Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN
Product name: Alkaline battery

Revision date: 04/06/2015
Printing date: 04/06/2015

1. Identification

(a) Product identifier

Product name: Alkaline battery

(b) Other means of identification

Product description: Model: LR03 AAA
Nominal Voltage: 1.5V
Weight: 11.3g
Dimension: 44.5mm×10.5mm (T×D)

(c) Recommended use of the chemical and restrictions on use

Recommended use: Battery.
Restriction on use: No information available.

(d) Details of the supplier of the product

Company name(China) Shen Zhen Tcbest Technology CO.,Ltd
Address: Floor5#，Building A6，Yintian Industrial,Xixiang Street, Bao an Shenzhen,China
E-mail: sales@tcbest.com.cn
Telephone: +86-755-29367669

(e) Emergency phone number

+86-755-29367669

2. Hazard(s) identification

(a) Classification of the chemical

The batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. A sealed Alkaline battery is not hazardous in normal use.

(b) Label elements

Pictogram(s): No pictogram.
Signal word: No signal word.
Hazard statements: No hazard statement.
Precautionary statements: No precautionary statement.

(c) Description of any hazards not otherwise classified

In case of mistreatment (abusive over charge, reverse charge, external short circuit…) and in case of fault some electrolyte can leak from the cell through the safety device. In these cases refer to the risk of the electrolyte. Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system, and skin. The electrode materials are only hazardous, if the materials are released by mechanical damaging of the cell or if exposed to fire.

Skin touch: Contact with battery electrolyte may cause burns and skin irritation.

Eyes touch: Contact with battery electrolyte may cause burns. Eye damage is possible.

Inhalation: Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

Ingestion: Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.

(d) Ingredient with unknown acute toxicity

No information available.

3. Composition/information on ingredients

(a) Mixtures information

Chemical name	CAS No.	Concentration%
Zinc	7440-66-6	8
Manganese dioxide (MnO2)	1313-13-9	22
Graphite	7782-42-5	2.9
Potassium Permanganate	7722-64-7	1
Potassium Hydroxide	1310-58-3	2.7
Iron	7439-89-6	61
Nylon-6	25038-54-4	1.9
Paper	RR-01108-5	0.5

4. First-aid measures

(a) Description of first aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice / attention if you feel unwell.

Skin contact: Remove contaminated clothes and rinse the skin with plenty of water. Get medical advice / attention if you feel unwell.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing. Get medical advice / attention if you feel unwell.

Ingestion: Have victim drink 60 to 240 mL (2-8 oz.) of water. and DO NOT induce vomiting. Get medical aid.

(b) Most important symptoms/effects, acute and delayed

Contact with internal components may cause allergic skin sensitization (rash) and irritate eyes, skin, nose, throat, respiratory system. Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).

(c) Immediate medical attention and special treatment

No information available.

5. Fire-fighting measures

(a) Extinguishing media

Suitable extinguishing media: Use foam, dry powder or dry sand, CO_2 as appropriate.

Unsuitable extinguishing media: No information available.

(b) Special hazards arising from the chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO, CO_2, Metal oxides, Irritating fumes

(c) Special protective equipment and precautions for fire-fighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

6. Accidental release measures

(a) Personal precautions, protective equipment and emergency procedures

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area, dispose the case after the batteries cool and vapors dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors.

(b) Methods and materials for containment and cleaning up

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

7. Handling and storage

(a) Precautions for safe handling

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not short-circuit batteries Use recommended charging time and current.

(b) Conditions for safe storage, including any incompatibilities

Don’t handling Alkaline battery with metalwork. Do not open, dissemble, crush or burn battery. Ensure good ventilation/ exhaustion at the workplace.
Prevent formation of dust.
Information about protection against explosions and fires: Keep ignition sources away- Do not smoke.
Recommended at 0℃~+35℃ for long period storage.
Do not storage ALKALINE BATTERY haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
Keep out of reach of children.
Do not expose Alkaline battery to heat or fire. Avoid storage in direct sunlight.

Do not store together with oxidizing and acidic materials.

8. Exposure controls/personal protection

(a) Control parameters

Not established.

(b) Appropriate engineering controls

Under normal conditions (during charge and discharge) release of ingredients does not occur.

(c) Personal protective equipment

Respiratory protection:	No personal respiratory protective equipment normally required. In case of inadequate ventilation wear respiratory protection.
Hand protection:	Wear protective gloves.
Eye/face protection:	No personal protective equipment normally required.
Skin/body protection:	Wear protective clothing to prevent contact.

9. Physical and chemical properties

(a) Appearance	solid
(b) Odor	Monotony
(c) Odor threshold	Not available.
(d) pH	Not available.
(e) Melting point/freezing point	Not available.
(f) Initial boiling point and boiling range	Not available.
(g) Flash point	Not applicable.
(h) Evaporation rate	Not applicable.
(i) Flammability	Non flammable.
(j) Upper/lower flammability or explosive limits	Not available.
(k) Vapor pressure	Not applicable.
(l) Vapor density	Not available.
(m) Relative density	Not available.
(n) Solubility(ies)	Insoluble in water.
(o) Partition coefficient: n-octanol/water	Not available.
(p) Auto-ignition temperature	130℃
(q) Decomposition temperature	Not available.
(r) Viscosity	Not available.

10. Stability and reactivity

(a) Reactivity

Stable under recommended storage and handling conditions.

(b) Chemical stability

Stable under normal conditions.

(c) Possibility of hazardous reactions

When heated above 150°C the risk of rupture occurs. Due to special safety construction, rupture implies controlled release of pressure without ignition.

(d) Conditions to avoid

Do not subject Alkaline battery to mechanical shock. Keep away from open flames, high temperature.

(e) Incompatible materials

Strong oxidizer, strong acid.

(f) Hazardous decomposition products

Under fire conditions, the electrode materials can form carcinogenic nickel and cobalt oxides.

11. Toxicological information

(a) Information on the likely routes of exposure

Inhalation:	Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.
Ingestion:	Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.
Skin contact:	Contact with battery electrolyte may cause burns and skin irritation.
Eye contact:	Contact with battery electrolyte may cause burns. Eye damage is possible.

Under normal conditions (during charge and discharge) release of ingredients does not occur. If accidental release occurs see information in section 2, 3, and 4. Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

(b) Information on toxicological characteristics

Acute toxicity:	No data available.
Skin corrosion/irritation:	The liquid in the battery irritates.
Serious eye damage/irritation:	The liquid in the battery irritates.
Respiratory sensitization:	The liquid in the battery may cause sensitization to some person.
skin sensitization:	The liquid in the battery may cause sensitization to some person.
Carcinogenicity:	Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).
Germ Cell Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
STOT-Single Exposure:	No data available.
STOT-Repeated Exposure:	No data available.
Aspiration Hazard:	No data available.

12. Ecological information

(a) Ecotoxicity

Water hazard class 1(Self-assessment): slightly hazardous for water.

(b) Persistence and Degradability

No information available.

(c) Bioaccumulative potential

No information available.

(d) Mobility in soil

No information available.

(e) Other adverse effects

No information available.

13. Disposal considerations

(a) Safe handling and methods of disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations.
Local regulations may be more stringent than regional or national requirements.

14. Transport information

UN NumberIATA, IMDG	N/A
UN Proper shipping name IATA, IMDG	N/A
Transport hazard class(es) IATA, IMDG	N/A
Packing group IATA, IMDG	N/A
Packaging Sign IATA, IMDG	N/A
Environmental hazards Marine pollutant	No
Special precautions for user	Not applicable

Transport information: Alkaline battery is exempt from dangerous goods. It is considered non-dangerous goods by the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) DGR 56rd, International Martine Dangerous Goods Regulations (IMDG)(36-12)

Alkaline battery batteries or Alkaline battery battery- powered devices, equipment or vehicles having the potential of a dangerous evolution of heat are not subject to these Regulations provided they are prepared for transport so as to prevent:

(a) 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); and
(b) unintentional activation.
The word “Not Restricted” and the Special Provision number must be included in the description of the substance

on the Air Waybill as required by 8.2.6, when an Air Waybill is issued

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport

Transport Fashion: Air, Rail, Road, Marine

15. Regulatory information

(a) Safety, health and environmental regulations specific for the product in question

CAS No.	USA TSCA	EU EINECS	Japan ENCS	Korea ECL	China IECSC	Canada DSL
7440-66-6	Listed	Listed	Not listed	Listed	Listed	Not listed
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
7782-42-5	Listed	Listed	Not listed	Listed	Listed	Listed
7722-64-7	Listed	Not listed	Listed	Listed	Listed	Not listed
1310-58-3	Listed	Not listed	Listed	Not listed	Listed	Not listed
7439-89-6	Listed	Listed	Listed	Listed	Listed	Not listed
25038-54-4	Listed	Not listed	Listed	Not listed	Not listed	Not listed
RR-01108-5	Listed	Listed	Listed	Listed	Listed	Listed

16. Other information, including date of preparation or last revision

(a) Preparation and revision information

Date of previous revision: Not applicable. Date of this revision: 04/06/2015

Revision summary: The first New SDS

(b) Abbreviations and acronyms

TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
EINECS:	European Inventory of Existing Commercial chemical Substances
ENCS	Japanese Existing and New Chemical Substances
ECL:	Existing Chemicals List, the Korean chemical inventory.
IECSC:	Inventory of existing chemical substances in China.

(c) Disclaimer

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

---------- End of the SDS ----------