

LR03 AAA Alkaline battery

Article Information Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations (According to HCS-2012 APPENDIX D TO §1910.1200)

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Safety Data Sheet is not available to article according to the OSHA Hazard Communication Standard 29 CFR 1910.1200, so AIS is provided instead of SDS.

Batteries are considered Articles under Global Harmonized Standards. This Article Information Sheet is provided according to the request of the customers.

SECTION 1: Identification

1.1. Identification

Product form : Article
Trade name : LR03 AAA Alkaline battery

1.2. Recommended use and restrictions on use

Recommended use : Electronic products
Restrictions on use : No information available

1.3. Supplier

Supplier

Zhejiang HuaRong Battery Co.,LTD
No 517 dongda road, qixing town, jiaxing city, zhejiang, china
T 86-573-83593608

Importer:

Address:

Tel:

E-mail:

1.4. Emergency telephone number

Emergency number : +86-573-83593608

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

The batteries are not hazardous when used according to the instructions of manufacturer under normal conditions. In case of abuse, there's risk of rupture, fire, heat, leakage of internal components, which could cause casualty loss. Abuses include but not limited to the following cases: short circuited, put into fire, whacked with hard object, punctured with acute object, crushed, and broken.

In the case of rupture, the following hazards may expose:

Acute toxicity (oral), Category 4	Harmful if swallowed.
Skin corrosion/irritation, Category 1A	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	Causes serious eye damage.
Skin sensitisation, Category 1	May cause an allergic skin reaction.
Carcinogenicity, Category 1B	May cause cancer.
Specific target organ toxicity — Repeated exposure, Category 1	Causes damage to organs through prolonged or repeated exposure.

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS US) :

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

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Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center or doctor if you feel unwell.
If swallowed: rinse mouth. Do NOT induce vomiting.
If on skin: Wash with plenty of water.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
Immediately call a poison center or doctor.
Get medical advice/attention if you feel unwell.
Specific treatment (see supplemental first aid instruction on this label).
Rinse mouth.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Manganese	(CAS-No.) 7439-96-5	41.8
Zinc	(CAS-No.) 7440-66-6	16
Stainless steel	(CAS-No.) 65997-19-5	16
Potassium hydroxide	(CAS-No.) 1310-58-3	15
Water	(CAS-No.) 7732-18-5	7
Graphite	(CAS-No.) 7782-42-5	4.2

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Make the victim blow his/her nose, gargle. Seek medical attention if necessary.
First-aid measures after skin contact	: Remove contaminated clothes and shoes immediately. Immediately wash extraneous matter or contact region with soap and plenty of water.
First-aid measures after eye contact	: Do not rub eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention.
First-aid measures after ingestion	: Make the victim vomit. Immediately seek medical attention.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Plenty of water, CO2 gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.

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Unsuitable extinguishing media : No information available.

5.2. Specific hazards arising from the chemical

No further relevant information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : When the battery burns with other combustibles simultaneously, take fire extinguishing method which corresponds to the combustibles. Extinguish a fire from the windward as much as possible.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : The preferred response is to leave the area and allow the batteries to cool and the vapors to dissipate. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

6.1.1. For non-emergency personnel

Protective equipment : Wear personal protective equipment.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Absorb and/or contain spill with inert material (sand), then place in suitable container.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid mechanical or electrical abuse. Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Never store the battery in hot and high humid place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Manganese (7439-96-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	0.02 mg/m ³ (respirable particulate matter) 0.1 mg/m ³ (inhalable particulate matter)
ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (Ceiling) (mg/m ³)	5 mg/m ³ (fume)
USA - IDLH - Occupational Exposure Limits	
US IDLH (mg/m ³)	500 mg/m ³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ (fume)
NIOSH REL (STEL) (mg/m ³)	3 mg/m ³

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Zinc (7440-66-6)	
No additional information available	
Steel manufacture, chemicals (65997-19-5)	
No additional information available	
Potassium hydroxide (1310-58-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH Ceiling (mg/m ³)	2 mg/m ³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³
Graphite (7782-42-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	2 mg/m ³ (all forms except graphite fibers-respirable particulate matter)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (synthetic-total dust) 5 mg/m ³ (synthetic-respirable fraction)
USA - IDLH - Occupational Exposure Limits	
US IDLH (mg/m ³)	1250 mg/m ³
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m ³)	2.5 mg/m ³ (natural-respirable dust)

8.2. Appropriate engineering controls

Appropriate engineering controls	: Keep away from foodstuffs beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of works. Avoid contact with the eyes and skin.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Not necessary under conditions of normal use

Eye protection:

Not necessary under conditions of normal use

Skin and body protection:

Not necessary under conditions of normal use

Respiratory protection:

Not necessary under conditions of normal use

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Metallic color
Odour	: odourless
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available

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Relative density	: No data available
Solubility	: Insoluble in water
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: Not applicable
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

When cell is exposed to an external short-circuit, crushes, deformation, high temperature above 100 degree C, it will cause heat generation and ignition. Avoid direct sunlight and high humidity.

10.5. Incompatible materials

Conductive materials, water, seawater, strong oxidizers and strong acids.

10.6. Hazardous decomposition products

Acrid or harmful gas is emitted during fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Manganese (7439-96-5)	
LD50 oral rat	9 g/kg
Zinc (7440-66-6)	
LD50 oral rat	630 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.41 mg/m ³
ATE US (oral)	630 mg/kg bodyweight
ATE US (dust,mist)	0.005 mg/l/4h
Potassium hydroxide (1310-58-3)	
LD50 oral rat	284 mg/kg
Graphite (7782-42-5)	
LD50 oral rat	> 2000 mg/kg OECD 423, CSR
LC50 inhalation rat (mg/l)	> 2000 mg/l/4h OECD 403, CSR

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.

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Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure.

Zinc (7440-66-6)	
NOAEL (oral, rat, 90 days)	13.3 mg/kg bodyweight/day
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: No further relevant information available
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Zinc (7440-66-6)	
LC50 fish 1	2.16 – 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.139 – 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	0.211 – 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])

Potassium hydroxide (1310-58-3)	
LC50 fish 1	80 mg/l (Gambusia affinis) (ECHA)

Graphite (7782-42-5)	
LC50 fish 1	> 100 mg/l Danio rerio, OECD 203, CSR
EC50 Daphnia 1	> 100 mg/l Daphnia magna, OECD 202, CSR

12.2. Persistence and degradability

Zinc (7440-66-6)	
Persistence and degradability	No information available.

12.3. Bioaccumulative potential

Zinc (7440-66-6)	
Bioaccumulative potential	No information available.

Potassium hydroxide (1310-58-3)	
Partition coefficient n-octanol/water (Log Pow)	0.65

12.4. Mobility in soil

Zinc (7440-66-6)	
Ecology - soil	No information available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated(batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions: Special provision A123 of IATA)

SECTION 15: Regulatory information

15.1. US Federal regulations

Manganese (7439-96-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

Zinc (7440-66-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ

454 kg no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm

Steel manufacture, chemicals (65997-19-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium hydroxide (1310-58-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ

1000 lb

Graphite (7782-42-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Manganese (7439-96-5)

Listed on the Canadian DSL (Domestic Substances List)

Zinc (7440-66-6)

Listed on the Canadian DSL (Domestic Substances List)

Steel manufacture, chemicals (65997-19-5)

Listed on the Canadian DSL (Domestic Substances List)

Potassium hydroxide (1310-58-3)

Listed on the Canadian DSL (Domestic Substances List)

Graphite (7782-42-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Manganese (7439-96-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Zinc (7440-66-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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Steel manufacture, chemicals (65997-19-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Potassium hydroxide (1310-58-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Graphite (7782-42-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Manganese (7439-96-5)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Zinc (7440-66-6)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Steel manufacture, chemicals (65997-19-5)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Potassium hydroxide (1310-58-3)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Poisonous and Deleterious Substances Control Law
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Graphite (7782-42-5)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

No additional information available

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations (According to HCS-2012 APPENDIX D TO §1910.1200)

Revision date : 31/08/2020
Data sources : LOLI. ECHA reference.

Abbreviations and acronyms:

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ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
EC50	Median effective concentration
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
LC50	Median lethal concentration
LD50	Median lethal dose
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.