SAFETY DATA SHEETS

In Accordance with OSHA Standard 1910.1200 App D (USA) Date: 01/01/2023

1. Identification

(a) Product identifier used on the label:

AA/LR6 / AM3/单 3 形 1.5V

(b) Other means of identification:

Alkaline

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

Do not throw in fire! Not rechargeable!

(d) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Manufacturer: HANGZHOU POWERPACK BATTERY CO., LTD.

Address: 1307,Shipping Mansion Shangcheng District Hangzhou Zhejiang, China.

Tel / Fax: +86-571-87831186

(e) Emergency phone number.

Tel: +86-571-87831186

2. Hazard(s) identification

(a) Classification of the chemical in accordance with paragraph (d) of §1910.1200

Chemical power source

(b) Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200. (Hazard symbols may be provided as graphical reproductions in black and white or the name of the symbol, e.g., flame, skull and crossbones)

N/A

(c) Describe any hazards not otherwise classified that have been identified during the classification process

The chemical materials concluded in the Product is sealed up, thus being stable, safe and eco-friendly under common conditions, may not cause physical / chemical hazards.

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(d) Where an ingredient with unknown acute toxicity is used in a mixture at a concentration ≥1% and the mixture is not classified based on testing of the mixture as a whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute toxicity is required

No such an ingredient is contained in the product.

3. Composition/information on ingredients

Except as provided for in paragraph (i) of §1910.1200 on trade secrets:

For Substances:

(a) Chemical name

(b) Common name and synonyms

(c) CAS number and other unique identifiers

(d) Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance

Chemical Name	CAS #	Content (approximate Wt %)
Manganese dioxide	1313-13-9	36.7 %
Carbon	7440-44-0	1.4 %
Graphite	7782-42-5	1.4 %
Zinc	7440-66-6	18 %
Potassium hydroxide	1310-58-3	8 %
Iron	7439-89-6	23 %
Brass (pin)	7440-50-8	1.4 %
Nylon (gasket)	32131-17-2	1.1 %
Water	7732-18-5	9%

For Mixtures

In addition to the information required for substances:

(a) The chemical name and concentration (exact percentage) or concentration ranges of all

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ingredients which are classified as health hazards in accordance with paragraph (d) of

§1910.1200 and,

(1) Are present above their cut-off/concentration limits; or

(2) Present a health risk below the cut-off/concentration limits.

No such an ingredient is contained in the product.

(b) The concentration (exact percentage) shall be specified unless a trade secret claim is made in accordance with paragraph (i) of §1910.1200, when there is batch-to-batch variability in the production of a mixture, or for a group of substantially similar mixtures (See A.0.5.1.2) with similar chemical composition. In these cases, concentration ranges may be used.

No such a situation would happen during the production from batch to batch.

For All Chemicals Where a Trade Secret is claimed

Where a trade secret is claimed in accordance with paragraph (i) of §1910.1200, a statement that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

4. First-aid measures

(a) Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion

Inhalation: Not applicable.

Skin Contact: Wash with clean water immediately once leakage happens and the inner liquid splashes onto skin.

Eye contact: Rinse eyes immediately with running water for at least ten minutes. Consult an ophthalmologist.

Ingestion: Seek medical assistance or treatment immediately.

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

The liquid if leaked from the product may be smelly, mild irritant to skin, etc.

(c) Indication of immediate medical attention and special treatment needed, if necessary

Wash with clean water immediately.

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5. Fire-fighting measures

(a) Suitable (and unsuitable) extinguishing media.

Carbon dioxide (CO_2), foam, or dry chemical powder extinguishing media is suitable.

(b) Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products).

The product is not inflammable; the liquid, if leaked from the product, may cause corrosion to paper, plastic, or any other tender material(s) near by.

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

The fire-fighters are suggested wearing full protective clothing and using self contained breathing apparatus.

6. Accidental release measures

(a) Personal precautions, protective equipment, and emergency procedures.

Wear protective clothing. Keep unprotected persons away.

(b) Methods and materials for containment and cleaning up.

Collect spilled material with an insert standard absorbent like sand or silica.
Care for well-Ventilated conditions. Recycle or dispose of the materials in an appropriate way.

7. Handling and storage

(a) Precautions for safe handling.

Obey the common known rules and precautions for handling with chemical power sources.

(b) Conditions for safe storage, including any incompatibilities.

Store product in clean, cool and ventilated place with a temperature between 10℃ and 30℃ (no higher than 40℃ in the ordinary course of events) and a relative humidity no higher than 65%; the storage time should not be too long; the batteries should be well-arranged, and do avoid sort-circuit caused by the contact of the positive and negative electrodes.

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8. Exposure controls/personal protection

(a) OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

N/A

(b) Appropriate engineering controls.

Do not disassemble the product without professional basis.

(c) Individual protection measures, such as personal protective equipment.

No special equipment is required for handling, carrying or using the product.
The chemical materials concluded in the Product is sealed up, thus being stable, safe and eco-friendly under common conditions.

9. Physical and chemical properties

(a) Appearance (physical state, color, etc.)	:	Cylindrical battery with PET label in white, blue, golden and black colours, etc.
(b) Odor	:	not applicable
(c) Odor threshold	:	not applicable
(d) pH	:	not applicable
(e) Melting point/ freezing point	:	not applicable
(f) Initial boiling point and boiling range	:	not applicable
(g) Flash point	:	not applicable
(h) Evaporation rate	:	not applicable
(i) Flammability (solid, gas)	:	not applicable
(j) Upper/lower flammability or explosive limits	:	not applicable

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(k) Vapor pressure	:	not applicable
(l) Vapor density	:	not applicable
(m) Relative density	:	not applicable
(n) Solubility(ies)	:	not applicable
(o) Partition coefficient: n-octanol/ water	:	not applicable
(p) Auto-ignition temperature	:	not applicable
(q) Decomposition temperature	:	not applicable
(r) Viscosity	:	not applicable

10. Stability and reactivity

(a) Reactivity

N/A

(b) Chemical stability

Stable.
The chemical materials concluded in the Product are sealed up, thus being stable, safe and eco-friendly under common conditions.

(c) Possibility of hazardous reactions

No.

(d) Conditions to avoid (e.g., static discharge, shock, or vibration)

Environmental temperature higher than 40℃, relative humidity below 45% or higher than 65% is recommended to be avoided for product storage or working.

(e) Incompatible materials

N/A

(f) Hazardous decomposition products

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No.

11. Toxicological information

Description of the various toxicological (health) effects and the available data used to identify those effects, including

(a) Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact)

The chemical materials concluded in the Product are sealed up, thus being stable, safe and eco-friendly under common conditions;
The liquid (alkaline solution), if leaked from the product, may cause corrosion to paper, plastic, or any other tender material(s) near by, but not toxicological.

(b) Symptoms related to the physical, chemical and toxicological characteristics

People might feel itching, if the inner liquid splashes onto skin.

(c) Delayed and immediate effects and also chronic effects from short- and long-term exposure

N/A

(d) Numerical measures of toxicity (such as acute toxicity estimates)

N/A

(e) Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA

No.

12. Ecological information (Non-mandatory)

(a) Ecotoxicity (aquatic and terrestrial, where available): N/A

(b) Persistence and degradability: N/A

(c) Bio-accumulative potential: N/A

(d) Mobility in soil: N/A

(e) Other adverse effects (such as hazardous to the ozone layer) : No.

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13. Disposal considerations (Non-mandatory)

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

The used product (waste) is recommended to be disposed-of in separate collection, so as to avoid improper disassembly or recycling method that may lead to pollution or corrosion caused by the alkaline solution inside it.

14. Transport information (Non-mandatory)

(a) UN number: N/A

(b) UN proper shipping name: N/A

(c) Transport hazard class(es) : N/A

(d) Packing group, if applicable: N/A

(e) Environmental hazards (e.g., Marine pollutant (Yes/No)) No.

(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

The product can be treated as ordinary goods in transportation;
Products in bulk shall be packed in inner packaging in such a manner that can prevent movement or short-circuit effectively.

(g) Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises

Avoid high-temperature, high-humidity condition.

15. Regulatory information (Non-mandatory)

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

The product is eco-friendly and in accordance with the safety regulations in ANSI C18.1M_ Part2 Standard, and complying with the environmental requirements in EU Directives 2006/66/EC (Battery Directive).

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

The date of preparation of the SDS or the last change to it

This Safety Date Sheets (SDS) is issued on January 1st, 2023 as a third version according to requirements of the USA's OSHA Standard 1910.1200 App D.

For any other question, please contact the manufacturer for further information.