

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : NEXcell Battery

Volts : 1.2 V

TRADE NAME : Nickel Metal Hydride Battery.

CHEMICAL SYSTEM : Nickel Metal Hydride.

Recharge : Yes

Date of preparation : Mar 01, 2009

I -MANUFACTURER INFORMATION

Established on April 8, 1994, NEXcell Battery Co., Ltd. was jointly founded by a number of internationally renowned battery experts along with various multinational Taiwanese companies. Its main purpose is to design and produce high performance rechargeable batteries. With synergistic work efforts from the company's employees, the first batch of purely "Made in Taiwan" high performance Nickel Metal Hydride rechargeable batteries was produced in March 1995, thus to be considered the technological leader in Taiwan. Furthermore with the affirmation received from the industry, Taiwan's Ministry of Economic Affairs honored NEXcell with an "Innovation Product Award" in both 1995 and 1997.

NEXcell BATTERY CO., LTD.

3F NO.24 , PROSPERITY RD. II, SCIENCE-BASED INDUSTRIAL PARK HSINCHU, TAIWAN 300

Headquarters

Tel.886-3-578-3800

Fax.886-3-578-6645

Sales

Tel. 886-3-578-3800, Fax.886-3-578-6645

Technical Service

sales@nexcell-battery.com

www.battery.com.tw

Tel.886-3-5783800 ext100, Fax.886-3-5786645

II - HAZARDOUS INGREDIENTS

IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENT	%wt
Aluminum	< 0.6
Nickel	30-50
As nickel hydroxide, nickel oxide and nickel powder	
Cobalt	2.5-6.0
As cobalt metal, cobalt oxide and cobalt hydroxide	
Zinc	<0.4
Mischmeal	
Including Lanthanum, Cerium, Neodymium and Praseodymium	<20
Lithium Hydroxide	<0.2
Potassium Hydroxide	<4
Sodium Hydroxide	<1.5
Graphite	<0.5
PTFE	<1
Lithium Hydroxide	0-4
Lead	free
Cadmium	free
Mercury	free

NEXcell BATTERY CO., LTD.

3F NO.24 , PROSPERITY RD. II, SCIENCE-BASED INDUSTRIAL PARK HSINCHU, TAIWAN 300
Headquarters
Tel.886-3-578-3800
Fax.886-3-578-6645

Sales
Tel. 886-3-578-3800, Fax.886-3-578-6645
Technical Service

III-FIRE AND EXPLOSION HAZARD DATA

If fire explosion occurs when batteries are on charge, shut off power to charger

In case of fire where nickel metal hydride batteries are present, apply a smothering agent such as sand, dry ground dolomite, or soda ash, or flood the area with water. A smothering agent will extinguish burning nickel metal hydride batteries. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving nickel metal hydroxide batteries can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In the situation, smothering agents are recommended.

Fire fighters should wear self-contained breathing apparatus. Burning nickel metal hydride batteries can produce toxic fumes including oxide of nickel, cobalt, aluminum, lanthanum, cerium, neodymium, and praseodymium.

Special fire fighting procedures: exposure to temperatures of above 212°F(100°C) can cause venting of the liquid electrolyte.

IV-HEALTH HAZARD DATA

Under normal conditions of use, the battery is hermetically sealing

Ingestion: Swallowing a battery can be harmful

Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

If battery or open battery is ingested, do not induce vomiting or mouth or give food or drink. Seek medical attention immediately. call national battery ingestion hotline for advice and follow-up

Inhalation: Contents of an open battery can cause respiratory irritation hypersensitivity to nickel can cause allergic pulmonary asthma. Provide fresh air and seek medical attention.

Skin contact: contents of an open battery can cause skin irritation and/or chemical burns. Nickel, nickel compounds, cobalt, and cobalt compounds can cause skin sensitization and allergic contact dermatitis.

Remove contaminated clothing and wash skin with soap and water. If irritation persists, seek medical attention.

Eye contact: Contents of an open battery can cause severe irritation and chemical burns. Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of

NEXcell BATTERY CO., LTD.

3F NO.24 , PROSPERITY RD. II, SCIENCE-BASED INDUSTRIAL PARK HSINCHU, TAIWAN 300
Headquarters
Tel.886-3-578-3800
Fax.886-3-578-6645

Sales
Tel. 886-3-578-3800, Fax.886-3-578-6645
Technical Service

sales@nexcell-battery.com

www.battery.com.tw

Tel.886-3-5783800 ext100, Fax.886-3-5786645

the chemical remains. Seek medical attention.

4/5

V –PRECAUTIONS FOR SAFE HANDLING AND USE

Storage: Store in a cool, well-ventilated area, elevated temperature can result in shortened battery life.

Mechanical containment: Never seals or encapsulate nickel metal hydride battery.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high-pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. However, this battery is capable of delivering very high short circuit currents. Prolonged short circuits will cause high cell temperatures, which can cause skin burns. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, and metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, use of labeled batteries is recommended.

Do not open the battery. The negative electrode material may be pyrophobia. Should an individual cell from a battery become disassembled, spontaneous combustion of the negative electrode is possible. This is much more likely to happen if the electrode is removed from its metal container. There can be a delay between exposure to air and spontaneous combustion.

Charging: This battery is made to be charged many time. Because it gradually loses its charge over a few months, it is good practice to charge battery before use. Use recommended charger. Improper charging can cause heat damage or even high pressure rupture. Observe proper charging polarity.

VI –SPECIAL PROTECTION INFORMATION

Ventilation requirement: Not necessary under normal conditions.

Respiratory protection: Not necessary under normal conditions.

Eye protection: Not necessary under normal conditions. Wear safety glasses with side shields if handling an open or leaking battery.

Gloved: Not necessary under normal conditions. Use neoprene or natural rubber glover if handling an open or leaking battery.

Open battery storage: Battery should not be opened. Should a cell become disassembled, the electrode should be stored in a fireproof cabinet, away from combustibles.

NEXcell BATTERY CO., LTD.

3F NO.24 , PROSPERITY RD. II, SCIENCE-BASED INDUSTRIAL PARK HSINCHU, TAIWAN 300

Headquarters

Tel.886-3-578-3800

Fax.886-3-578-6645

Sales

Tel. 886-3-578-3800, Fax.886-3-578-6645

Technical Service

sales@nexcell-battery.com

www.battery.com.tw

Tel.886-3-5783800 ext100, Fax.886-3-5786645

VII –TRANSPORTATION INFORMATION

NEXcell sealed nickel metal hydride batteries are considered to be “dry cell” batteries and are unregulated for purpose of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) and the International Maritime Organization (IMO). The only requirements for shipping these batteries by DOT is Special Provision 130 which states: “Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals). The only requirements for shipping these batteries by ICAO and IATA is Special Provision A123 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.”

NEXcell BATTERY CO., LTD.

3F NO.24 , PROSPERITY RD. II, SCIENCE-BASED INDUSTRIAL PARK HSINCHU, TAIWAN 300	
Headquarters	Sales
Tel.886-3-578-3800	Tel. 886-3-578-3800, Fax.886-3-578-6645
Fax.886-3-578-6645	Technical Service

sales@nexcell-battery.com

www.battery.com.tw

Tel.886-3-5783800 ext100, Fax.886-3-5786645