



## Material Safety Data Sheet

Model No.: Batteries, Nickel-Metal Hydride

Document Number: KLY-M-0101

Revision: 2.6

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## IDENTITY

( As Used on Label and List )

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 I – Identification

|   |   |
|---|---|
| Manufacturer's Name<br>YiYang Corun Battery Co., Ltd.   | Product Name<br>Batteries, Nickel-Metal Hydride                                     |
| Address(Number, Street, City State, and ZIP Code)<br>ChaoYang Development Zone,<br>YiYang city, Hunan province, china | Emergency telephone Number<br>Telephone Number for information<br>+86) 0737-6202918 |
| Signature of Preparer(optional)   | Date of prepared and revision<br>1 Jan 2016   |

## Section II –Hazard(s) Identification

Classification N.A.

## Section III -Composition/Information on Ingredients

| Common Chemical Name | Concentration (%) | CAS Number | EC No.    |
|----------------------|-------------------|------------|-----------|
| Lanthanum            | 16                | 7439-91-0  | ---       |
| Cerium               | 11                | 7440-45-1  | 231-154-9 |
| Cobaltous oxide      | 1                 | 1307-96-6  | 215-154-6 |
| Iron                 | 27                | 7439-89-6  | 231-096-4 |
| Copper               | 7                 | 7440-50-8  | 231-159-6 |
| Nickel hydroxide     | 20                | 12054-48-7 | 235-008-5 |
| Nickel               | 3                 | 7440-02-0  | 231-111-4 |
| Water                | 8                 | 7732-18-5  | 231-791-2 |
| Polypropylene        | 2                 | 9003-07-0  | ---       |
| Polyethylene         | 2                 | 9002-88-4  | 244-334-7 |
| Potassium hydroxide  | 1                 | 1310-58-3  | 215-181-3 |
| Sodium Hydroxide     | 2                 | 1310-73-2  | 215-185-5 |

High Technology Industry Park, ChaoYang Development Zone, YiYang city, Hunan province, china

Telephone : (086) 737 6202918

Website: <http://www.corun.com>

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Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.

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## Section IV – 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 electrolytes vapors are inhaled, provide fresh air and seek the attention if respiratory irritation develops.

Ventilate the contaminated area.

## Section V –Fire-Fighting Measures

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

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.

### Extinguishing Media

Carbon Dioxide, Dry Chemical or Foam Extinguishers

Special Fire Fighting Procedures N.A.

Unusual Fire and Explosion Hazards

Do not dispose of battery in fire – may explode.

Do not short circuit battery – may cause burns.



## Section VI –Accidental Release Measures

### 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 a positive pressure Self-Contained Breathing Apparatus (SCBA).

## Section VII – 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 call vapors or touch internal material with bare hands.

Keep batteries between -10°C and 40°C for prolong storage.

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## Section VII – Exposure Controls / Personal 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 VIII –Physical and Chemical Properties

|                        |                             |                                    |      |
|------------------------|-----------------------------|------------------------------------|------|
| Boiling Point          | N.A.                        | Specific Gravity (H2O=1)           | N.A. |
| Vapor Pressure (mm Hg) | N.A.                        | Melting Point                      | N.A. |
| Vapor Density (AIR=1)  | N.A.                        | Evaporation Rate (Butyl Acetate=1) | N.A. |
| Solubility in Water    | N.A.                        |                                    |      |
| Appearance and Odor:   | Cylindrical Shape. odorless |                                    |      |



## Section X –Stability and Reactivity

|                                       |                |   |                     |
|---------------------------------------|----------------|---|---------------------|
| 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 XI –Toxicological Information

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

Toxicological information / Health Hazard (Acute and Chronic)

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.

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**Section XII - Ecological Information**

N.A.

**Section XIII – Disposal Considerations**

Dispose of batteries according to government regulations

**Section XIV - Transportation Information**

Corun batteries are considered to be “Dry cell” batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) and International Maritime Dangerous Goods Regulations (IMDG).

The battery in the transportation, loading and unloading, and storage process, easy for person, property and environmental damage, need special protection, should according to (IMDG) UN3496(batteries, nickel metal hydride, type 9) corresponding dangerous goods transport, piling entries on packaging carrying, isolation and checked.

SP117

Only regulated when transported by sea.

SP 963

Nickel-metal hydride button cells or nickel-metal hydride cells or batteries packed with or contained in equipment are not subject to other provisions of this code.

All other nickel-metal hydride cells or batteries shall be securely packed and protected from short circuit. They are not subject to other provisions of this code provided that are loaded in a cargo transport unit in a total quantity of less than 100 Kg gross mass. When loaded in a cargo transport unit in a total quantity of 100 Kg gross mass or more, they are not subject to other provisions of this Code except those of 5.4.1, 5.4.3 and column (16) of the dangerous good list in Chapter 3.2.

International Civil Aviation Organization(ICAO)and International Air Transport Association(IATA),Special Provision A199 which states: “An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent 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)is forbidden from transportation.”

We hereby certify that the consignment is not classified as dangerous under the current edition of the IATA. Dangerous goods regulations A199 under 57<sup>th</sup> Edition and all applicable carrier and governmental regulations.

**Section XV - Regulatory Information**

Special requirement be according to the local regulations.

**Section XVI - Other Information**

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

Last revision is 2.5, and new revision 2.6 prepared on 1 Jan 2016.