

MSDS Report

MATERIAL SAFETY DATA SHEET

Name of Sample : NI-MH Button Battery
Model : 250H/40H/80H/20H/160H
Trade Name : N/A

Applicant :
Address

Report No. : HSO190107128DRM
Date of Issue : *Jan.08,2019*

Section 1- PRODUCT AND COMPANY IDENTIFICATION

-Applicant :
-Address :
-Product code : NI-MH Button Battery
-Model No. : **250H/40H/80H/20H/160H**
-Nominal Voltage: : 1.2V
-Capacity : 250mAh (0.3Wh)
-Weight : 10g
-Dimension : H:25mm D:6.5mm

Section 2 – Composition/Information on Ingredient

Chemical characterixation: Mixtures

Description:

Product: Consisting of the following components.

Common Chemical Name	CAS No.	EC No./ EC index/EINECS (if applicable)	%/wt.
Nickelous hydroxide	12054-48-7	/	35
Aluminium magnesium alloy powder	12604-68-1	/	40
Cobalt oxide	1307-96-6	215-154-6	5
PTPErme; 1-piperoyl piperidine	7780-20-3	/	3
WATER	7732-18-5	231-791-2	8
Graphite powder(C)	7782-42-5	231-955-3	5
Potassium hydroxide	1310-58-3	215-181-3	2
Carboxymethyl Cellulose (CMC)	9004-32-4	900-432-4	2

Note: CAS number is Chemical Abstract Service Registry Number.
N/A=Not apply.

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/m³ (OSHA);0.2mg/m³ (ACGIH) Potassium Hydroxide; 2mg/m³ (ACGIH)

Zinc(as Zoo,dust): 2mg/m³ (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⁻¹

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 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

This report applies to by sea, by air and by land;

The NI-MH Button Battery (model: 250H, 40H, 80H, 20H, 160H) tested according to the requirements of the UN manual of tests and Criteria, Part III, subsection 38.3;

NI-MH BUTTON BATTERY (C) 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 60th, IATA Special Provisions A199, International Maritime Dangerous Goods Regulations (IMDG), or 《Recommendations on the Transport of Dangerous Goods Model Regulations》 (20th)

A199 The UN number UN 3496 is only applicable in sea transport. Nickel-metal hydride batteries or nickel-metal hydride 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 case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transport; and (b) accidental activation

The words "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;

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 Labeling 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 Labeling 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.08,2019

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