Individual consumers may dispose of spent (used) batteries with household trash, should be put into the waste battery recycling bucket. This product does not recommend that spent batteries be accumulated. Do not incinerate, since batteries may explode at excessive temperature.

个人消费者可能会把用过的电池和家庭垃圾一起处理掉，应放入废旧电池回收桶中。本产品不建议将用过的电池积累起来。不要焚烧，因为电池在高温下可能爆炸。

Section 14. Transport information

运输信息

The Batteries in all forms of transportation (e.g. Truck, air, or sea) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in (Strong Carton / Packaging) that prevents spillage of contents.

所有运输方式(如卡车、空运或海运)的电池必须以安全可靠的方式包装。所有安全包装机构的监管要求，电池应以防止短路的方式包装，并装入(坚固的纸箱/包装)以防止内容物外溢。

These batteries are not regulated by IMO IMDG, not classified by IMO IMDG. The substance is not subject to IMO IMDG, not subject to the dangerous goods regulations provided they meet the

requirement contained in the following special provisions.

Regulatory Parties	Special Provisions
ADR	Not Regulated
IMDG	Not Regulated
UN, ICAO	Not Regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123

此电池不受 IMO IMDG 管理, 不被 IMO IMDG 分类。该物质不受国际海事组织《国际危规》的限制, 不受危险品规例的限制, 只要它们符合下列特别条款所载的要求。

规则	特殊规定
ADR	无要求
IMDG	无要求
UN, ICAO	无要求
US DOT	49 CFR 172.102 Provision 130
IATA	A123

All Alkaline Zinc-Manganese Dioxide Dry Batteries are packed in a safe and responsible manner to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, The IATA Dangerous Goods Regulations ICAO Technical Instructions require the words "Not Restricted" and the Special Provision No: A123 be provided on the air waybill, when an air waybill is issued.

所有碱性锌锰干电池都以安全可靠的方式包装, 以防止短路或产生危险的热量, 并满足上述特殊规定。此外, 《国际航空运输协会危险品条例》和《国际民航组织技术说明》要求, 在签发航空运单时, 航空运单上应注明“不受限”字样和特别规定编号: A123。

Section 15 Regulation information

法规信息

Batteries are not classified as dangerous goods by US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

电池不被美国运输部或主要国际监管机构列为危险货物, 因此不受监管。

Section 16 Other information

其他信息

This data is offered in good faith as typical values and not as a product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. No warranty, either expressed or implied is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

这些数据是作为典型值而不是作为产品规格提供的。本数据表中的信息是根据该化合物成分的供应商提供的信息编制的。在此不作任何明示或默示保证。推荐的工业卫生和安全处理程序被认为是普遍适用的。但是, 每个用户都应该在预期使用的特定上下文中审查这些建议, 并确定它们是否合适。

-- End of Report --