MSDS Report

Prepared For :	SHAO YANG SHI HUA LIN BATTERY CO.,LTD Rou Lian Chang Ta Bei Lou Shuang Qing District Shao Yang Shi Hu Nan China
Product Name:	NI-MH BUTTON
Model :	80H（Capacity: 80mAh）
Prepared By :	Shenzhen HUT Testing Technology Co., Ltd. 11F Baohe Building At The Intersection Of BaoAn Road And XiXiang Road BaoAn District ShenZhen City
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Material Safety Data Sheet

Section 1- Chemical Product & Company Identification

Product Name: NI-MH BUTTON
Manufacture: SHAO YANG SHI HUA LIN BATTERY CO.,LTD
Post Code: N/A
Tel: 0739-5221558
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Section 2- Composition/Information on Ingredients

NI-MH BUTTON

Chemical Name	CAS No.	Wt %
Nickel hydroxide	12054-48-7	25-40
Iron	7440-89-6	10-15
Cobalt	7440-48-4	5-10
Manganese	7439-96-5	1-5
Graphite(natural graphite) (artificial graphite)	7782-42-5 7740-44-0	10-20
Thin and alloy	--	10-20
Aluminum	7429-96-5	0.5-1.0
Potassium hydroxide	1310-58-3	5-10
Sodium hydroxide	1310-73-2	1-5
Lithium hydroxide	1310-65-2	1-5
Other	--	10-20

Section 3- Hazards Identification

For the batter cell, chemical materials are stored in a hermetically sealed metal case designed to withstand temperatures and pressure encountered during normal
Most important hazard and effects:
Human health effects:
Inhalation: the steam of the electrolyte has an aesthesia action and stimulates a respiratory Tract

Skin contact: the steam of the electrolyte stimulates a skin. The electrolyte skin contact causes a sore and stimulation on the skin
Eye contact: the steam of the electrolyte stimulates eyes. The electrolyte skin contact Causes a sore and stimulation on the eyes. Especially substance the causes a strong information of the eyes is contained.
Environmental effects: since a battery cell remains in the environments do not throw out into the environment
Specific hazards: if the electrolyte contact with water, if will generate detrimental hydrogen fluoride since the leaked electrolyte is inflammable liquid it does not bring close to fire.

Section 4- First Aid Measures

Under normal conditions of use, the battery is hermetically sealed
Ingestion: swallowing a battery can be harmful, contents of an open battery can cause serious chemical burns of mouth oesophagus and gastrointestinal tract
Induce vomiting When it is impossible or the feeling is not well after vomiting seek medical attention
Inhalation: contents of an open battery can cause respiratory imitation. Remove to fresh air immediately and make the victim blow his/her nose, gargle, seek medical attention if necessary.
Skin contact: remove contaminated cloths and shoes immediately. Wash the adhere or contact region with soap and plenty of water immediately.
Eye contact: immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.

Section 5- Fire Fighting Measures

Flash Point: N/A
Auto-Ignition Temperature: N/A
Extinguishing Media
H2O, CO2
Special Fire-Fighting Procedures
Self-contained breathing apparatus.
Unusual Fire and Explosion Hazards
Cell my vent when subjected to excessive heat-exposing battery contents
Hazardous Combustion Products
Carbon monoxide, carbon dioxide, lithium oxide fumes.

Section 6- Accidental Release Measures

Internal cell material, such as electrolytic leaked from battery cell, are carefully dealt with according to the followings:
Personal precautions: remove leaked materials with protective equipment (protective glasses and protective gloves). Do not inhale the gas as much as possible. Moreover avoid touching with as much as possible.
Environmental precautions: do not throw out into the environments.

Method of cleaning up: the leaked solid is moved to a container. The leaked place is wiped off with dry cloth
Prevention of secondary hazards: avoid re-scattering. Do not bring the collected materials close to fire.

Section 7- Handling and Storage

Handling: technical measure
Prevention of user exposure: not necessary under normal use
Prevention of fire and explosion: not necessary under normal use.
Precaution for safe handing: do not damage or remove the external tube.
Specific safe handing advice: never throw out cells in a fire or expose to high temperatures. Do not soak cells into water and seawater. Do not expose to strong oxidizers. Do not give a strong mechanical shock or throw down. Never disassemble modify or deform. Do not connect the positive terminal to the negative terminal with electrically conductive material. In the case of charging use only dedicated charger or charger according to the conditions specified.
Storage: technical measures
Storage conditions (suitable to be avoid): avoid direct sunlight high temperature, high humidity and the place where it is exposed to the static electricity.
Store in cool place(temperature:-20－35℃, humidity: 45-85%).
Incompatible products: conductive materials. Water, seawater, strong oxidizers and strong acids.
Packing material(recommended, not suitable): isolative and waterproof materials are recommended.

Section 8 - Exposure Controls/Personal Protection

Engineering measures:
NO engineering measure is necessary during normal use. In case of internal cell materials leakage, operate the local exhaust or improve ventilation.
Control parameters

- personal protective equipment
- respiratory protection, protective against dust mask.
- hand protection: protection 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: soild
Boiling point/range: not applicable

Melting point/range: not applicable
Flashpoints: not applicable
Density: not applicable
Upper flammable(explosive) limits in air-Lower (vol%)-UEL: /
Oxidising properties: not applicable
Vapour pressure: not applicable
Solubility in water:insoluble in water
Partition coefficient (no-ctanal/water): not applicable
Viscosity: not applicable
Evaporation rate: not applicable
Ignition temperature: not applicable
Any addition information:/

Section 10 – Stability and Reactivity

Stability
Stable under normal use
Conditions to Avoid
When a battery cell is exposed to an external short circuit, crushes, modification, high temperature above 100 ℃, 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 demined during fire.

Section 11 – Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened. Exposure to internal contents, the corrosive fumes will be very irrigative to skin、eyes and mucous membranes .Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritancy.

Section 12-Ecological Information

Persistence/degradability:
Since a batter cell and the internal material remain in the environment do not bury or throw out into the environment.

Section 13 – Disposal Considerations

Recommended methods for safe and environmentally preferred disposal
Product (waste from residues)

Do not throw out a used battery cell. Recycle it through the recycling company.
Contaminated packaging
Neither a container nor packing is contaminates, dispose as industrial wastes subject to special control

Section 14 – Transport Information

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 cell. Please refer to section VII-HANGING AND STROAGE also.
Codes and classifications according to international regulations for transport
Air
IATA-DGR: Special provision A45
Sea
IMO-IMDG code: special provision 188
The UN classification number: class 9 3090
However, since it corresponds to special provision A45of IATA-DGR or special provision 188 of IMOIMDG Code, this battery cell can be conveyed normally.

Section 15 – Regulatory Information

Regulations specifically applicable to the product
IATA UN NO.:3090(air transportation)
IMO UN NO.:3090(sea transportation)
US department of transparent 49 codes of federal regulations (USA)
Waste disposal and public cleaning law (Japan)
Other information:
The information contained in this safety data sheet is based on the present state of knowledge and current legislation. This safety date 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 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.

End of report