

# SDS

## SAFETY DATA SHEET

**Prepared For** : Cixi Utrust Electric Appliance Co., Ltd.  
No. 668, Zhendong Road, Zhouxiang Town, Cixi City, Ningbo City,  
Zhejiang Province

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**Approved by:** Sam Li

## Section 1-Chemical Product and Company Identification

**Product:** Ni-Cd Battery

**Common name:** Ni-Cd Battery

**Model:** MB Cd- AA 600mAh

**Rating of battery:** 1.2V, 600mAh, 0.72Wh

**Trademark:** N/A

**Weight:** 71.0g

**Shape and Physical Dimension (mm):**  $\Phi 48.0 \times 13.9$ mm

**Manufacture:** Cixi Utrust Electric Appliance Co., Ltd.

**Address:** No. 668, Zhendong Road, Zhouxiang Town, Cixi City, Ningbo City, Zhejiang Province

**Telephone number of the supplier:** 0574-63316177

**Emergency Telephone:** 0574-63316177

**E-mail address:** sales25@cn-ustrust.com

## Section 2- Hazards Identification

### (a) Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS/SDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery

|                                                             |             |
|-------------------------------------------------------------|-------------|
| Skin corrosion/irritation                                   | Category 1A |
| Serious eye damage/eye irritation                           | Category 1  |
| Specific target organ toxicity (repeated exposure) Category | Category 2  |
| Flammable liquid and vapor                                  | Category 3  |

### (b) GHS Label elements, including precautionary statements

#### Emergency Overview

**Signal word**

**Hazard Statements**

Causes skin irritation

Causes serious eye damage

May cause cancer

Contains gas under pressure; may explode if heated



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance. This is a battery. In case of rupture: the above hazards exist.

Appearance Golden

Physical State Solid

Odor Odorless

#### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapors/spray

Do not eat, drink or smoke when using this product

#### **Precautionary Statements - Response**

Specific treatment (see supplemental first aid instructions on this label)

Get medical advice/attention if you feel unwell

#### **Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Immediately call a POISON CENTER or doctor/physician

#### **Skin**

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

#### **Precautionary Statements - Storage**

No information available.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**(c) Hazards not otherwise classified (HNOC)**

No information available.

**(d) Unknown Toxicity**

10% of the mixture consists of ingredient(s) of unknown toxicity.

**(e) Other information**

No information available.

**(f) Interactions with Other Chemicals**

No information available.

**Section 3- Composition/Information on Ingredient**

| Common Chemical Name                       | Concentration (%) | CAS Number | EC No.    |
|--------------------------------------------|-------------------|------------|-----------|
| Lithium Cobalt Oxide (LiCoO <sub>2</sub> ) | 15                | 12190-79-3 | 235-362-0 |
| Graphite                                   | 30                | 7782-42-5  | 231-955-3 |
| 1,1-Difluoroethylenepolymer                | 15                | 24937-79-9 | 200-867-7 |
| Carbon black                               | 20                | 1333-86-4  | 215-609-9 |
| Phosphate(1-),hexafluoro-,lithium          | 20                | 21324-40-3 | 244-334-7 |

**Section 4- First Aid Measures**

The battery is not hazard with eye and skin contact under normal circumstance. In case of the enclosure is damaged, the battery can not be used and touched. It is safety except that the battery is damaged by fire or rupture. The leakage of internal hazardous substance and formation of hazardous substance would occur, take the following measures if contact with the battery.

**Skin touch:** If there is any unwell reaction, wash thoroughly with soap & water, flush with plenty of water. If irritation persists, seek medical advice.

**Eyes touch:** Rinse immediately with plenty of water for at least 15 mins. Contact a doctor if symptoms persist.

**Inhalation:** Remove from exposure site to fresh air. Keep at rest. Obtain medical attention.

**Ingestion:** Rinse mouth out with water. Seek medical advice immediately.

**Self-protection of the first aider:** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Information for doctor**

**Most important symptoms and effects, both acute and delayed:** no further relevant information available.

**Indication of any immediate medical attention and special treatment needed:** No further relevant information available

## Section 5- Fire Fighting Measures

**(a) Extinguishing media**

Suitable extinguishing media: Use foam, dry powder or dry sand, CO<sub>2</sub> as appropriate.

Unsuitable extinguishing media: No information available.

**(b) Special hazards arising from the chemical**

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO, CO<sub>2</sub>, Metal oxides, Irritating fumes.

**(c) Special protective equipment and precautions for fire-fighters**

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

## Section 6- Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:**

If the battery is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the vapors to dissipate. Avoid

skin and eyes contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerated. If leakage of the battery happens, liquid could be absorbed with sand, earth or other inert substance and contaminated area should be ventilated meantime.

**Environment precautions:**

Do not allow product to reach sewage system or any water source.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

**Methods and material for containment and cleaning up:**

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

**Section 7- Handling and Storage****Precautions for safe handling:**

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not short-circuit batteries. Use recommended charging time and current.

**Storage conditions:**

If the batteries are subject to storage for such a long term as more than 3 months, it is recommended to recharge the Li-ion battery periodically.

**Storage Temperature:**

Short period less than 3 months: -20~+45°C, 75%RH Max

Long period more than 3 months: +5°C~+35°C, 75%RH Max

Do not storage Li-ion battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects. Keep out of reach of children. Do not expose Li-Polymer battery to heat or

fire. Avoid storage in direct sunlight. Do not store together with oxidizing and acidic materials.

## Section 8- Exposure Controls, Personal Protection

### (a) Control parameters

#### Exposure Guidelines

| Chemical Name                                         | ACGIH TLV                                                                   | OSHA PEL                                                                                                                                                                                                                                           | NIOSH IDLH                                                                                                                   |
|-------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Lithium Cobalt Oxide (LiCoO <sub>2</sub> ) 12190-79-3 | TWA: 0.02 mg/m <sup>3</sup>                                                 |                                                                                                                                                                                                                                                    |                                                                                                                              |
| Aluminum 7429-90-5                                    | TWA: 1 mg/m <sup>3</sup> respirable fraction                                | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated)<br>TWA: 15 mg/m <sup>3</sup> total dust (vacated)<br>TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated)<br>TWA: 5 mg/m <sup>3</sup> Al Aluminum | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust                                             |
| Copper 7440-50-8                                      | TWA: 0.2 mg/m <sup>3</sup> fume<br>TWA: 1mg/m <sup>3</sup> Cu dust and mist | TWA: 0.1 mg/m <sup>3</sup> fume<br>TWA: 1 mg/m <sup>3</sup> dust and mist (vacated)<br>TWA: 0.1 mg/m <sup>3</sup> Cu dust, fume, mist                                                                                                              | IDLH: 100 mg/m <sup>3</sup> dust, fume and mist<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>TWA: 0.1 mg/m <sup>3</sup> fume |
| Phosphate(1-), hexafluoro-, lithium 21324-40-3        | TWA: 2.5 mg/m <sup>3</sup> F                                                | TWA: 2.5 mg/m <sup>3</sup> F<br>TWA: 2.5 mg/m <sup>3</sup> dust (vacated)<br>TWA: 2.5 mg/m <sup>3</sup>                                                                                                                                            |                                                                                                                              |

ACGIH TLV: American Conference of Governmental Industrial Hygienists -Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

**Other Exposure Guidelines:** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992) See section 15 for national exposure control parameters

### (b) Appropriate engineering controls

Engineering Measures: 1.Showers 2.Eyewash stations 3.Ventilation systems

### (c) Individual protection measures, such as personal protective equipment

**Respiratory protection:** No necessary under normal use. In case electrolyte leakage from the battery, protect hand with chemical resistant rubber gloves. If battery is burning, leave the area immediately. In abuse, use NIOSH approved acid gas filter mask or self-contained breathing apparatus.

**Hand protection:** None under normal use. In case of spilling, use PVC, neoprene or nitrile gloves of 15mils

(0.015 inch) or thicker.

**Eye/Face protection:** None required under normal conditions. Use approved chemical work safety goggles or face shield, if handling a leaking or rupture battery.

**Skin and body protection:** No necessary under normal use. Use rubber apron and protective working in case of handling of a rupture battery.

**Other protective equipment:** Chemical resistance clothing is recommended along with eye wash station and safety shower should be available. Work hygienic practices: Use good chemical hygiene practice. Wash hands after use and before drinking, eating or smoking. Wash hands thoroughly after cleaning-up component spill caused by leaking battery. No eating, drinking, or smoking in battery storage area. Launder contaminated cloth before reuse.

## Section 9- Physical and Chemical Properties

### Information on basic physical and chemical properties

#### General information

**Form:** Solid      **Colour:** Golden      **Odour:** Odourless      **Odour threshold:** Not available

**pH-value:** Not available

#### Change in condition

**Melting point/Melting range:** Not available

**Boiling point/Boiling range:** Not available

**Freezing point:** Not available

**Flash point:** Not available

**Flammability (solid, gaseous):** Not available

**Auto-Ignition temperature:** Not available

**Decomposition temperature:** Not available

**Self-igniting:** Product is not selfigniting.

**Explosive properties:** Risk of explosion by shock, friction, fire or other sources of ignition.

#### Explosion limits

**Lower:** Not available

**Upper:** Not available

**Oxidizing properties:** Not available

**Vapour pressure:** Not available

**Density:** Not available

**Relative density:** Not available

**Vapour density:** Not available

**Evaporation rate:** Not available

**Solubility in / Miscibility with water:** Not available

**Partition coefficient (n-octanol/water):** Not available.

**Viscosity**

**Dynamic:** Not available.

**Kinematic:** Not available

**Other information:** No further relevant information available.

## **Section 10- Stability and reactivity**

### **(a) Reactivity**

Stable under recommended storage and handling conditions.

### **(b) Chemical stability**

Stable under normal conditions.

### **(c) Possibility of hazardous reactions**

When heated above 150°C the risk of rupture occurs. Due to special safety construction, rupture implies controlled release of pressure without ignition.

### **(d) Conditions to avoid**

Do not subject Li-ion Battery to mechanical shock. Keep away from open flames, high temperature.

### **(e) Incompatible materials**

Strong oxidizer, strong acid.

### **(f) Hazardous decomposition products**

Under fire conditions, the electrode materials can form carcinogenic nickel and cobalt oxides.

## Section 11- Toxicological information

### (a) Information on the likely routes of exposure

**Inhalation:** Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

**Ingestion:** Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.

**Skin contact:** Contact with battery electrolyte may cause burns and skin irritation.

**Eye contact:** Contact with battery electrolyte may cause burns. Eye damage is possible.

Under normal conditions (during charge and discharge) release of ingredients does not occur. If accidental release occurs see information in section 4. Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

### (b) Information on toxicological characteristics

Acute toxicity: No data available.

Skin corrosion/irritation: The liquid in the battery irritates.

Serious eye damage/irritation: The liquid in the battery irritates.

Respiratory sensitization: The liquid in the battery may cause sensitization to some person.

Skin sensitization: The liquid in the battery may cause sensitization to some person.

Carcinogenicity: Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).

Germ Cell Mutagenicity: No data available.

Reproductive Toxicity: No data available.

STOT-Single Exposure: No data available.

STOT-Repeated Exposure: No data available.

Aspiration Hazard: No data available.

Sensitization: No data available.

Mutagenic Effects: No data available.

Carcinogenicity: No data available.

Reproductive Toxicity: No data available.

Chronic Toxicity: No data available.

Target Organ Effects: No data available.

Aspiration Hazard: No data available.

## Section 12- Ecological Information

### Toxicity

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behaviour in environmental systems:** No further relevant information available
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information**
- **General notes:**
  - Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  - Do not allow product to reach ground water, water course or sewage system.
  - Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

## Section 13- Disposal Considerations

**Nature of waste:** Hazardous Waste 26

### Waste disposal methods:

- a. Disposal of the battery should be performed by permitted, professional disposal firms knowledgeable in federal, state or local requirements of hazardous waste treatment and hazardous waste transportation.
- b. Incineration should never be performed by battery used. The batteries contained recyclable materials.  
Recycling options available in your local area should be considered when disposing of this product, through licensed waste carrier.
- c. The battery should have their terminal insulated in order to prevent short circuits during transportation to the disposal site.

**Note:** Consult your local or region authorities, disposal maybe subject to national, state, or local laws.

## Section 14 – Transport Information

### Land transport

ADR/RID class: Not Restricted

UN-Number: Not Restricted

### Air transport

ICAO/IATA Class: Not Restricted

UN/ID Number: Not Restricted

Environmental hazards: Not Restricted

Special precautions for user: Not Restricted

**Transport/Additional information** According to the special provisions A199 IATA Dangerous Goods Regulations 61th Edition(IATA DGR 61th), Nickel-metal hydride button cells or nickel-metal hydride cells or batteries packed with or contained in equipment are not subject to the provisions of this Code. It is considered non-dangerous goods by the International Carriage of Dangerous Goods by Road (ADR 2019) for transportation, International Carriage of Dangerous Goods by Rail (RID 2019)

The UN number UN 3496 is only applicable in sea transport. According to the SP963 of the International Maritime Dangerous Good Code (IMDG CODE 39-18), Nickel-metal hydride button cells or nickel-metal hydride cells or batteries packed with or contained in equipment are not subject to the 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 they 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 columns 16a and 16b of the Dangerous Goods List in chapter 3.2.

### **UN-Number**

· ADR, IMDG, IATA UN3496

### **UN proper shipping name**

· ADR Ni-Cd Battery

· IMDG, IATA Ni-Cd Battery

### **Transport hazard class(es)**

· ADR, IMDG, IATA



Class 9 Miscellaneous dangerous substances and articles.

Label 9

#### Packing group

· ADR, IMDG, IATA 9

· Marine pollutant: No

**Special precautions for user:** Warning: Miscellaneous dangerous substances and articles.

· **Danger code (Kemler):** -

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

· **UN "Model Regulation":** UN3480 or UN3481, LITHIUM ION BATTERIES, 9, II

### Section 15- Regulatory information

OSHA hazard communication standard (29 CFR 1910.1200)

\_\_\_\_\_ Hazardous

\_\_\_\_\_ ☒ Non-hazardous

### Section 16- Other Information

**Note:** 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.