FILE NAME： **Material/Product Safety Data Sheet**
PRODUCT： **Ni-MH Battery**
DOCUMENT No.： **M/RONDA002**
EDITION： **A3**
DATE： **2014-01-07**

EDITION	AMENDMENT	DATE OF ISSUE
A	A0 Initial Publish A1 Changing the Company name A2 Editing “Section 14 – Transport Information” A3 Updating version	2012-09-01 2013-03-15 2013-11-05 2014-01-07

Drawn	Checked	Reviewed	Approved

Ronda Group Co.,Ltd.
Add /Block C & D,Shachongwei Industrial Zone,Huangzhuang,Jianshe Third Road,Jiangmen,Guangdong,China
Tel /86-750-3287188 3287189
Fax /86-750-3287198 3287199 P.C. /529000
http:// www.ronda-battery.com
E-mail/ ronda@ronda-battery.com

Section 1 – Chemical Product and Company Identification

Product Name: Ni-MH Battery (Sealed rechargeable Cells)
Battery Type: Series (According to the model size and design)
Manufacturer: Ronda Group Co., Ltd.
Address: Block C&D, Jianshe Third Road, Huangzhuang Shachongwei Industrial District, Jiangmen, Guangdong, China.
Post Code: 529000
Tel: 086-0750-3287188
Emergency Telephone: 086-0750-3287188
Fax: 086-0750-3287198
Web site: www.ronda-battery.com
E-mail: ronda@ronda-battery.com

Section 2 – Composition/Information on Indredient

Chemical Composition	Chemical Formula	CAS No.	Weight(%)
Nickel	Ni	7440-02-0	3～4
Nickel Hydroxide	$Ni(OH)_2$	12054-48-7	20~25
Hydrogen Storage Metals Power	---	---	25～35
Iron	Fe	7439-89-6	20～50
Cobalt	Co	7440-48-4	2～6
Potassium Hydroxide (Liquid)	KOH	1310-58-3	2.5～6
PP Paper	---	---	1～5
Water	H_20	231-791-2	4～9

Section 3 – Hazards Identification

No specific health hazards for normal use.

Routes of Entry

Eyes, Skin, Inhalation, Ingestion.

Health Hazards

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is acute exposure when a battery vents. Leaking material exposure to skin, eyes may cause irritation. Inhalation of fumes may cause respiratory irritation.

Sign/Symptoms of Exposure

Leaking can cause thermal and chemical burns upon contact with the skin.

Section 4 – First Aid Measures

Eyes

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

Inhalation

Remove from exposure and move to fresh air immediately. Use oxygen if available.

Ingestion

Do not induce vomiting. Call a physician immediately.

Section 5 – Fire Fighting Measures

Flash Point: N/A.

Auto-Ignition Temperature: N/A.

Extinguishing Media

CO_2 , Dry chemical.

Special Fire-Fighting Procedures

Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards

Cell may vent when subjected to excessive heat-exposing battery contents.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, other metallic oxide fumes.

In case of PVC sleeved products, the combustion releases chloride gas.

Section 6 – Accidental Release Measures

Steps to be Taken in case Material is Released or Spilled

If the battery is accidental broken and leaks out, wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled material with absorbent.

Waste Disposal Method

It is recommended to discharge the battery to the end, recycle copper and other metal, handing in the abandoned batteries to related department unified, and dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

Section 7 – Handling and Storage

The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Other Precautions

Do not short or install with incorrect polarity.

Section 8 – Exposure Controls, Personal Protection

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory Protection is not necessary under conditions of normal use.

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

Personal Protection is recommended for venting batteries: Respiratory Protection, Protective Gloves, Protective Clothing and Safety Glass with side shields.

Section 9 – Physical and Chemical Properties

Nominal Voltage: 1.2V

Rated Capacity: In accordance with the specification or the product marking.

Appearance Characters: Cylindrical, with odorless battery.

Chemical Uses: Chemical power.

Section 10 – Stability and Reactivity

Stability

Stable.

Conditions to Avoid

Heating, fire, mechanical abuse and electrical abuse.

Hazardous Decomposition Products

When exposed to fire or extreme heat, batteries may emit toxic fumes.

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 irritation to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibroid lung injury and membrane irritation.

Section 12 – Ecological Information

Environment Effect

When promptly used or disposed the battery does not present environmental hazard. In case of product destruction or opening, the metals content in a Ni-MH battery are toxics for environment.

If not recycled, it must be disposed of in accordance with all state and local regulations.

Section 13 – Disposal Considerations

Incineration Never incinerate Ni-MH batteries.

Landfill Never dispose Ni-MH batteries as landfill.

Recycling

Ni-MH batteries can be fully recyclable. They are submitted to the European community directive 91-157/CE. We recommend proper recycling of these batteries whenever possible.

Appropriate Method of Disposal of Substance or Preparation

Dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency.

Section 14 – Transport Information

Sealed Ni-MH batteries with sleeve are considered as “dry batteries” which transport is not checked. They are not submitted to specific transport obligations for land, maritime (IMDG) or air (IATA) transport, as they are protected against short-circuits. The battery is considered non-dangerous goods by the International Air Transport Association (IATA) Special Provisions A123.

Sealed Ni-MH cells or batteries without sleeve are submitted to ADR prescription under UNO code 3496, except in case of qualified packaging use (IATA group 2 type).

UNO code 3496:

Ni-MH cells or batteries packed with or contained in equipment are not subject to the provisions of this code.

All other Ni-MH cells or batteries shall be securely packed and protected from short circuit. They are not subject to other provisions of this code if they are loaded in a cargo transport unit in a total quantity of less than 100kg gross mass. When the loaded gross mass is equal or higher than 100kg they are subject to other provisions of this code described in the 3.2 chapter: they have to be kept away from heating sources (Category A).

Section 15 – Regulatory Information

Law Information

《Dangerous Goods Regulation》
《Recommendations on the Transport of Dangerous Goods Model Regulations》
《International Maritime Dangerous Goods》
《Technical Instructions for the Safe Transport of Dangerous Goods》
《Classification and code of dangerous goods》
《Occupational Safety and Health Act》(OSHA)
《Toxic Substances Control Act》(TSCA)
《Consumer Product Safety Act》(CPSA)
《Federal Environmental Pollution Control Act》(FEPCA)
《The Oil Pollution Act》(OPA)
《Superfund Amendments and Reauthorization Act Title 111 (302/311/312/313》(SARA)
《Resource Conservation and Recovery Act》(RCRA)
《Safety Drinking Water Act》(CWA)
《California Proposition 65》
《Code of Federal Regulations》(CFR)

In accordance with all Federal, State and Local laws.

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.