

DONGGUAN NUOXING ELECTRONIC CO., LTD

Material Safety Data Sheet for Nickel Metal Hydride Batteries (Ni-MH)

Ref.No.:NX2013052101

Section I - Information of Manufacturer

Manufacturer's Name: Dongguan NuoXing Electronic Co.,Ltd
Address: Baihao Industrial Area, Houjie Town, Dongguan City, Guangdong Province, China
Telephone number/FAX number: TEL:0086-769-85991992 FAX: 0086-769-85889734
Post Code: 523957 Email:8888@1681788.com.cn
Battery models/sizes: All
MSDS Creation Date: May 21 th 2013

Section II - Hazardous Ingredients / Identity Information

Description	CAS No.	% of Total Weight	
Nickel Hydroxide	12054-48-7	32	Wt%
Nickel	7440-02-0	2	Wt%
Copper	7440-50-8	0.5	Wt%
Cobalt oxide	1307-96-6	2	Wt%
Potassium hydroxide	1310-58-3	5	Wt%
Water	7732-18-5	7	Wt%
Iron	7439-89-6	6	Wt%
Lithium Hydroxide	1310-65-2	1.2	Wt%
Sodium Hydroxide	1310-73-2	2.5	Wt%
Nylon	9008-75-7	0.5	Wt%
Carbon	7440-44-0	0.2	Wt%
Polypropylene	9003-07-0	0.5	Wt%
Rubber	9006-04-6	0.2	Wt%
Sodium carboxymethyl cellulose	9004-32-4	0.1	Wt%
Polytetrafluoroethene (PTFE)	9002-84-0	0.3	Wt%
Mischmetal	84989-08-2	40	Wt%

Section III - Physical / Chemical Characteristics

Boiling Point: N.A	Specific Gravity(H ₂ O=1): N.A
Vapor Pressure(mm Hg): N.A	Vapor Density (AIR=1): N.A
Solubility in Water: N.A	Melting Point : N.A
Appearance and Odor	Solid object, odorless

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Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): N.A	Flammable Limits : N.A.
LEL: N.A	UEL: N.A
Extinguishing Media: Carbon Dioxide, Dry Chemical or Foam extinguishers. Do not dispose of battery in fire - may explode. Special Fire Fighting Procedures: N.A. Do not short-circuit battery - may cause burns.	

Section V - Reactivity Data

Stability : Stable
Incompatibility (Materials to Avoid): Hazardous Decomposition or Byproducts
Polymerization: Will Not Occur

Section VI - Health Hazard Data

<p>◆Swallowing Do not induce vomiting. Seek medical attention immediately.</p> <p>◆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.</p> <p>◆Skin If the internal cell materials of an opened battery comes into contact with the skin, immediately flush with water for at least 15minutes.</p> <p>◆Inhalation If potential for exposure to fumes or dusts occurs, remove immediately to fresh air and seek medical attention.</p>
<p>Health Hazard (Acute and Chronic) / Toxic logical information</p> <p>◆ In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte. In contact with electrolyte can cause severe irritation and chemical burns.</p>

Section VII – First Aid Measures

<p>First Aid Procedures:</p> <p>◆ If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.</p> <p>◆ If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician.</p>
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Section VIII– Accidental Release or Spillage

Steps to Be Taken in Case Material is Released or Spilled

- ◆ Batteries that are leakage should be handled with rubber gloves.
- ◆ Avoid direct contact with electrolyte.

Section IX – Handling and Storage

Safe handling and storage advice

- ◆ Batteries should be handled and stored carefully to avoid short circuits.
- ◆ Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries
- ◆ Never disassemble a battery.
- ◆ Do not touch internal material with bare hands.
- ◆ Keep batteries between -30° C and 35° C.

Section X – Ecological Information

- ◆ Ecological Information : N.A

Section XI – Exposure Controls / Person Protection

- ◆ Occupational Exposure Limits: LTEP N.A.
- ◆ Respiratory Protection (Specify Type): N.A.
- ◆ Ventilation Local Exhausts: N.A. ◆ Protective Gloves: N.A.
- ◆ Eye Protection: N.A.
- ◆ Other Protective Clothing or Equipment: N.A.

Section XII – Disposal Method

- ◆ Dispose of batteries according to government regulations.

Section XIII –Regulation Information

Regulation Information

- ◆ Special requirement be according to the local regulations

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Section XIV – Transportation Information

Nickel Metal Hydride batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the International Civil Aviation Organization (ICAO), 2013-2014 edition, International Air Transport Association (IATA), 54th edition, U.S. Department of Transportation. (DOT), 49 CFR. These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following Special Provisions. Special Provision A123 in the IATA Dangerous Goods Regulations and ICAO Technical Instructions and Special Provision 130 in 49 CFR 172.102 of the U.S. hazardous materials regulations require these batteries to be packed in such a way to prevent short circuits or generating a dangerous quantity of heat. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "Not Restricted" and "Special Provision A123" to be provided on the air waybill, when an air waybill is issued. Effective January 1, 2012 the International Maritime Organization (IMO) regulates shipments by ocean, in excess of 100 Kg, as a Class 9 dangerous good under UN 3496 and Special Provision 117 and 963.

Section XV-Other Information

◆The data in this Material Safety Data Sheet relates only to the specific material designated herein.

Section XVI – Measures for fire extinction

- ◆In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.
- ◆Fire fighters should wear self-contained breathing apparatus.