

MSDS REPORT

Sample Name : Nickel-metal hydride battery

Model No. : See Attachment

Sample Model : AA600mAh

Sample Received Date : 2025-12-29

Completion Date : 2026-05-11

Client Unit : Xinxiang Lingxin Power Supply Co., Ltd

Client Address : Building 2, East Road, 50 meters south of the intersection of Beihuan Road and Xihuan Road, Muye District, Xinxiang City, Henan Province

Client ID : IH0345

Manufacturer : Xinxiang Lingxin Power Supply Co., Ltd

Manufacturer Address : Building 2, East Road, 50 meters south of the intersection of Beihuan Road and Xihuan Road, Muye District, Xinxiang City, Henan Province

Remark : 1.Report B-R01310E1806R1 is a revision of the original report B-R01310E1806, modified the content of the report.
2.Report B-R01310E1806 was repealed and replaced by Report B-R01310E1806R1.



Report Query

Signed for Beide (Shenzhen) Product Service Limited

Written by:

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1. Identification of substance/preparation and company/undertaking

Product identifier : Nickel-metal hydride battery

Other means of identification : AA600mAh, Ni-MH rechargeable battery; also applicable to models listed in attachment

Recommended use : Portable power source for consumer electronics, tools, toys, etc.

Restrictions on use : Do not open, crush, short circuit, incinerate, or expose to high temperatures.

Manufacturer : Xinxiang Lingxin Power Supply Co., Ltd

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2. Hazards identification

Classification (per 29 CFR 1910.1200)

This product is an article — a sealed battery. In its intact, unruptured state, it does not expose users to hazardous chemicals and is not subject to the OSHA Hazard Communication Standard. The hazards described below apply only if the battery is mechanically or electrically abused (e.g., crushed, punctured, disassembled, or exposed to fire), leading to release of internal contents.

For a ruptured / leaking battery:

Hazard class	Category
Skin corrosion	Category 1A
Serious eye damage	Category 1
Specific target organ toxicity — single exposure (respiratory irritation)	Category 3

Signal word

Danger

Hazard statements

H314 — Causes severe skin burns and eye damage.

H335 — May cause respiratory irritation.

Pictograms (for ruptured battery)



GHS05



GHS07

Precautionary statements

Prevention:

P260 — Do not breathe dust/fume/gas from leaked contents.

P264 — Wash hands thoroughly after handling a leaked battery.

P280 — Wear protective gloves, eye/face protection.

Response:

P301+P330+P331 — IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 — IF ON SKIN (or hair): Remove contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 — IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses if present.

P310 — Immediately call a POISON CENTER or physician.

Storage:

P405 — Store locked up (for leaked battery waste).

Disposal:

P501 — Dispose of contents/container in accordance with local/state/federal regulations.

Other hazards

None under normal use. Do not short circuit -can cause fire or leakage.

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3. Composition/information on ingredients

The battery is a sealed mixture. The following are the main ingredients inside the battery. In the intact state, these are not released.

Ingredient name	Molecular Formula	CAS Number	Weight(%)	Classification
iron	Fe	7439-89-6	33.80%	Not classified
Polyamide Resin	/	63428-84-2	0.98%	Not classified
Cobalt oxide	CoO	1307-96-6	0.90%	Not classified
Nickel(II) hydroxide	Ni(OH) ₂	12054-48-7	20%	Not classified
Metal Hydroxide Alloy	LaNi ₅ Al ₁ Co ₁	/	19.90%	Not classified
1-Propene, homopolymer;	(C ₃ H ₆) _n	9003-07-0	4.47%	Not classified
polyvinyl chloride	(CH ₂ -CHCl) _n	9002-86-2	2.44%	Not classified
Potassium Hydroxide	KOH	1310-58-3	4.55%	Not classified
Sodium Hydroxide	NaOH	1310-73-2	1.04%	Not classified
Lithium hydroxide	LiOH	1310-65-2	0.21%	Not classified
Dihydrogen oxide	H ₂ O	7732-18-5	11.71%	Not classified

4. First-aid measures

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion : Do not induce vomiting. Rinse mouth. Call a physician or poison control center immediately.

Skin contact : Immediately flush with plenty of water for at least 15 minutes. Remove contaminated clothing. Call a physician if irritation or burns occur.

Eye contact : Immediately flush eyes with water for at least 15 minutes, lifting upper and lower lids. Call a physician immediately.

Most important symptoms/effects : Corrosive burns to skin/eyes, respiratory tract irritation.

5. Fire-fighting measures

Suitable extinguishing media : Water, CO₂, dry chemical powder.

Specific hazards from the battery :

May emit toxic fumes (metal oxides, potassium hydroxide aerosols) if involved in fire. Hydrogen gas (H₂) may be generated during overheat/overcharge, increasing explosion risk in confined spaces.

Special protective equipment for firefighters :

Use self-contained breathing apparatus (SCBA) and full protective clothing.

Note : Do not use water directly on a large Li-ion/Ni-MH fire unless necessary; water can be used to cool surrounding area.

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6. Accidental release measures

Personal precautions : Use protective gloves, goggles, and respirator if handling a ruptured or leaking battery.
Avoid contact with leaked electrolyte.

Environmental precautions : Prevent spilled electrolyte from entering drains, soil, or water bodies. Collect contaminated wash water for approved disposal.

Methods for containment and cleaning :

Neutralize spilled alkaline electrolyte with weak acid (e.g., vinegar or boric acid).
Absorb with inert material (sand, vermiculite) and place in a sealed plastic container.
Dispose of as hazardous waste in accordance with local regulations.

7. Handling and storage

Precautions for safe handling

Do not open, crush, puncture, short circuit, or incinerate.
Do not immerse in water or other liquids.
Avoid mechanical or electrical abuse.
Use proper polarity when installing.

Conditions for safe storage

Store in a cool, dry, well-ventilated area.
Keep away from heat sources, direct sunlight, and flammable materials.
Do not store with incompatible chemicals (strong acids, oxidizers).

8. Exposure controls/personal protection

Occupational exposure limits (for released contents – KOH, NaOH, LiOH)

Substance	OSHA PEL (8-hr TWA)	ACGIH TLV (8-hr TWA)
Potassium hydroxide	2 mg/m ³ (ceiling)	2 mg/m ³ (ceiling)
Sodium hydroxide	2 mg/m ³ (ceiling)	2 mg/m ³ (ceiling)
Lithium hydroxide	No specific PEL	0.5 mg/m ³ (inhalable)

Engineering controls

Use local exhaust ventilation when handling a large number of damaged batteries.

Personal protective equipment (for handling ruptured batteries)

Eye protection: Chemical splash goggles.

Hand protection: Neoprene or nitrile gloves.

Skin protection: Acid-resistant apron and coveralls. Avoid cotton (absorbs KOH).

Respiratory protection: Use N95 or half-face respirator if airborne particulate/mist is present.

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9. Physical and chemical properties

Appearance	: Columnar solid, light-green casing (cell)
Odor	: Odorless
Odor threshold	: Not applicable
pH (of leaked electrolyte)	: 13–14 (alkaline)
Melting point/freezing point	: Not applicable (solid battery)
Initial boiling point	: Not applicable
Flash point	: Not flammable (as intact battery)
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Does not burn except in fire
Upper/lower flammability limit	: Not applicable
Vapor pressure	: Not applicable
Vapor density	: Not applicable
Relative density	: ~2.0 - 3.0 g/cm ³ (estimated)
Solubility(ies)	: Insoluble in water (casing); internal electrolyte is water-soluble
Partition coefficient (n-octanol/water)	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: >150°C (internal separator may degrade)

10. Stability and reactivity

Reactivity : Stable under normal handling and storage.

Chemical stability : Stable. Hazardous polymerization will not occur.

Possibility of hazardous reactions :

Reacts with strong acids (neutralization, heat). Contact with active metals may generate hydrogen gas.

Conditions to avoid :

Heating above 100°C, fire, mechanical crushing, short circuit, overcharge, forced overdischarge.

Incompatible materials :

Strong oxidizing agents, strong acids, water-reactive metals (e.g., sodium, potassium).

Hazardous decomposition products :

When burned: toxic fumes including metal oxides, hydrogen gas, and potassium-containing aerosols.

11. Toxicological information

Routes of exposure (only if battery is ruptured)

Inhalation: Mist/fumes from electrolyte.

Skin contact: Corrosive burns.

Eye contact: Severe damage.

Ingestion: Harmful, corrosive.

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Acute effects

Skin: Severe burns, ulceration (KOH/NaOH/LiOH).

Eyes: Irreversible corneal damage.

Inhalation: Respiratory irritation, coughing, pulmonary edema if severe.

Ingestion: Mouth, throat, and stomach burns; perforation possible.

Chronic effects

No data available for battery as a whole. Chronic exposure to nickel compounds may cause allergic dermatitis or lung effects, but not expected from intact battery.

Numerical measures of toxicity (for KOH)

Oral LD50 (rat): ~273 mg/kg (estimated, varies by species).

Inhalation LC50: Not available.

12. Ecological information

Ecotoxicity : The intact battery is not environmentally harmful. Released alkaline electrolyte (KOH/NaOH) can raise local pH, harmful to aquatic life in large amounts.

Persistence and degradability : Inorganic hydroxides will be neutralized in natural waters.

Bioaccumulative potential : Nickel and cobalt compounds may bioaccumulate, but release is minimal.

Mobility in soil: Hydroxides dissolve and migrate with water.

Other adverse effects : Do not discard batteries in nature; recycle properly.

13. Disposal considerations

Product disposal : Dispose of used or damaged batteries in accordance with federal, state, and local regulations. Do not incinerate or landfill intact batteries. Recycle through approved battery recycling programs (e.g., Call2Recycle in the US).

Container disposal : Empty battery packaging may be recycled.

14. Transport information

According to the standards of the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), and the International Maritime Organization (IMO), and meeting the special regulation A199, this product is classified as non restricted cargo. For detailed information on transportation, testing, labeling, and packaging, please consult with label experts. During transportation, batteries should be stored separately to prevent short circuits. They should be packaged with sturdy packaging materials to provide support during transportation and ensure that the equipment is not accidentally powered on during transportation.

Regulatory body	Special provisions / Classification
US DOT (49 CFR)	Not regulated as hazardous if batteries meet UN38.3 and are properly packaged. Provision 130 applies.
IATA / ICAO	UN 3496 (for Ni-MH batteries), Special Provision A199. Generally not subject to dangerous goods regulations if packed in equipment or with strong outer packaging.
IMDG	UN 3496, SP117 and SP963.
ADR	UN 3496, special provisions 295, 304, 598.

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15. Regulatory information

US federal regulations

OSHA HazCom 2012: This SDS is prepared in accordance with 29 CFR 1910.1200 Appendix D.

TSCA (Toxic Substances Control Act): All chemical ingredients are listed on the TSCA inventory or are exempt.

SARA Title III: Not subject to reporting under Sections 302/304 for intact battery.

RCRA: Used batteries may be subject to state disposal requirements; not a hazardous waste if fully discharged.

State regulations

California Prop 65: This product may contain nickel (known to cause cancer) and cobalt (known to cause cancer). However, no exposure occurs from intact battery.

16. Other information

Abbreviations

OSHA - Occupational Safety and Health Administration

GHS - Globally Harmonized System

SDS - Safety Data Sheet

PEL - Permissible Exposure Limit

TLV - Threshold Limit Value

SCBA - Self-Contained Breathing Apparatus

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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Photo of sample



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Attachment

Button : 20mAh/30mAh/40mAh/50mAh/60mAh/70mAh/80mAh/100mAh/110mAh/120mAh,etc,NI-MHAA80mAh/AA100mAh/AA150mAh/AA200mAh/AA250mAh/AA300mAh/AA400mAh/AA500mAh/AA600mAh/AA700mAh/AA800mAh/AA900mAh/AA1000mAh/AA1100mAh/AA1200mAh/AA1300mAh/AA1500mAh/AA1600mAh/AA1700mAh/AA1800mAh/AA1900mAh/AA2000mAh/AA2100mAh/AA2200mAh/AA2300mAh/AA2400mAh/AA2500mAh/AA2600mAh/AA2700mAh,etc,AAA60mAh/AAA70mAh/AAA80mAh/AAA90mAh/AAA100mAh/AAA110mAh/AAA120mAh/AAA130mAh/AAA140mAh/AAA150mAh/AAA200mAh/AAA250mAh/AAA300mAh/AAA400mAh/AAA500mAh/AAA600mAh/AAA700mAh/AAA800mAh/AAA900mAh/AAA1000mAh,etc,1/3AAA50mAh/1/3AAA60mAh/1/3AAA70mAh/1/3AAA80mAh/1/3AAA90mAh/1/3AAA100mAh/1/3AAA120mAh/1/3AAA150mAh/1/3AAA180mAh/1/3AAA190mAh/1/3AAA200mAh/1/3AAA210mAh/1/3AAA220mAh/1/3AAA230mAh/1/3AAA240mAh/1/3AAA250mAh,etc,1/4AAA60mAh/1/4AAA70mAh/1/4AAA80mAh/1/4AAA85mAh,2/3AAA60mAh/2/3AAA70mAh/2/3AAA80mAh/2/3AAA90mAh/2/3AAA100mAh/2/3AAA150mAh/2/3AAA200mAh/2/3AAA250mAh/2/3AAA300mAh/2/3AAA350mAh/2/3AAA400mAh,etc,2/3AA80mAh/2/3AA100mAh/2/3AA120mAh/2/3AA150mAh/2/3AA200mAh/2/3AA250mAh/2/3AA300mAh/2/3AA400mAh/2/3AA500mAh/2/3AA600mAh/2/3AA700mAh,etc,1/3AA50mAh/1/3AA60mAh/1/3AA80mAh/1/3AA100mAh/1/3AA120mAh/1/3AA150mAh/1/3AA200mAh/1/3AA250mAh/1/3AA300mAh,etc,4/5AAA100mAh,4/5AAA200mAh,4/5AAA300mAh,4/5AAA400mAh,4/5AAA500mAh,4/5AAA600mAh,etc,5/4AAA400mAh,5/4AAA500mAh,5/4AAA600mAh,5/4AAA700mAh,5/4AAA800mAh,5/4AAA900mAh,5/4AAA1000mAh,etc,4/5C500mAh,4/5C1000mAh,4/5C1500mAh,4/5C2000mAh,4/5C2500mAh,4/5C3000mAh,4/5C3500mAh,4/5C4000mAh,4/5C4500mAh,4/5C5000mAh,C500mAh,C1000mAh,C1500mAh,C2000mAh,C2500mAh,C3000mAh,C3500mAh,C4000mAh,C4500mAh,C5000mAh,C5500mAh,C6000mAh,etc,D500mAh,D1000mAh,1/2D500mAh,1/2D1000mAh,1/2D1500mAh,1/2D2000mAh,1/2D2500mAh,1/2D3000mAh,1/2D3500mAh,1/2D4000mAh,D1500mAh,D2000mAh,D2500mAh,D3000mAh,D3500mAh,D4000mAh,D4500mAh,D5000mAh,D5500mAh,D6000mAh,D6500mAh,D7000mAh,D7500mAh,D8000mAh,D8500mAh,D9000mAh,etc,F5000mAh,F6000mAh,F7000mAh,F8000mAh,F9000mAh,F10000mAh,F11000mAh,F12000mAh,F13000mAh,F14000mAh,M4000mAh,M5000mAh,M6000mAh,M7000mAh,M8000mAh,M9000mAh,M10000mAh,M11000mAh,M12000mAh,M13000mAh,M14000mAh,A800mAh,A1000mAh,A1500mAh,A2000mAh,A2500mAh,A3000mAh,etc,4/5SC400mAh,4/5SC500mAh,4/5SC600mAh,4/5SC700mAh,4/5SC800mAh,4/5SC900mAh,4/5SC1000mAh,4/5SC1100mAh,4/5SC1200mAh,4/5SC1300mAh,4/5SC1400mAh,4/5SC1500mAh,SC500mAh,SC600mAh,SC800mAh,SC1000mAh,SC1200mAh,SC1300mAh,SC1500mAh,SC1800mAh,SC2000mAh,SC2500mAh,SC3000mAh,etc.(1.2V,2.4V,3.6V,4.8V,6V,7.2V,8.4V,9.6V,10.8V)1/2AA200mAh,1/2AA250mAh,1/2AA300mAh,2/3N60,2/3N100,2/3N130,2/3N150,2/3N180mAh,2/3N200mAh,2/3N250mAh,2/3N300mAh,2/3N350mAh,2/3N400mAh,2/3N450mAh,2/3N500mAh,etc.4/5N100mAh,4/5N200mAh,4/5N300mAh,4/5N400mAh,4/5N500mAh,4/5N600mAh,etc,N400mAh,N500mAh,N600mAh,N700mAh,N800mAh,N900mAh,N1000mAh,etc.4/5AA100mAh,4/5AA200mAh,4/5AA300mAh,4/5AA400mAh,4/5AA500mAh,4/5AA600mAh,4/5AA700mAh,4/5AA800mAh,4/5AA900mAh,4/5AA1000mAh,etc.5/4AA400mAh,5/4AA500mAh,5/4AA600mAh,5/4AA700mAh,5/4AA800mAh,5/4AA900mAh,5/4AA1000mAh,5/4AA1100mAh,5/4AA1200mAh,5/4AA1500mAh,5/4AA2000mAh,5/4AA2500mAh,5/4AA3000mAh,etc.

End of Report

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