

Nickel Metal Hydride Rechargeable Battery

Edition: May 2012

Section 1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name:

Nickel Metal Hydride Rechargeable Battery

A0BATT00E0012 / A0BATT00E0014 / A0BATT00E0019 / F0BATT00E07A0 / F0BATT01E01A0 / R1BATT01E01A0

Product Use:

Power supply for Autec radio remote control.

Supplier:

Autec srl

Address:

Via Pomaroli 65, 36030 Caldogno, Vicenza, ITALY

Competent person responsible for SDS:

info@autecsafety.com

Emergency telephone number

+390444901000

Legal remark (EU)

These batteries are no "substances" or "preparations" according to Regulation (EC) No 1907/2006 EC, they are "articles" and no substances are intended to be released during handling. Therefore there is no obligation to supply a SDS according to Regulation (EC) 1907/2006, Article 31.

Legal Remark (U.S.A.)

Material Safety Data Sheets (MSDS) are required by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR Subpart 1910.1200. This Hazard Communication Standard does not apply to "article". Because these batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard.

Legal Remark (Canada)

This is not a controlled product under Workplace Hazardous Materials Information System (WHMIS). This product meets the definition of a "manufactured article" and is not subject to the regulations of the Hazardous Products Act.

General remark

This "Safety Information" is provided as a service to our customers. The information contained in this Safety Data Sheet contains valuable information critical to the safe handling and proper use of the product. The details presented are in accordance with our present knowledge and experiences, they cannot advise all possible situation.



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Section 2. HAZARDS IDENTIFICATION

As a solid manufactured article, no exposure to hazardous ingredients is expected with normal use. Exposure to the ingredients contained within or their combustion products could be harmful, so we recommend to follow these safety measure:

- Do not short-circuit
- Do not open or disassemble.
- Do not expose to fire or open flame.
- Do not puncture, deform, incinerate or heat above 60 °C.
- Do not put in contact with water.

Additional information on battery handling are shown under section 7 and 16.

Potential health effects:

The Nickel Metal Hydride rechargeable battery described in this Safety Data Sheet is a sealed unit which is not hazardous when used according to the recommendations of the Supplier.

The materials contained in this battery may only represent a hazard if the integrity of the battery is compromised or if the battery is physically or electrically abused.

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	EINECS	Percent of Content (%)
Nickel:			35-65
 as Metallic Nickel 	7440-02-0	231-111-4	
 Nickel-based alloy (rare 			
earth)	12054-48-7	235-008-5	
 Nickel Dihydroxide 			
Iron	7439-89-6	231-096-4	20-35
Cobalt Oxide	1307-96-6	215-154-6	2-6
Potassium hydroxide	1310-58-3	215-181-3	1-4
Sodium hydroxide	1310-73-2	215-185-5	1-4
Lithium Hydroxide	1310-65-2	215-183-4	< 1

Batteries are Lead (Pb), Cadmium (Cd) and Mercury (Hg) free.

Section 4. FIRST AID MEASURES

In case of rupture of the battery and contact with the internal:

Eye Contacts: Flush with plenty of water (eyelids held open) for at 15 minutes. Medical treatment. Skin Contacts: Remove all contaminated clothing and flush affected areas with plenty of water and

soap for at least 15 minutes. Do not apply greases or ointments.

Inhalation: Remove to fresh air, medical treatment.

Ingestion: Dilute by giving plenty of water and get immediate medical attention. Assure that



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the victim does not aspirate vomited material by se of potential drainage. Assure that mucus does not obstruct the airway. Do not give anything by mouth to an unconscious person.

Section 5. FIREFIGHTING MEASURES

Extinguishing Media:

Any class of extinguishing medium may be used on the batteries or their packing material.

Special exposure hazards:

In fire situations fumes containing cobalt and nickel compounds may develop; danger of acute damage to health by inhalation of fumes.

Special Protective equipment:

Use self-contained breathing apparatus and full fire-fighting protective clothing.

Section 6. ACCIDENTAL RELEASE MEASURES

Spill and leaks are unlikely because batteries are contained in a sealed case.

Absorb or pack spill residues in inert material and dispose in accordance with local regulations.

Section 7. HANDLING AND STORAGE

The batteries should not be opened, destroyed nor incinerated since they may leak or rupture and release in the environment the ingredients they contain.

Handling:

Batteries are designed to be recharged. However, improperly charging a cell or battery may cause the cell or battery to flame.

Use only approved chargers and Procedures.

Never disassemble a battery or bypass any safety device.

Do not crush, pierce, short (+) and (-) battery terminals with conductive (i.e. metal) goods.

Do not directly heat or solder.

Do not throw into fire.

Do not mix batteries of different types and brands.

Do not mix new and used batteries.

Keep batteries in non conductive (i.e. plastic) trays.

Storage:

Store in a cool place, but prevent condensation on cell or battery terminals. Elevated temperatures may result in reduced battery life. Optimum storage temperatures are between -20 and +30 $^{\circ}$ C.

Do not store batteries above 60 °C or below -20 °C.

Elevated temperatures can result in reduced battery service life.

Do not store batteries in a manner that allows terminals to short circuit.

Accidental short circuit will bring high temperature elevation to the battery as well as shorten the battery life. Be sure to avoid prolonged short circuit since the heat can burn attendant skin and even rupture the battery cell case.



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Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Under normal use, during charge and discharge, release of ingredients does not occur and no special personnel protection is required.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Not applicable if closed

Section 10. STABILITY AND REACTIVITY

Conditions to avoid:

Heat above 60 °C or incinerate.

Deform, mutilate, crush, pierce, disassemble

Short circuit.

Section 11. TOXICOLOGICAL INFORMATION

Under normal conditions (during charge and discharge) release of ingredients does not occur. In case of accidental release see information in sections 2, 3, 4.

Section 12. ECOLOGICAL INFORMATION

Nickel - Metal Hydride batteries do not contain heavy metals as defined by the European Directives 2006/66/EC Article 21.

Section 13. DISPOSAL CONSIDERATIONS

Europe: End-of-life management must be managed according to directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators and its transposition into each European Union's Member State national legislation.

As a waste their European Waste Code (EWC) is 16 06 05 (non hazardous)

As all battery systems, NiMH cells must be collected separately from other waste and recycled.

Never incinerate Nickel - Metal Hydride batteries

Never dispose of Nickel - Metal Hydride batteries in landfills.

Section 14. TRANSPORT INFORMATION

Autec Nickel - Metal Hydride batteries are considered to be "dry cell" batteries and are not subject to dangerous goods regulation for the purpose of transportation by the U.S. Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) and the European agreement o the transport of Dangerous goods by road (ADR).

This battery is regulated only when transported by sea.

IMDG - Sea Transportation



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- UN 3496
- Class 9
- Proper shipping name: BATTERIES, NICKEL-METAL HYDRIDE
- Packing group (non applicable)
- Packing instruction (see 963)
- Emergency Schedule F-A, S-I
- Marine pollutant: NO
- Special Provisions: 117, 963

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 IMDG Code.

Section 15. REGULATORY INFORMATION

European Union: According to Directive 2006/66/EC, the batteries have to be marked with the crossed wheel bin symbol. Waste batteries have to be collected and recycled.



Section 16. OTHER INFORMATION

The information contained in this Safety Data Sheet contains valuable information critical to the safe handling and proper use of the product. The details presented are in accordance with our present knowledge and experiences, they cannot advise all possible situation.