

**MATERIAL SAFETY DATA SHEET FOR Nickel Metal Hydride Battery****Section 1. Chemical Product and Company Identification****Product Name:** Nickel Metal Hydride Battery**Manufacture:** Dongguan Large Electronics Co.,Ltd**Address:** Building A and B, Gosun Science Park, Zhouxi Road, Nancheng District, Dongguan, Guangdong**Post Code:**523000**Tel:** 0769-22810105**Emergency Telephone:**0769-22810105**Fax:** 0769-22813796**Email:** [market@juda.cn](mailto:market@juda.cn)**MSDS Code:** LARGE-MSDS008**Date Prepared:** 2014-1-2**Section 2. Composition/Information on Ingredients**

Chemical Name	CAS NO.	Wt %
Nickel hydroxide (Ni(OH) <sub>2</sub> )	12054-48-7	29
Cobaltous oxide (CoO)	1307-96-6	2
Alloy Powder	/	33
Copper(Cu)	7440-50-8	6
High carbon steel(Fe)	7439-89-6	19
Nickel(Ni)	7440-02-0	7
Zinc(Zn)	7440-66-6	1.7
Manganese(Mn)	7439-96-5	2.3

**Section 3. Hazards Summarizing**

The battery is contained in a hermetically-sealed case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, hazardous materials are fully contained inside the battery. The battery should not be opened or exposed to heat because exposure to the following ingredients contained within could be harmful under some circumstances. The following information is provided for the user's information only.

**Section 4. First Aid Measures****Swallowing**

Do not induce vomiting. Seek medical attention immediately.

**Eyes**

If the contents from an opened battery comes into contact with the eyes, immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention.

**Skin**

If the internal cell materials of an opened battery comes into contact with the skin, immediately flush with water for at least 15 minutes.

**Inhalation**

If potential for exposure to fumes or dusts occurs, remove immediately to fresh air and seek medical attention.

**Section 5 . Fire Fighting Measures**

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Flash Point: /.

Auto-Ignition Temperature: /.

**Extinguishing Media**

Carbon dioxide, dry chemical, or foam

**Special Fire-Fighting Procedures**

Wear NIOSH/MSHA approved positive pressure self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Unusual Fire and Explosion Hazards**

Do not dispose of battery in fire-may explode. Do not short-circuit batter-may cause burns.

Hazardous Combustion Products: /

**Section 6. Accidental Release Measures**

**General:** protect people and the environment by keeping filament in appropriate locations.

**Specific:** sweep inert filament and dispose of properly. Avoid the generation of dust in the area.

**Section 7. Handling and Storage**

Ventilation requirements: not required under normal use.

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation.

**Section 8. Exposure Controls/Personal Protection**

Spill and leaks are unlikely because Battery are contained in an hermetically-sealed case. If the battery case is breached, don protective clothing that is impervious to caustic materials and absorb or pack spill residues in inert material. Dispose in accordance with applicable state and federal regulations.

Control parameters

- personal protective equipment
- respiratory protection: protective against dust mask
- hand protection: protective gloves
- eye protection: goggle or protective glasses designed to protect against liquid splashes
- Skin and body protection: working clothes with long sleeve and long trousers.

**Section 9. Physical and Chemical Properties**

PH: /

Boiling point/range: /

Melting point/range: /

Flashpoint: /

Density: /

Upper flammable (explosive) limits in air-Lower (vol%)-UEL: /

Oxidising properties: /

Vapour pressure: /

Solubility in water:

Partition coefficient (n-octanol / water): /

Viscosity: /

Vapour density: /

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Evaporation rate: /

Ignition temperature: /

Any addition information: /

**Section 10. Stability and Reactivity****Stability**

Stable under normal use

**Conditions to Avoid**

When a battery is exposed to an external short circuit, crushes, modification, high temperature above 100 degree C, it will be the cause of heat generation and ignition. Direct sunlight and high humidity.

Materials to avoid: conductive materials, water, seawater, strong oxidizers and strong acids.

**Hazardous Decomposition Products**

Acrid or harmful gas is emitted during fire.

**Section 11. Toxicological Information**

Nickel has been identified by the national toxicology program as reasonably anticipated to be a carcinogen. Cobalt has been identified by IARC as a 2B carcinogen.

Chronic overexposure to nickel may result in cancer; dermal contact may result in dermatitis in sensitive individuals .

**Section 12. Ecological Information**

Persistence/degradability:

Since a battery and the internal material remain in the environment do not bury or throw out into the environment.

**Section 13. Disposal Considerations**

Encourage battery recycling. Our nickel metal hydride batteries are not defined by the federal government as hazardous waste and are safe for disposal in the normal municipal waste stream. Do not incinerate or subject battery to temperatures in excess of 212<sup>o</sup>. Such treatment can cause battery rupture.

**Section 14. Transport Information**

According to Packing Instruction of IATA for transportation, and the special provision of IMDG.

In the case of transportation, confirm no leakage and no overspill from a container. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a battery.

Codes and classifications according to international regulations for transport

Battery can be conveyed normally.

**Section 15. Regulatory Information**

The information contained in this safety data sheet is based on the present state of knowledge and current legislation. This safety data sheet provides guidance on health safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

**Section 16. Additional 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



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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.