




Rep No. CHE11-MAE090263M

# MSDS Report

**Name of sample:** Ni-MH RECHARGEABLE BATTERY

**Client unit:** SUNRISE POWER SOURCE (HUIXIAN) CO., LTD.

**Address:** WEST SUOKELOU, HUQIAO, HUIXIAN CITY,  
HENAN, CHINA

Inspected by:   
Kevin Yu

Date:  September 30, 2011

Report in electronic version is only for client's preview and reference.  
For confirmative content, formal test report shall prevail.

## Material Safety Data Sheet

Printing date September 30, 2011

Reviewed on September 30, 2011

**1 Identification of substance:****Product details****Product name:** Ni-MH RECHARGEABLE BATTERY**Product information:**

Product Model No: 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, AAA100mAh, AAA150mAh, AAA200mAh, AAA250mAh, AAA300mAh, AAA350mAh, AAA400mAh, AAA450mAh, AAA500mAh, AAA600mAh, AAA700mAh, AAA800mAh, AAA900mAh, AAA1000mAh, 2/3AA100mAh, 2/3AA150mAh, 2/3AA200mAh, 2/3AA250mAh, 2/3AA300mAh, 2/3AA350mAh, 2/3AA400mAh, 2/3AA500mAh, 2/3AA600mAh, 2/3AA700mAh, 2/3AA800mAh, 2/3AA900mAh, 2/3AAA100mAh, 2/3AAA150mAh, 2/3AAA200mAh, 2/3AAA250mAh, 2/3AAA300mAh, 2/3AAA350mAh, 2/3AAA400mAh, 2/3AAA500mAh, 2/3AAA600mAh, SC600mAh, SC700mAh, SC800mAh, SC900mAh, SC1000mAh, SC1100mAh, SC1200mAh, SC1300mAh, SC1400mAh, SC1500mAh, SC1600mAh, SC1800mAh, SC2000mAh, SC2200mAh, SC2400mAh, SC2600mAh, SC2800mAh, SC3000mAh, C2000mAh, C2500mAh, C3000mAh, C3500mAh, C4000mAh, D4000mAh, D5000mAh, D6000mAh, D7000mAh, D8000mAh

Product End Uses: OUR BATTERIES ARE MAINLY APPLIED TO CORDLESS PHONES, WALKMANS, SOLAR LIGHTS, ELECTRICAL DRILLS, SHAVERS, EMERGENCY LIGHTS, AND BACK-UP POWER, ETC.

**Manufacturer/Supplier:**

SUNRISE POWER SOURCE (HUIXIAN) CO., LTD.

WEST SUOKELOU, HUQIAO, HUIXIAN CITY, HENAN, CHINA

Tel: +86-373-6115988

Fax: +86-373-6115600

Emergency Tel: +86-373-6115988

**MSDS Code: CHE11-MAE090263M****2 Composition/information on ingredients****Chemical characterization:****Description : (CAS#)**

7440-02-0	Nickel	20%
/	Alloy powder	26.4%
7440-48-4	Cobalt	1.1%
14918-69-5	Na	9.8%
7439-89-6	Iron	16.7%
7732-18-5	Water	18.3%
/	Other	7.7%

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## 3 Hazards identification

### **Hazard description:**

Routes of Entry: Not applicable under normal conditions.

Health Hazards: In case of leakage, will be cause itchy and/or chemical burns when direct contact With electrolyte.

Hazards to Environment: Not applicable.

Fire and Explosion Hazards: Not applicably.

## 4 First aid measures

### **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

### **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

### **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

### **After swallowing:**

If symptoms persist consult doctor.

## 5 Fire – fighting measures

### **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire fighting measures that suit the environment.

### **Special hazards caused by the material, its products of combustion or resulting gases:**

Emits toxic fumes under fire conditions

**Protective equipment:** Wear self-contained respiratory protective device.

## 6 Accidental release measures

### **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

### **Measures for environmental protection:**

Do not allow to enter sewers/ surface or ground water.

### **Measures for cleaning/collecting:**

Dispose contaminated material as waste according to item 13.

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## 7 Handling and storage

### **Handling:**

#### **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

#### **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Storage:

**Requirements to be met by storerooms and receptacles:** Store in a cool location.

#### **Information about storage in one common storage facility:**

Store away from flammable substances.

Do not store together with oxidizing and acidic materials.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

## 8 Exposure controls/personal protection

### **Personal protective equipment:**

#### **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

#### **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer

Exposure use respiratory protective device that is independent of circulating air.

#### **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the Degradation

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and

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Has to be observed.

**Eye protection:** Tightly sealed goggles

## 9 Physical and chemical properties:

### General Information

**Form:** Solid

**Color:** Mixed

**Odor:** Odorless

### Change in condition

**Melting point/Melting range:** Not determined

**Boiling point/Boiling range:** Not determined

**Sublimation temperature / start:** Not determined

**Flash point:** Not applicable

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Danger of explosion:** Product does not present an explosion hazard

### Explosion limits:

**Lower:** Not determined

**Upper:** Not determined

**Vapor pressure:** Not determined

**Viscosity:** Not determined

**Density:** Not determined

**Solubility in / Miscibility with Water:** Insoluble

## 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.

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## 11 Toxicological information

**Acute toxicity:****Primary irritant effect:**

**On the skin:** Irritant to skin and mucous membranes.

**On the eye:** Strong irritant with the danger of severe eye injury.

**Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

## 12 Ecological information

**General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## 13 Disposal considerations

**Product:****Recommendation:**

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

**Unlearned packaging:**

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

Ni-MH rechargeable battery is unregulated for purpose of transportation by EU. Department of Transportation (DOT), International Civil Aviation Administration (ICAA), International Air Transport Association (IATA) and the International Maritime Dangerous Goods Regulations (IMDG). The only DOT requirement for shipping these batteries is Special Provision 130 which states: "Batteries, dry, are not subject to the requirements of this subchapter 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)." The only requirements for shipping these batteries by ICAO and IATA is Special Provision A123 which states: "An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so

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as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed Terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transportation. "The International Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says: "Batteries, dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provisions of this Code provided the batteries are securely packed and protected against short-circuits. Examples of such batteries are: alkaline-manganese, zinc-carbon, and nickel metal hydride and nickel-cadmium batteries".

The requirements for shipping these batteries, in all modes of transportation, are that they be separated from each other to prevent short-circuits and to prevent movement that could lead to short-circuits. Products must also be packed in strong packaging that can withstand the rigors normal to transportation.

### 15 Regulations

#### Law Information

- 《Dangerous Goods Regulation》
- 《Recommendations on the Transport of Dangerous Goods Model Regulations》
- 《International Maritime Dangerous Goods》
- 《Technical Instructions for the Safe Transport of Dangerous Goods》
- 《Classification and code of dangerous goods》
- 《Occupational Safety and Health Act》 (OSHA)
- 《Toxic Substances Control Act》 (TSCA)
- 《Consumer Product Safety Act》 (CPSA)
- 《Federal Environmental Pollution Control Act》 (FEPCA)
- 《The Oil Pollution Act》 (OPA)
- 《Superfund Amendments and Reauthorization Act Title III(302/311/312/313)》 (SARA)
- 《Resource Conservation and Recovery Act》 (RCRA)
- 《Safety Drinking Water Act》 (CWA)
- 《California Proposition 65》
- 《Code of Federal Regulations》 (CFR)

In accordance with all Federal, State and Local laws.

### 16 Other information:

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.