Material Safety Data Sheet For NiMH Batteries

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IDENTITY (As Used on Label and List) Nickel Metal Hydride Battery	Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

Section - Information of Manufacturer

Manufacturer's Name JYH Technology Co., Ltd	Emergency Telephone Number +86-750-3808313
Address : No. 12, Bangmin Road, Jianghai District, Jiangmen City, Guangdong, P.R. China.	Telephone Number for information +86-750-3808313

Section 1- Hazardous Ingredients/ Identity Information

Hazardous Components:

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A) The content of elements are based on homogeneous materials level of NiMH battery:

Element	Lead	Cadmium	Hexavalent Chromium(Cr^{6+})	Mercury	Polybrominated Biphenyls(PBBs)	Polybrominated Diphenyls Ethers(PBDEs)
Limit(mg/kg)	<1000	<100	<1000	<1000	<1000	<1000
CAS no.	7439-92-1	7440-43-9	18540-29-9	7439-97-6	59536-65-1	---

B) The content of elements are based on total weight of NiMH battery:

Element	Lead	Cadmium	Hexavalent Chromium(Cr^{6+})	Mercury	Polybrominated Biphenyls(PBBs)	Polybromi-nated Diphenyls Ethers(PB-DEs)
Limit(mg/kg)	<40	<20	<5	<5	Nil	Nil

Element	Ni(OH)2(Nickel Hydroxide)	30%KOH Solution(Potassium Hydroxide)	30%NaOH Solution(Sodium Hydroxide)	Non-Hazardous Materials
Limit(mg/kg)	<30%	<20%	<20%	<30%
CAS no.	12054-48-7	1310-58-3	1310-73-2	---

Section 2- Physical/ Chemical Characteristics

Boiling Point N.A.	Specific Gravity (H_2O=1) N.A.
Vapor Pressure(mm Hg) N.A.	Melting Point N.A.
Vapor Density(AIR=1) N.A.	Evaporation Rate (Butyl Acetate) N.A.

Solubility Water

Material Safety Data Sheet For NiMH Batteries

N.A.

Appearance and Odor

Cylindrical Shape, odorless

Section 3- Hazard Classification

Classification

N.A.

Section 4- Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	
Incompatibility(Materials to Avoid)			
Hazardous Decomposition or Byproducts			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section 5- Health Hazard Data

Route(s) of Entry	Inhalation	Skin	Ingestion
	N.A.	N.A.	N.A.

Health Hazard (Acute and Chronic) / Toxicological information

In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.

In contact with electrolyte can cause severe irritation and chemical burns.

Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs

Section 6- First Aid Measures

First Aid Procedures

If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.

If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician.

If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area.

Section 7- Fire and explosion Hazard Data

Flash Point (Method Used)	Ignition Temp	Flammable Limits	LEL	UEL
N.A.	N.A.	N.A.	N.A.	N.A.

Extinguishing Media

Carbon Dioxide, Dry Chemical or Foam extinguishers can be used for battery BUT water extinguisher is not suitable.

Special Fire Fighting Procedures

N.A

Unusual Fire and Explosion Procedures

Material Safety Data Sheet For NiMH Batteries

Do not dispose of battery in fire – may explode.

Do not short-circuit battery – may cause burns.

Section 8- 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.

Wear protective clothing and positive pressure Self-Contained Breathing Apparatus(SCBA).

Section 9- 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 breathe cell vapors or touch internal material with bare hands.

Keep batteries between -20□ and 35□ for prolong storage.

When the cells are closed to fully charged, the storage temperature should be between -20℃ and 30℃ and should be controlled at 10-20℃ during transportation and packed with efficient air ventilation.

Section 10- Exposure Controls / Person Protection

Occupational Exposure limits: LTEP N.A.		STEP N.A.
Respiratory Protection (Specify Type) N.A.		
Ventilation	Local Exhausts N.A.	Special N.A.
	Mechanical (General) N.A.	Other N.A.
Protective Gloves N.A.		Eye Protection N.A.
Other Protective clothing or Equipment N.A.		
Work / Hygienic Practices N.A.		

Section 11- Ecological Information

N.A.

Section 12- Disposal Method

Dispose of batteries according to government regulations.

Section 13- Transportation Information

JYH batteries are exempt from dangerous goods. It is considered non-dangerous goods by the International Civil

Aviation Organization (ICAO), the International Air Transport Association (IATA) DGR 62th IATA Special Provisions A199, S.P.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 the case of batteries, by the effective insulation of exposed terminals; or, 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.

According to International Martine Dangerous Goods Regulations (IMDG) (39-18) Edition special provisions 963, the Ni-MH button cell Ni-MH cells or batteries install in (or packed with) equipments, and the battery in the carriage of goods by a single component does not exceed the total weight of 100 kg, does not apply to any other provisions of this rule of IMDG.

Section 14- Regulatory Information

Special requirement be according to the local regulatories.

Section15- Other Information

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

Section 16- Measures for fire extinction

In case of fire, it is permissible to use Carbon Dioxide, Dry Chemical or Foam extinguishers on the batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.