Material Safety Data Sheet

1. Identification of Substance

Product Details

Product Name: **NI-MH RECHARGEABLE BATTERY**

Product Model: Ni-MH: AA100mAh, AA150mAh, AA200mAh, AA250mAh, AA300mAh, AA350mAh, AA400mAh, AA450mAh, AA500mAh, AA600mAh, AA700mAh, AA800mAh, AA900mAh, AA1000mAh, AA1100mAh, AA1200mAh, AA1300mAh, AA1400mAh, AA1500mAh, AA1600mAh, AA1700mAh, AA1800mAh, AA1900mAh, AA2000mAh, AA2100mAh, AA2200mAh, AA2300mAh, AA2400mAh, AA2500mAh, AA2600mAh
Ni-MH: AAA100mAh, AAA150mAh, AAA200mAh, AAA250mAh, AAA300mAh, AAA350mAh, AAA400mAh, AAA450mAh, AAA500mAh, AAA600mAh, AAA700mAh, AAA800mAh, AAA900mAh, AAA1000mAh
Ni-MH: 2/3AA100mAh, 2/3AA150mAh, 2/3AA200mAh, 2/3AA250mAh, 2/3AA300mAh, 2/3AA350mAh, 2/3AA400mAh, 2/3AA450mAh, 2/3AA500mAh, 2/3AA550mAh, 2/3AA600mAh
Ni-MH: 2/3AAA100mAh, 2/3AAA150mAh, 2/3AAA200mAh, 2/3AAA250mAh, 2/3AAA300mAh, 2/3AAA350mAh, 2/3AAA400mAh, 2/3AAA450mAh, 2/3AAA500mAh, 2/3AAA550mAh, 2/3AAA600mAh
Ni-MH: 4/5AA100mAh, 4/5AA200mAh, 4/5AA300mAh, 4/5AA350mAh, 4/5AA400mAh, 4/5AA500mAh, 4/5AA600mAh, 4/5AA700mAh, 4/5AA800mAh, 4/5AA900mAh, 4/5AA1000mAh, 4/5AA1100mAh, 4/5AA1200mAh, 4/5AA1300mAh, 4/5AA1400mAh, 4/5AA1500mAh, 4/5AA1600mAh, 4/5AA1700mAh, 4/5AA1800mAh, 4/5AA1900mAh
Ni-MH: 4/5SC600mAh, 4/5SC700mAh, 4/5SC800mAh, 4/5SC900mAh, 4/5SC1000mAh, 4/5SC1100mAh, 4/5SC1200mAh, 4/5SC1300mAh, 4/5SC1400mAh, 4/5SC1500mAh, 4/5SC1600mAh, 4/5SC1700mAh, 4/5SC1800mAh, 4/5SC1900mAh, 4/5SC2000mAh
Ni-MH: SC600mAh, SC700mAh, SC800mAh, SC900mAh, SC1000mAh, SC1100mAh, SC1200mAh, SC1300mAh, SC1400mAh, SC1500mAh, SC1600mAh, SC1700mAh, SC1800mAh, SC1900mAh, SC2000mAh, SC2200mAh, SC2400mAh, SC2600mAh, SC2800mAh, SC3000mAh
Ni-MH: C1500mAh, C1800mAh, C2000mAh, C2500mAh, C3000mAh, C3500mAh, C4000mAh
Ni-MH: D3000mAh, D3500mAh, D4000mAh, D4500mAh, D5000mAh, D6000mAh, D7000mAh, D8000mAh

Manufacturer/Supplier By: **XINXIANG LVNENG POWER MATERIAL CO., LTD**
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2. Hazards Identification

Hazard description:

These batteries are no “substances” or “mixtures” according to Regulation (EC) No 1907/2006 EC. Instead they have to be regarded as “articles”, no substances are intended to be released during handling. Therefore there is no obligation to supply a “safety data sheet according to Regulation (EC) 1907/2006, Article 31”.

The rechargeable NiMH batteries described in this Product Safety Data Sheet are sealed units which are not hazardous when used according to the recommendations of the manufacturer and as long as their integrity is maintained.

Do not short circuit, puncture, incinerate, crush, force discharge or expose to temperatures above the declared operating temperature range of the product. Risk of fire or explosion.

Under normal conditions of use, the active materials and liquid electrolyte contained in the cells and batteries are not exposed to the outside, provided the battery integrity is maintained and seals remain intact. Risk of exposure only in case of abuse (mechanical, thermal, electrical) which leads to the opening of the valves and/or the rupture of the battery container. Electrolyte leakage or battery vent/explosion/fire may follow, depending upon the circumstances.

3. Composition/Data on Components

COMPONENT	CAS No.	% By wt.
$Ni(OH)_2$	12054-48-7	20%
$LaNi_5$	12196-72-4	8%
FeO	1345-25-1	16.7%
Water	7732-18-5	18.3%
KOH	1310-58-3	31.6%
NaOH	1310-73-2	2.8%
Graphite Powder	7782-42-5	2.6%

4. First aid Measures

In case of accumulator breakage or burst, please evacuate employees from the contaminated area and ensure maximal ventilation in order to break-up corrosive gas, smoke and unpleasant odours. If it occurs, by accident,

following measures must be taken:

Eyes:	Immediately flush eyes with running water for at least 15 minutes without interruption. Seek medical advice.
Skin:	Remove contaminated clothing. Wash with plenty of soap and water. If irritation occurs, get medical attention.
Inhalation:	Move to fresh air. Seek medical attention if irritation persists.
Ingestion:	Do not induce vomiting. Seek immediate medical attention.

5. Fire Fighting Measures

Extinguishing Media:	Use fire-extinguishing media appropriate for surrounding materials.
Unusual Fire and Explosion Hazards:	Leak from a damaged or opened battery: Do not use water unless flooding amounts are available.
Hazardous Combustion Products:	In the event of fire and/or explosion do not breathe fumes. Irritating, corrosive and/or toxic gases or fumes will be released during a fire. Combustion products may include: carbon oxides, metal oxides.
Special Fire-Fighting Procedures:	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

6. Accidental Release Measures

Person related measures:	None under normal use conditions. Remove personnel from area until fumes dissipate. Do not breathe vapours or touch liquid with bare hands. Provide sufficient room ventilation if required.
Environment protection measures:	Avoid allowing material from exposed battery to contaminate soil, sanitary sewers, or waterways
Treatment for cleaning:	Use neoprene or natural rubber gloves and protective glasses, if handling an open or leaking battery. Battery materials should be collected in a leak-proof container and disposed of as Special Waste in accordance with local regulations.

7. Handling and Storage

Guideline for safe handling:	Do not crush, pierce, short (+) and (-) battery terminals with conductive (i.e. metal)goods, which would end up into excessive heating. Do not directly heat or solder. Do not throw into fire. Do not mix batteries of different types and brands. Do not mix new and used batteries. Keep batteries in non conductive (i.e. plastic) trays.

Do not disassemble, mutilate or mechanically abuse cells and batteries.
In order to prevent seal or safety vent damage, never solder the batteries directly at the battery terminals.
This battery is made to be charged many times.
Use only specified charger.
Follow manufacturer data in respect of charge current and charge time.
Note correct polarity.
Improper charging can cause heat damage or even high pressure rupture.

Storage: Store in a cool (preferable below 25°C), well ventilated area, away from moisture, sources of heat, and open flames.
Elevated temperatures can result in shortened battery life.
Keep adequate clearance between walls and batteries.
Since short circuit can cause burn, leakage and rupture hazard, keep batteries in original packaging until use and do not jumble them.

8. Exposure Controls and Personal Protection

National occupational exposure and biological limit values: Under normal conditions release of ingredients does not occur.

Appropriate engineering controls:

Personal protective equipment: Not necessary under normal conditions. Room ventilation may be required in areas where there are open or leaking batteries.

Eye protection: Not necessary under normal conditions. Wear safety glasses with side shields if handling an open or leaking battery.

Skin and body protection: Not necessary under normal conditions.

Hand protection: Not necessary under normal conditions. Use neoprene or natural rubber gloves if handling an open or leaking battery

Respiratory protection: Not necessary under normal conditions. Avoid exposure to electrolyte fumes from open or leaking battery. In all fire situations use self-contained breathing apparatus

Thermal hazard protection: Not required for normal conditions of use.

Environmental exposure controls: Avoid release to the environment. Do not allow to enter drains or water courses.

Other information: Do not eat, drink or smoke during use.

9. Physical and Chemical Properties

General Information

Appearance characters: Mixed with odorless battery

Nominal Voltage: 1.2V

Capacity: 8000mAh
Watt-hour: 9.6WH

10. Stability and Reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Dangerous reactions: No dangerous reactions known.
Dangerous products of decomposition: No dangerous decomposition products known.

11. Toxicological Information

Acute Effects: Under normal conditions of use, the risk of exposure to hazardous components is minimal If the cells become damaged due to mechanical failure or fire, contact with hazardous materials is possible.

Chronic Effects: Under normal conditions of use, the risk of long-term exposure to hazardous components is minimal. Prolonged inhalation of metal dusts or electrolyte mists may cause serious respiratory illness. The chronic effects of long-term exposure to nickel bearing alloys (nickel metal hydride) are currently unknown. According to the national toxicology program (NTP) insoluble nickel compounds (nickel hydroxide) may reasonably be anticipated to be carcinogens, and an assessment by International Agency for Research on Cancer (IARC) concluded there was sufficient evidence that nickel and nickel compounds, as a group, but not necessarily as individual chemicals, were carcinogenic to humans. Cobalt compounds have been classified as carcinogens or potential carcinogens by OSHA and IARC.

12. Ecological Information

The sealed nickel-metal hydride battery as a product are not presenting ecotoxicological hazards. In case of product destruction or opening, the substances described in paragraph 11 can come in contact of the environment. The metals content in a nickel-metal hydride battery are toxics for the environment. If not recycled, it must be disposed of in accordance with all state and local regulations.

13. Disposal Considerations

Product-Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned

packagings-Recommendation: Disposal must be made according to official regulations.

14. Transport Information

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in “strong outer packaging” that prevents spillage of contents. Nickel metal hydride batteries (also as “Dry cell” batteries) are not defined as dangerous goods under the IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). Nickel metal hydride batteries are defined as dangerous goods under the IMDG code. For air and ground transportation, these batteries are not subject to the dangerous goods regulations as they are compliant with the requirements contained in the following special provisions.

Regulatory Body	Special Provisions
IMDG（IMDG Code 2024 Edition (Amdt 42-24) (International Maritime Dangerous Goods Code)	Not Regulated/ Not restricted , unless in excess of 100Kg, Class 9, UN3496 SP117 and SP 963
UN (United Nations)	Not Regulated/ Not restricted
US DOT (United States Department of Transportation)	49 CFR 172.102 Provision 130
IATA(67th Edition-2026) (International Air Transport Association)	Not Regulated/Not restricted UN 3496 and A199
ICAO (Int’l Civil Aviation Organization)	Not Regulated/Not restricted

In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

15. Regulations

UN Model Regulations Rev. 24 (2025)
ICAO Emergency Response Guidance, 2025-2026 Edition
IATA (International Air Transport Organization): Dangerous Goods Regulations 67th Edition; Effective January 1st, 2026
ADR 2025 - Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG Dangerous Goods 42-24 2025 Regulations
EU Battery Directive(EU) 2023/1542

16. Other Information

DISCLAIMER OF LIABILITY

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