

Safety Data Sheet

For

Guangzhou Boren Electronics Co.,Ltd
No.6, Hehu Road, Helong Village, Taihe Town , Guangzhou, China

Nickel Cadmium Battery

Model/type reference:A

Nominal Voltage.....: 1.2V

Typical Capacity

Weight..... About27.0g

Shape and Physical Dimension H:48.5mm
(mm)..... D:16.8mm

Version number.....: V1.0

Revision date.....: N/A.

Laboratory **Shenzhen Micro test Technology Co.,
Ltd.**

Address 6F,ZhongbaoBuilding,Xiaweiyuan,Gushu,Bao'anDistrict,
Shenzhen, P.R. China.

Compiled by (+signature): Steven Guan

Reviewed by(+signature):Tony Xie

Approved by(+signature):Hebe Lee

Steven Guan

Tony Xie

Hebe Lee



Section 1- Chemical Product and Company Identification

Product Identification: Nickel Cadmium Battery
Model: A
Manufacture : Guangzhou Boren Electronics Co.,Ltd
Address: No.6, Hehu Road, Helong Village, Taihe Town , Guangzhou, China
Trade name: N/A.
Telephone number of the supplier: (86)20-28077415
Emergency Telephone No.(24h): (86)20-28077416
Fax: (86)20-28077417
e-mail address: vpow@live.cn
PreparationDate:Jul.08,2013
This MSDS was prepared by Shenzhen Micro test Technology Co. ,Ltd.
ItemNumber:MTI130627002RM
Referenceddocuments:ISO11014:2009 Safety datasheet for chemical products

Section 2

Preparation Hazard and classification	Not dangerous with normal use. Do not dismantle, open or shred Nickel Cadmium Battery.Exposuretotheingredientscontainedwithinthepreparationproducts Could be harmful.
Appearance, Color, and Odor	Solid object with no odor, green.
Primary Route(s)of Exposure	Thesechemicalsarecontainedinasealedstainlesssteelenclosure.Riskof exposureoccursonlyifthecellismechanically,thermallyorelectricallyabusedto thepointofcompromisingtheenclosure.Ifthisoccurs,exposuretotheelectrolyte solutioncontainedwithincanoccurbyInhalation,Ingestion,EyecontactandSkin contact
Potential Health Effects:	ACUTE(short term): see Section8 for exposure controls In the event that this Battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns. Inhalation: Vapors or mists from a ruptured battery may cause respiratory irritation. Ingestion: Swallowing the contents of an open battery can cause serious chemical Burns of mouth, esophagus, and gastrointestinal tract. Skin: Skin contact with contents of an open battery can cause severe irritation or Burns to the skin. Eye: Eye contact with contents of an open battery can cause severe irritation or Burns to the eye. CHRONIC(long term) : see Section11 for additional toxicological data
Medical Conditions Aggravated by	Not applicable

Exposure
Reported as carcinogen Not applicable

Section 3

Nickel Cadmium Battery is a mixture.

Hazardous Ingredients (Chemical Name)	Concentration or concentration ranges (%)	CAS Number
Nickel hydroxide	14.5%	21041-95-2
Cadmium oxide	13.6%	1306-19-0
Cadmium	5.2%	7440-43-9
Cobaltousoxide	0.4%	1307-96-6
Nickel	5.3%	7440-02-0
Iron	33.5%	7439-89-6
Potassium hydroxide	7.1%	1310-58-3
Sodium hydroxide	0.8%	1310-73-2
Lithium hydroxide	0.5%	1310-66-3
Water	19.8%	7732-18-5
Others	0.1%	--

Labeling according to EC directives.

No symbol and risk phrase are required.

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

Section 4

Inhalation If contents of an opened battery are inhaled, remove source of contamination or move victim to fresh air. Obtain medical advice.

Skin contact If skin contact with contents of an open battery occurs, as quickly as possible Remove contaminated clothing, shoes and leather goods. Immediately flush with lukewarm, gently flowing water for at least 30minutes.If irritation or pain persists, seek medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Eye contact If eye contact with contents of an open battery occurs, immediately flush the Contaminated eye(s) with lukewarm ,gently flowing water for at least 30minutes while holding the eyelids open. Take care not to rin secontaminated water into the

Ingestion unaffected eye or on to face. Quickly transport victim to an emergency care facility. If ingestion of contents of an open battery occurs, never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. Quickly transport victim to an emergency care facility.

Section 5

Flammable Properties In the event that this battery has been ruptured, the electrolyte solution contain Within the battery would be flammable. Like any sealed container, battery cells may Rupture when exposed to excessive heat; this could resulting there lease of flammable or corrosive materials.

Suitable extinguishing Media Use extinguishing media suitable for the materials that are burning(e.g.: dry Chemical powder foam, carbon dioxide, sand).

Unsuitable extinguishing Media Not available

Explosion Data **Sensitivity to Mechanical Impact:** This may resulting rupture in extreme cases
Sensitivity to Static Discharge: Not Applicable

Specific Hazards Arising from The chemical Fires involving Nickel Cadmium Battery can be controlled with water. When water Is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas Can for man explosive mixture.

Protective Equipment and precautions for firefighters As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-dem and, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Use NIOSH/ MSHA approved full-face self-contained breathing apparatus(SCBA)with full protective gear.

NFPA Health:0Flammability:0Instability:0

Section 6

Personal Precautions, protective equipment, and Emergency procedures Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section8.

Environmental Precautions Prevent material from contaminating soil and from entering sewers or water ways.

Method sand materials for Containment Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth .Clean up spills

immediately.

Method sand materials for cleaning up Absorb spilled material with an inert absorbent (e.g.: dry sand).Scoop contaminated absorbent

Into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.

Section 7

Handling Don't handling Nickel Cadmium Battery with metal work. Do not open, disassemble ,crush or burn battery .Ensure

Good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Information about protection against explosion sand fires: Keep ignition sources away-Do not smoke.

Storage If the Nickel Cadmium Battery are subject to storage for suchalongtermasmorethan3months,it is

Recommended to recharge the Nickel Cadmium Battery periodically.

Storage Temperature

Shortperiodlessthan1month: -20°C~+50°C,85%RH
Max

Shortperiodlessthan3months: -20°C~+40°C,85%RH
Max

Shortperiodlessthan1year: -20°C~+30°C,85%RH
Max

Do not storage Nickel Cadmium 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 Nickel Cadmium Battery to heat or fire. Avoid storage indirect sunlight.

Do not store together with oxidizing and acidic materials.

Section 8

Engineering Controls Use local exhaust ventilation or other engineering controls to control sources of dust,

mist,fumesandvap or.

Keep away from heat and open flame .Store in a

Personal Protective Equipment

Cool ,dry place.
Respiratory Protection: Not necessary under Normal conditions.
Skin and body Protection: Not necessary Under normal conditions.
Hand protection: Wear neoprene or natural Rubber material gloves if handling an open or leaking battery.
Eye Protection: Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.

Other Protective Equipment Have a safety shower and eye wash fountain readily available in the immediate work area.

Hygiene Measures Do no eat ,drink ,or smoke in work area. Maintain good housekeeping.

Section 9 - Physical and Chemical Properties

Physical Form: Solid
Color: Green
State Odour :Monotony

Change in condition:

pH, within dication of the concenration Not applicable

Melting point/freezing point Not available.

Boiling Point ,initial boiling point and Boiling range: Not available.

Flash Point Not available. Upper/lower flammability or explosive limits Not available.

Vapor Pressure: Not applicable

Vapor Density:(Air=1) Not applicable

Density/relative density Not available. Solubility in Water: Insoluble

n-octanol /water partition coefficient Not available.

Auto-ignition temperature Not available. Decomposition

temperature Not available. Odoutthreshold Not available.

Evaporationrate Not available.

Flammability(soil ,gas) Not available. Viscosity Not applicable

Section 10 - Stability and Reactivity

Stability The product is stable under normal conditions.

Conditions to Avoid(e.g. static discharge ,shock Or vibration)

Do not subject Nickel Cadmium Battery to Mechanical shock.

Vibration encountered during transportation does Not cause leakage, fire or explosion.

Do not disassemble, crush, short or install with Incorrect polarity. Avoid mechanical or electrical abuse.

Incompatible Materials Not Available

Hazardous Decomposition Products This material may release toxic fumes if burned or exposed to fire

Possibility of Hazardous Reaction Not Available

Section 11 - Toxicological Information

Irritation Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to

The point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.

Sensitization Not Available Neurological Effects Not Available

Teratogenicity Not Available Reproductive Toxicity Not Available

Mutagenicity (Genetic Effects) Not Available Toxicologically

Synergistic Materials Not Available

Section 12 - Ecological Information

General note: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or

Anticipated behavior of a chemical product in environment/possible environmental impact / eco toxicity Sewage system. Not Available

Mobility in soil Not Available Persistence and Degradability Not Available

Bioaccumulation potential Not Available Other Adverse Effects Not Available

Section 13

Product disposal recommendation: Observe local, state and federal laws and regulations.

Packaging disposal recommendation: Observe local, state and federal laws and regulations.

Completely cleaned container can be recycled.

Section 14

For the international transport of lithium batteries, they must comply with these regulations: the International Maritime Dangerous Goods (IMDG) Code by International Maritime Organization (IMO), Dangerous Goods Regulations (DGR) by International Air Transport Association (IATA) and Technical Instructions for the Safe Transport of Dangerous Goods by Air (TI) by International Civil Aviation Organization (ICAO). These regulations are based on the UN Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria.

Dangerous class: 8th dangerous goods.

UN number: UN2795

Section 15 - Regulatory Information

The United Nations «Transport of Dangerous Goods»

International Civil Aviation Organization (ICAO)

International Air Transport Association (IATA)

International Maritime Dangerous Goods (IMDG)

The Globally Harmonized System of Classification & Labeling of Chemicals (GHS)

GB12268-2005 «List of dangerous goods»

OSHA hazard communication standard (29CFR1910.1200)

Hazardous	v	Non-hazardous
-----------	---	---------------

Section 16 - Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, Concorde makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

*****The End*****