

# MSDS Report

## MATERIAL SAFETY DATA SHEET

Name of Sample : Ni-MH BATTERIES  
Model : HR49AA800, AA600mAh  
AAAAA,AAA,AA,A,N,18650,SC,C,D,F,  
Trade Name : N/A



Applicant :  
Address :

Report No. : HSO190110137MRM  
Date of Issue : Jan.4,2021



Prepared and checked by



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## Section 1- PRODUCT AND COMPANY IDENTIFICATION

-Applicant :  
-Address :  
-Product code : Ni-MH BATTERIES  
-Model No. : HR49AA800, AA600mAh  
AAAAA,AAA,AA,A,N,18650,SC,C,D,F,  
-Trade Name : N/A  
-TEL : +86-0373-6633859  
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Item number: **HSO190110137MRM**



## Section 2 – Composition/Information on Ingredient

Component	CAS No.	%
Nickel ,Nickel hydroxide	12054-48-7	About 32%
Hydrogen absorbing alloy (Ni,La,Ce,Pr,Nd.Mn,Al,Co)	N/A	About 38%
Cobalt	7440-48-4	About 3%
Iron	7439-89-6	About 10%
Potassium hydroxide	1310-58-3	About 4%
Nylon	24937-16-4	About 3%
PP fiber Separator	N/A	About 8%
Other	N/A	About 2%

## Section 3 – Hazards Identification

### Eyes

Exposure to the electrolyte contained inside the battery may result in severe irritation and chemical burns.

### Skin

Exposure to the electrolyte contained inside the battery may result in chemical burns.

### Inhalation

During normal use inhalation is an unlikely route of exposure due to containment of hazardous materials within the Battery case. However, should the batteries be exposed to extreme heat or pressures causing a breach in the **battery**

Cell case, exposure to the constituents may occur.

### Ingestion

If the battery case is breached in the digestive tract, the electrolyte may cause localized burns.



## Section 4 – First Aid Measures

### Battery Electrolyte

**Eye Contact**

Flush with plenty of water for at least 20 minutes. Get immediate medical attention.

**Skin Contact**

Remove contaminated clothing and flush affected areas with plenty of water for at least 20 minutes.

**Ingestion**

Do not induce vomiting. Dilute by giving large volumes of water or milk. Get immediate medical attention. Do not give anything by mouth to an unconscious person.

**Inhalation**

Move to an outdoor location. Give oxygen or artificial respiration if needed. Get immediate medical attention. Nickel and Cadmium

Compounds

**Skin contact**

Wash with cold water and soap for 15 minutes.

## Section 5 – Fire Fighting Measures

**Extinguishing Media:**

Use water, foam or dry powder, as appropriate to extinguish fire.

**Fire Fighting Procedures:**

In the event of a fire, wear full protective clothing and NOSH-approved self-contained breathing apparatus with Full-face piece operated in the pressure demand or other positive pressure mode. Fight fire from the maximum Distance. Evacuate area.

**Specific Hazards:**

When involved in a fire, this material may decompose and produce irritating fumes which is harmful for firefighter.



## Section 6 – Accidental Release Measures

### **Personal Precautions:**

Wear appropriate personal protective equipment as specified in Section VIII.

### **Methods of Clean up:**

Spill and leaks are unlikely because cells are contained in a hermetically-sealed case. In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container. Dispose in accordance with applicable state and federal regulations.

## Section 7 – Handling and Storage

Use and store at room temperature. Avoid mechanical or electrical abuse. DO NOT short or install incorrectly. Batteries may explode, hydrolyze or vent if disassembles. crushed, recharged or exposed to high temperature. Install batteries in accordance with equipment instructions. Do not mix battery systems, such as alkaline and zinc carbon, in the same equipment. Replace all batteries in equipment at the same time. Do not carry batteries loose in pecker or bag.



## Section 8 – Exposure Controls, Personal Protection

**Exposure guidelines:**

Manganese Dioxide(as Mn):5.0mg/m<sup>3</sup> (OSHA);0.2mg/m<sup>3</sup> (ACGIH) Potassium Hydroxide; 2mg/m<sup>3</sup> (ACGIH)

Zinc(as Zoo,dust): 2mg/m<sup>3</sup> (ACGIH)

**Engineering measure:**

Use general ventilation under normal use condition.

**Personal protection equipment:**

**Respiration protection:**Not required under normal use.

**Eye protection:**Not required under normal use.Wear safety glassed or face shield as appropriate when handing leaking batteries.

**Hand protection:**Not required under normal use.Use gloves when handling leaking batteries.

**Skin and Body Protection:**Not required under normal use.Use protection clothes when handing leaking batteries.

**Recommended decontamination facilities:**

Eye bath,safety shower,washing facilities.

## Section 9 – Physical and Chemical Properties

**Odor:**Odorless **Appearance:**Cylindrical solid. **Boiling Point:**N/A

**Melting Point:**N/A

**Solubility in Water:**Insoluble

**Density:** N/A

**Ignition temperature:** N/A



## Section 10 – Stability And Creativity

**Stability:**

The product is considered stable under normal conditions.

**Materials to Avoid:**

The battery cells are encased in a non-reactive container,however,if the container is breached or rupture,avoid contact of internal battery components with acids,strong oxidizing agents.

**Stability Condition to Avoid:**

Avoid heat,open flames,moisture,crush,disassemble,short circuit or recharge.

**Hazardous Decomposition Products:**

Thermal degradation may produce hazardous fumes of zinc and manganese,hydrogen gas,caustic vapors of potassium hydroxide and other toxic by-products.

## Section 11 – Toxicological Information

**Manageress Dioxide:**

Harmful by inhalation or ingestion.Long term exposure to manganese compounds may reduce fertility in men.

**Toxicity date:**

ORAL-RAT LD50>3478mg/kg

**Zinc:**

May be harmful if swallowed or inhaled.May act as an irritant.

**Potassium Hydroxide:**

Corrosive-may cause serious burns.Harmful by ingestion.inflation and in contact with skin.If the solid or solution comes into contact with the eyes,serious eye damage may result.

**Toxicity date:**

ORL-RAT LD50 365mg kg<sup>-1</sup>

**Irritation date:**

SKN-HMN 50mg/24h sev

SKN-RBT 50mg/24h/sev

DYE- RBT 1mg/24h/rinse mod

SKN-GPG 50mg/24h/sev



## Section 12 – Ecological Information

### Environmental Precautions:

This product meets the lead,Cadmium and Mercury content requirements of 98/101/EC&91/157/EEC directives.So it may be non-hazardous in ordinary use and may be discarded in a accordance with applicable governmental regulations and take order with the demand of the environmental protection section.

### Environmental Toxicity:

On the basis of available information,this material is not expected to produce any significant adverse environmental effects when recommended use instructions are followed.

## Section 13 – Disposal Considerations

### Waste Disposal Methods:

Individual consumers may dispose of spent(used) batteries with household trash.This product does not recommend that spent batteries be accumulated(quantities of five gallons or more should be disposed of in a secure landfill).in accordance with Federal.State or Local Laws and Regulations.Do not incinerate,since batteries may explode at excessive temperature.

### Note:

This product meets the lead, Cadmium and Mercury content requirements of 98/101/EC & 91/157/EEC directives.





## Section 14 – Transportation Information

Dry cell are not subject to dangerous goods regulation for the purpose of transportation by the U.S. Department of Transportation(DOT),the International Civil Aviation Organization(ICAO),the international Air Transport Association(IATA) or the International Maritime Dangerous Goods regulations(IMDG).The only DOT requirement for shipping Nickel Metal Hydrate batteries is Special Provision A199 which states:”Batteries,dry are not subject to the requirements of this sub chapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat(for example,by the effective insulation of exposed terminals).”

IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting.

And according to 2020 IATA Dangerous Goods regulations 62<sup>th</sup> edition,the product is handled as Non-Dangerous Goods by meeting the requirements:such batteries batteries have been packed in inner pacjing in such a manner as to effectively prevent from short circuits and the movements which could lead to short circuit. And it passes the special provision A199

## Section 15 – Regulatory Information

### Overview:

Do not dispose in fire,mix with other battery types,recharge,connect improperly,or short circuit, which may result in overheating,explosion or leakage of cell contents.Observe all warnings and precautions listed for the product before use.The children should be instructed before they make use of the product.

**Manganese Dioxide: EC#:**215-202-6

**CAS#:**1313-13-9

**Classification and La belling Information:**Annex I Index#025-001-00-3

**European Priority Lists and Risk Assessment Information(Council Regulation(EEC)793/93:**

This chemical substance is not listed in a priority list(as foreseen under Council Regulation(EEC) No793/93 on the evaluation and control of the risks of existing substances.)

**Risk phrases:**R20R22

**Safety phrases:**S25

**Zinc:**

**EC#:**231-175-3

**CAS#:**7440-66-6

**Classification and La belling Information: Annex I Index#(1):**030-001-00-1

**Substance Name in Annex 1:**Zinc powder-zinc dust(euphoric) Annex I Index#(2):030-002-00-7

**Substance Name in Annex 1:**Zinc powder-zinc dust(stabilized)

**European Priority Lists and Risk Assessment Information(Council Regulation(EEC)793/93:**

**Rapporteur:**Netherlands



**Priority List#:**2

**ECB#:**072

**Safety phrases:**S7 S8 S43

**Potassium Hydroxide: EC#:**215-1813-3

**CAS#:**1310-58-3

**Classification and Labeling Information:** Annex I Index#019-002-00-8

**European Priority Lists and Risk Assessment Information(Council Regulation(EEC)793/93:**

This chemical substance is not listed in a priority list(as foreseen under Council Regulation(EEC) No793/93 on the evaluation and control of the risks of existing substances.)

**Risk phrases:** R20 R21 R22 R35 R41

**Safety phrases:**S26 S36 S37 S39 S45

## Section 16 – Additional Information

The data is offered in good faith as typical values and not as a product specification. The information in this data sheet was compiled from information supplied by the vendors of the components of this compound. No warranty, either expressed or implied is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

**Issue date:** Jan.4,2021

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