Material Safety Data Sheet

1. Chemical Product and Company Identification

Date of Issue : 02 Jan 2026

Product Name : LR14 C AM2 1.5V NO.662A0 Zinc-Manganese Alkaline Battery

Supplier : Guangzhou Tiger Head Battery Group Co., Ltd
Floor 28, Top Plaza East Tower, No.222 Xingmin Road,
Zhujiang New Town, Tianhe District, Guangzhou, China

Emergency Phone No. : 020-85525623 ext. 8901

Manufacturer : YuNan Tiger Head Power Supply Science and Technology Ltd.
Shaziling, Ducheng Town, YuNan County,
GuangDong Province

2. Composition/ Information on Ingredients

Chemical/Size	LR14 / C AM2	CAS Registry No
Weight	72 g	
Mercury	<1ppm	7439-97-6
Cadmium	<5ppm	7440-43-9
Lead	<10ppm	7439-92-1
Zinc Powder	16.00%	7440-66-6
Carbon	3.50%	7782-42-5
Manganese Dioxide	40.00%	1313-13-9
Steel	19.50%	12597-69-2
Brass (68% copper)	1.50%	63338-02-3
Plastic	1.20%	900288-4
Paper	0.80%	9004-34-6
Potassium hydroxide	8.50%	1310-58-3
Water	8.50%	7732-18-5
Zinc oxide	0.50%	1314-13-2
Total	100%	

The components in this section may only represent a hazard, if the batteries are damaged.

3. Hazards Identification:

Warning: When recharge batteries or discard in the fire or use used battery with new one, or connected improperly may cause battery vent, leak or explode.

Damaged batteries may cause skin and eye burn, may cause respiratory tract irritation.

4. First-aid Measure

General speaking it is not expected to result in situation that requires first-aid measure, except the damaged batteries may cause they release the contents.

Inhalation: If vapours or fumes from vented or leaked batteries are irritation, move to fresh air and get medical attention.

Eyes: Check for and remove any contact lens, flush eyes with plenty of water, holding eyelids open, for at least 20 minutes, get medical help.

Skin: Immediately move the metal fragments and chemical components flush skin with plenty of water at least 15 minutes, get medical, if necessary,

Ingestion: Get immediately medical attention, do not induce vomiting or give a liquid to unconscious person.

5. Fire Fighting Measure:

Extinguishing media: Use appropriate agent for adjacent fire.

Flash point: Not available.

Auto-ignition temperature: Not available.

Flammable limits: Not available.

Products of combustion: Zinc oxide, manganese oxide.

6. Accidental Release Measure:

Not available.

7. Handling and Storage:

Precaution: Handling and transfer the products with care, make sure the packing always in good condition.

Damaged packing may cause batteries contact together, in this case batteries may short circuit or improperly connected, it cause batteries venting, leaking or exploding.

Storage: Store in a dry, cool and well-ventilated area.

8. Exposure control / Personal protection

Exposure control: If necessary, set local exhaust ventilation.

Personal protection: Gloves, safety glass, dust respirator.

9. Physical and Chemical Properties

Physical State and Appearance: Solid.

Melting Point : Not applicable.

Vapour pressure: Not available.

PH (1% soln/water): Not available.

Solubility: Insoluble.

Volatility: Not available.

Specific gravity: (water=1) not applicable

Odour: Odourless.

Taste: Not available.

10. Stability and Reactivity

Stability: The products are stable.

Instability temperature: Not available.

Incompatibility: Reactive with acids and alkalis.

Corrosivity: None.

Hazardous Polymerization: Will not occur.

11. Toxicological information

Note: Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

Toxicity to Animals: Not applicable.

Chronic Effects on Human: Not applicable.

12. Ecological information

This product has not been tested for environmental effects.

13. Disposal consideration

Waste disposal: Consult your local or regional authorities, disposal maybe subject to national, state, or local laws.

14. Regulatory information

ACGH: American Conference of Government Industrial Hygiene.

IARC: International Agency for Research Cancer.

NPT: US National Toxicology Program.

NIOSH: National Institute of Occupational Safety and Health

ACGIH, documentation on TLVS and BELS 1992-1993

ACGIH, threshold limit values, current listing

15. Other information

Warning wordings: "Keep out reach of children"

"Do not recharge or discard in fire or use used battery with new one, make sure polarity"

16. Transportation Shipping

The transportation of dry cell batteries manufactured or sold by Guangzhou Tiger Head Battery Group Co., Ltd is not regulated by US Department of Transportation or major international regulatory bodies.

These batteries are also not regulated by International Agencies as hazardous materials or dangerous goods when shipped.

These batteries are also not being considered as a "hazardous material" per US DOT (Dept of Transportation) regulations or "dangerous goods" per IATA (International Air Transport Association) regulations.

Not restricted as per 67th IATA dangerous goods special regulations provision A123.

We, Guangzhou Tiger Head Battery Group Co., Ltd declares that this cargo is not dangerous goods in accordance with the IMDG Code Special Provision 304.

Material Safety Data Sheet

1. Chemical Product and Company Identification

Date of Issue : 2 Jan 2026

Product Name : LR14 C AM2 1.5V NO.662A0 Zinc-Manganese Alkaline Battery

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Zhujiang New Town, Tianhe District, Guangzhou, China

Emergency Phone No. : 020-85525623 ext. 8901

Manufacturer : YuNan Tiger Head Power Supply Science and Technology Ltd.
Shaziling, Ducheng Town, YuNan County,
GuangDong Province

2. Composition/ Information on Ingredients

Chemical/Size	LR14/662A0	CAS Registry No
Weight	72 g	
Mercury	＜1ppm	7439-97-6
Cadmium	＜5ppm	7439-92-1
Lead	＜10ppm	7440-43-9
Zinc Powder	16.00%	7440-66-6
Carbon	3.50%	7782-42-5
Manganese Dioxide	40.00%	1313-13-9
Steel	19.50%	7439-89-6
Brass(68% copper)	1.50%	7440-50-8
Plastic	1.20%	900288-4
Paper	0.80%	9004-34-6
Potassium hydroxide	8.50%	1310-58-3
Water	8.50%	7732-10-5
Zinc oxide	0.50%	1314-13-2
Total	100%	

The components in this section may only represent a hazard, if the batteries are damaged.

GUANGZHOU TIGER HEAD BATTERY GROUP CO.,LTD 广州市虎头电池集团股份有限公司

3. Hazards Identification:

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Skin: Immediately move the metal fragments and chemical components flush skin with plenty of water at least 15 minutes, get medical, if necessary,

Ingestion: Get immediately medical attention, do not induce vomiting or give a liquid to unconscious person.

5. Fire Fighting Measure:

Extinguishing media: Use appropriate agent for adjacent fire.

Flash point: Not available.

Auto-ignition temperature: Not available.

Flammable limits: Not available.

Products of combustion: Zinc oxide, manganese oxide.

6. Accidental Release Measure:

Not available.

7. Handling and Storage:

Precaution: Handling and transfer the products with care, make sure the packing always in good condition.

Damaged packing may cause batteries contact together, in this case batteries may short circuit or improperly connected, it cause batteries venting, leaking or exploding.

Storage: Store in a dry, cool and well-ventilated area.

8. Exposure control / Personal protection

Exposure control: If necessary, set local exhaust ventilation.

Personal protection: Gloves, safety glass, dust respirator.

9. Physical and Chemical Properties

Physical State and Appearance: Solid.

Melting Point : Not applicable.

Vapour pressure: Not available.

PH (1% soln/water): Not available.

Solubility: Insoluble.

Volatility: Not available.

Specific gravity: (water=1) not applicable

Odour: Odourless.

Taste: Not available.

10. Stability and Reactivity

Stability: The products are stable.

Instability temperature: Not available.

Incompatibility: Reactive with acids and alkalis.

Corrosivity: None.

Hazardous Polymerization: Will not occur.

11. Toxicological information

Note: Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

Toxicity to Animals: Not applicable.

Chronic Effects on Human: Not applicable.

12. Ecological information

This product has not been tested for environmental effects.

13. Disposal consideration

Waste disposal: Consult your local or regional authorities, disposal maybe subject to national, state, or local laws.

14. Regulatory information

ACGH: American Conference of Government Industrial Hygiene.

IARC: International Agency for Research Cancer.

NPT: US National Toxicology Program.

NIOSH: National Institute of Occupational Safety and Health

ACGIH, documentation on TLVS and BELS 1992-1993

ACGIH, threshold limit values, current listing

15. Other information

Warning wordings: "Keep out reach of children"

"Do not recharge or discard in fire or use used battery with new one, make sure polarity"

16. Transportation Shipping

The dry cell battery manufactured and sold by Guangzhou Tiger Head Battery Group Co., Ltd. such batteries have been packed in inner packaging in such a manner as to effectively prevent movement which could lead to short circuits, complies with IMDG code, Amendment 42-24 by IMO. The dry cell battery is non-dangerous goods and should not be prohibited for sea shipment by any major international regulatory bodies.

空 运
By Air

NO.202600509833522

中国认可
检验
INSPECTION
CNAS IB0071

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

非限制性货物

样品名称 ： LR14 C AM2 1.5V NO.662A0 碱锰电池

Sample Name: LR14 C AM2 1.5V NO.662A0 zinc¯ manganese alkaline battery

委托单位 ： 广州市虎头电池集团股份有限公司
GuangZhou Tiger Head Battery Group Co.,Ltd

生产单位 ： 郁南虎头电源科技有限公司
Yunan Tiger Head Power Supply Science and Technology Ltd.

上海化工院检测有限公司 检验检测专用章

Witness Better Life
SICIT
上海化工院检测有限公司
SHANGHAI INSTITUTE OF CHEMICAL INDUSTRY TESTING CO.,LTD.

空 运
By Air

空 运
By Air

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 202600509833522

样品名称 Sample Name	中文 Chinese	LR14 C AM2 1.5V NO.662A0 碱锰电池
	英文 English	LR14 C AM2 1.5V NO.662A0 zinc- manganese alkaline battery
委托单位 Applicant		广州市虎头电池集团股份有限公司 GuangZhou Tiger Head Battery Group Co.,Ltd
生产单位 Manufacturer		郁南虎头电源科技有限公司 Yunan Tiger Head Power Supply Science and Technology Ltd.
检验方法、程序 Inspection Methods and Procedures		国际航空运输协会《危险品规则》67版 IATA Dangerous Goods Regulations (DGR) 67th Edition
样品外观与气味 Appearance & Odor		多种颜色不锈钢外壳，无臭 Multicolorsteel shell,odorless

IDENTIFICATION CONCLUSION 鉴定结论

1. 危险性识别(Hazards identification)

无。
None.

2. 空运按照IATA DGR办理的类项(Suggestion according to IATA DGR)

根据特殊规定A123，可按非限制性货物条件办理。
The product is not subject to IATA DGR according to special provision A123.

3. 包装类别(Packing Group)

无。
None.

检验日期: Inspection Date: 2025-11-27　签发日期: Issue Date: 2025-12-01　生效日期: Effective Date: 2026-01-01

备注 Comment	/

批准 Approver: 王宝　审核 Checker: 黄学胜　主检 Appraiser: 孙锋

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 202600509833522

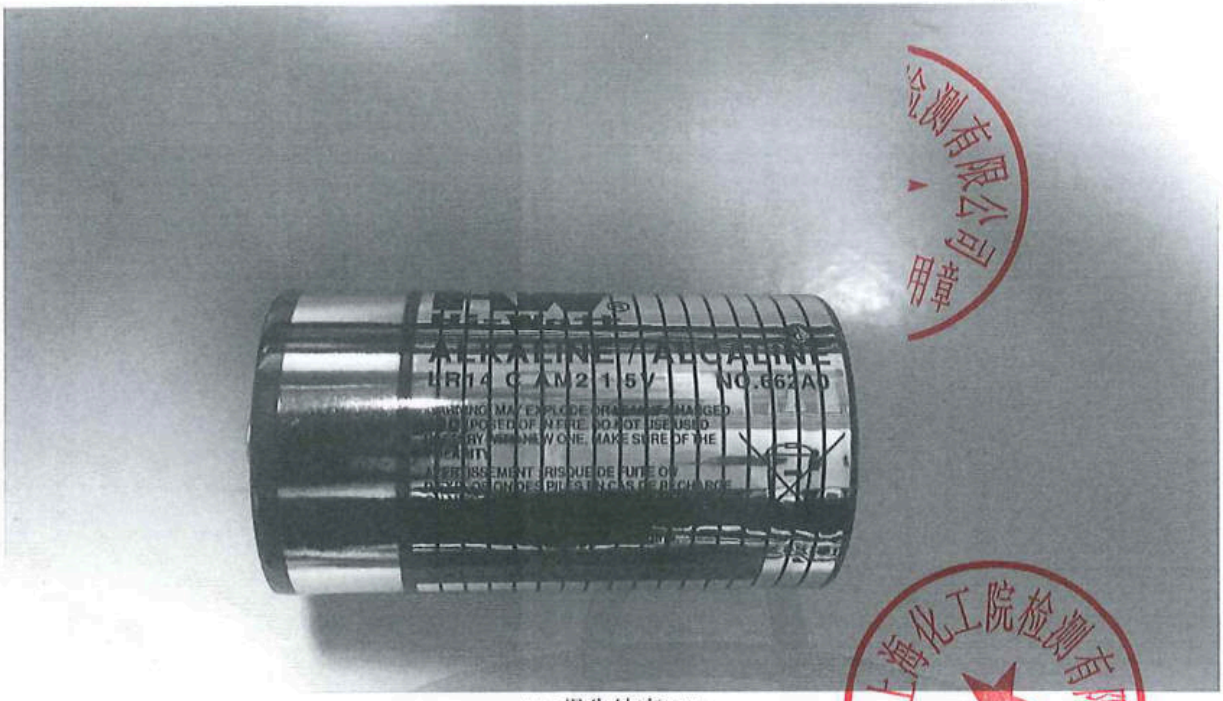
鉴定项目 Identification Items	鉴　　定　　结　　果 Identification Results
爆炸危险性鉴定 Identification of Explosive Hazards	本品不属于爆炸品。 The product is not classified in Explosives.
易燃危险性鉴定 Identification of Flammable Hazards	本品不属于易燃危险品。 The product is not classified in Flammable Substances.
氧化危险性鉴定 Identification of Oxidative Hazards	本品不属于氧化剂和有机过氧化物。 The product is not classified in Oxidizing Substances and Organic Peroxides.
毒害及传染危险性鉴定 Identification of Toxic & Infectious Hazards	本品不属于毒害品和感染性物质。 The product is not classified in Toxic and Infectious Substances.
放射危险性鉴定 Identification of Radioactive Hazard	本品无放射危险性。 The product is not classified in Radioactive Material.
腐蚀危险性鉴定 Identification of Corrosive Hazard	本品不属于腐蚀品。 The product is not classified in Corrosives.
其他危险性鉴定 Identification of other Hazards	电池必须具有适当的防短路措施，若是以电池为动力的装置、设备或车辆还须采取有效的防止意外启动措施。 The battery must be protected appropriately to prevent a short circuits and any battery powered device, equipment or vehicle must be effectively prepared to prevent unintentional activation.

-验证码:679375-

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 202600509833522



报告结束

海 运
By Sea

NO.202600509733323

中国认可
检验
INSPECTION
CNAS IB0071

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

非限制性货物

样品名称 ： LR14 C AM2 1.5V NO.662A0 碱锰电池

Sample Name: LR14 C AM2 1.5V NO.662A0 zinc manganese alkaline battery

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GuangZhou Tiger Head Battery Group Co.,Ltd

生产单位 ： 郁南虎头电源科技有限公司
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海 运
By Sea

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By Sea

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 202600509733323

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检验方法、程序 Inspection Methods and Procedures		国际海事组织《国际海运危险货物规则》（2024版） IMO International Maritime Dangerous Goods Code (2024 Edition)
样品外观与气味 Appearance & Odor		多种颜色不锈钢外壳，无臭 Multicolorsteel shell,odorless

IDENTIFICATION CONCLUSION 鉴定结论

1. 危险性识别(Hazards identification)

无。
None.

2. 海运按照IMO IMDG Code办理的类项(Suggestion according to IMO IMDG Code)

可按非限制性货物条件办理。
The product is not subject to IMO IMDG Code.

3. 包装类别(Packing Group)

无。
None.

检验日期: Inspection Date: 2025-11-27　签发日期: Issue Date: 2025-11-30　生效日期: Effective Date: 2026-01-01

备注 Comment	/

批准 Approver: 王宗　审核 Checker: 黄学性　主检 Appraiser: 孙清

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 202600509733323

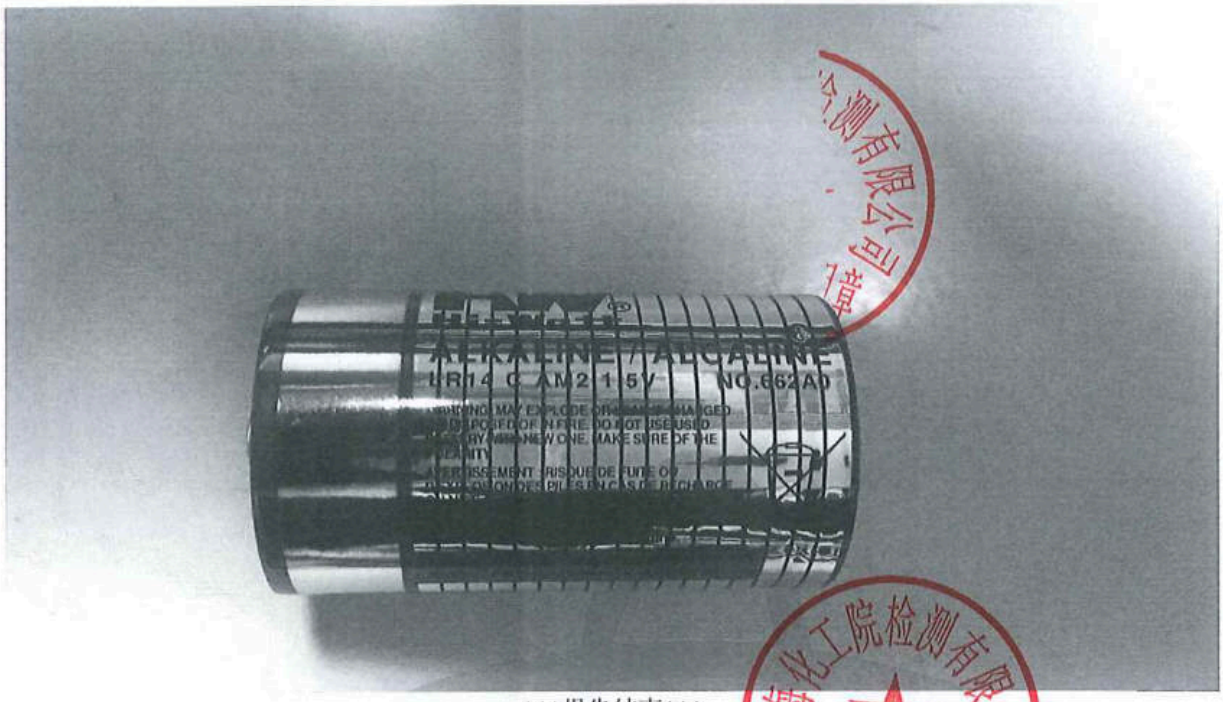
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-验证码:938341-

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 202600509733323



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