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## MSDS Report

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ReportNo.:A001B20170328023

Samples	NI-MH battery
Model	AAA
Client	Shenzhen Huipu Energy Technology Co.,Ltd
Issue Date	2017-03-28

深圳市鑫宇环检测有限公司

Attestation of Global Compliance (Shenzhen) Co., Ltd.

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## Material Safety Data Sheet

According to ISO11014:2009 & GB/T16483-2008

### Section 1 - Chemical Product and Company Identification

#### Chemical product information

**Sample Description:** NI-MH battery

**Sample Model:** AAA

**Sample Receiving Date:** 2017-03-28

**Sample Uses:** ---

#### Company information

**Manufacturer:** Shenzhen Huipu Energy Technology Co.,Ltd

**Address:** NO.jili 6, pingdi town pingxi jixiang 2 road,longgang district ,Shenzhen,Guangdong province

**Tel:** 0755-28957948

**Fax:** 0755-28957948

**Post code:** 518000

**Emergency telephone:** 0755-28957948

**E-mail:**561901292@qq.com

### Section 2 - Hazards Identification

**Emergency overview:** No information available

**Classification according to GHS:** Not a dangerous substance according to GHS.

Label elements	
Hazard pictogram(s)	No available
Signal word	No available
Hazard statement(s)	No available
Precautionary statement(s)	
Prevention	No available
Response	No available
Disposal	No available

**Physical and chemical risk:** No information available

**Health hazard:** No information available

**Environmental hazards:** No information available

**Other hazards:** No information available

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### Section 3 - Composition, Information on Ingredients

**Classification of the substance or mixture:**
 substance     mixture

Chemical Composition	CAS No.	EC#	Weight (%)
Nickel hydroxide	12054-48-7	235-008-5	11-26
Cobalt oxide	11104-61-3	---	8-20
Potassium hydroxide(liquid)	1310-58-3	215-181-3	5
Sodium hydroxide	1310-73-2	215-185-5	1.8
Fe	7439-89-6	231-096-4	12-19

Note: CAS: Chemical Abstracts Service (Division of the American Chemical Society)

EC#: European inventory of Existing commercial Chemical Substances

"---": No Data

### Section 4 - First Aid Measures

**General information:** No special measures required.

**After inhalation:** Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

**After skin contact:** Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

**After eye contact:** Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

**After swallowing:** Do not induce vomiting. Get medical attention.

**The main symptoms:** No relevant details information.

**Health effects:** No relevant details information.

**To protect the rescuers advice:** No relevant details information.

**To the doctor's advice:** Need timely medical treatment and special symptoms, no relevant details information.

### Section 5 - Fire Fighting Measures

**Suitable extinguishing agents:** Use extinguishing agent suitable for local conditions and the surrounding environment. Such as dry powder, CO<sub>2</sub>.

**Special hazards arising from the substance or mixture:** Battery may burst and release hazardous decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable

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electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150°C(302°F)), when damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

**Attention extinguishing method and protective measures:** Wear self-contained respirator. Wear fully protective impervious suit.

## Section 6 - Accidental Release Measures

**Homework personnel protective measures, protective equipment and emergency disposal procedures:**

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

**Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.

**Steps to be taken in case material is spilled or released and Waste disposal method:** Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water. All waste must refer to the United Nations, the national and local regulations for disposal.

**To prevent the secondary disasters prevention measures:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## Section 7 - Handling and Storage

**Precautions for safe handling:** Consumption of food and beverage should be avoided in work areas. Wash hands with soap and water before eating, drinking. Ground containers when transferring liquid to prevent static accumulation and discharge.

**Information about fire and explosion protection:** Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

**Conditions for safe storage, including any incompatibilities:** Requirements to be met by storerooms and receptacles. Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the long time of sunlight.

## Section 8 - Exposure Controls, Personal Protection

**Occupational exposure limit**

**Ingredients with limit values that require monitoring at the workplace:**no relevant details information.

**Biological limit:** no relevant details information.

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**Detection:** no relevant details information.

**Engineering control**



**General protective and hygienic measures:**The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

**Respiratory Protection:** Use suitable respirator when high concentrations are present.

**Personal Protection**

Protection of hands	Eye protection
 Protective gloves	 Tightly sealed goggles

**Section 9 - Physical and Chemical Properties**

Information on basic physical and chemical properties	
Appearance	Sliver
Form	Cylinder
Odour	Odorless.
Electrical properties information	
Voltage	1.2V
Electric capacity	300-1000mAh
Watt-hour	---

**Section 10 - Stability and Reactivity**

**Chemical stability:** Stable in normal circumstances.

**Possibility of hazardous reactions:** Data not available.

**Conditions to Avoid:** Flames, sparks, and other sources of ignition, incompatible materials.

**Incompatibilities:** Oxidizing agents, acid, base.

**Hazardous Combustible Products:** Carbon monoxide, carbon dioxide, lithium oxide fumes.

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## Section 11 - Toxicological Information

### Information on toxicological effects

#### Acute toxicity LD/LC50 Values relevant for classification:

Composition	CAS No.	LC50/LD50
Potassium hydroxide (liquid)	1310-58-3	LD50: 273mg/kg

Note: LC50: lethal concentration, 50 percent kill

LD50: lethal dose, 50 percent kill

**Skin irritation/corrosion:** No further relevant information available.

**Eyes stimulus/corrosion:** No further relevant information available.

**Breathing or skin irritation:** No further relevant information available.

**Germ cell respectively:** No further relevant information available.

**Carcinogenicity:** No further relevant information available.

**Reproductive toxicity:** No relevant details information.

**Specific target organ system toxicity disposable contact:** No further relevant information available.

**Specific target organ system toxicity, repeated contact:** No further relevant information available..

**Inhalation hazard:** No further relevant information available.

**Potentially harmful effects:** No further relevant information available.

## Section 12 - Ecological Information

### Ecological toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

#### Behaviour in environmental systems

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

### Ecological effects

#### Additional ecological information

**General notes:** Do not allow material to be released to the environment without proper governmental permits.

**Other adverse effects:** No further relevant information available.

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### Section 13 - Disposal Considerations

**Waste treatment methods and Recommendation:** Consult state, local or national regulations to ensure proper disposal.

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

### Section 14 - Transport Information

	IATA	IMDG
<b>UN Number</b>	N/A	N/A
<b>UN Proper shipping name</b>	N/A	N/A
<b>Transport hazard class(es)</b>	N/A	N/A
<b>Packing group</b>	N/A	N/A
<b>Marine pollutant:</b>	No	

Note: IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods

**Transport information:** NI-MHbattery(AAA1.2V)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 58<sup>th</sup>, IATA Special Provisions A199, International maritime Dangerous Goods Regulations (IMDG) (37-14), or the 《Recommendations on the Transport of Dangerous Goods Model Regulations》 (19<sup>th</sup>).

By ocean the International maritime Dangerous Goods Regulations (IMDG) regulates them as class 9 dangerous good under UN3496 and Special Provision 117 and 963 which allow a total quantity of less than 100kg gross mass to be transported as non-regulated.

**S.P.A199** The UN number UN 3496 is only applicable in sea transport. Nickel-metal hydride battery 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 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); and
- (b) unintentional 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.

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

**Transport Fashion:**

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### Section 15 - Regulatory Information

**This Material Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006. Safety, health and environmental regulations/legislation specific for the substance or mixture.**

Composition	CAS No.	IECSC	TSCA	DSL/NDSL	EINECS/ ELINCS/ NLP
Nickel hydroxide	12054-48-7	Listed	Listed	Listed	Listed
Cobalt oxide	11104-61-3	Listed	Listed	Listed	Not Listed
Potassium hydroxide(liquid)	1310-58-3	Listed	Listed	Listed	Listed
Sodium hydroxide	1310-73-2	Listed	Listed	Listed	Listed
Fe	7439-89-6	Listed	Listed	Listed	Listed

Note: EINECS: European Inventory of Existing Chemical Substances

ELINCS: European List of Notified Chemical Substances

DSL: Canadian Domestic Chemical Substances

IECSC: Inventory of Existing Chemical Substances in China

NDSL: Canadian non-domestic Chemical Substances

TSCA: Toxic Substances Control Act of USA

### Section 16 - Additional Information

**Declare to reader**

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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\*\*\*End of report\*\*\*

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