PRODUCT DATA SHEET

Nickel Metal Hydride Rechargeable Battery
Rev. February 2022

Section 1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT NAME:	LBM02MH	A0BATT00E0012 / R0BATT00E0012
	MBM06MH	A0BATT00E0014 / R0BATT00E0014
	MBM06MH	F0BATT01E01A0 / R1BATT01E01A0
	MH0707L	F0BATT00E07A0 / R0BATT00E07A0
	MHM03	F0BATT00E14A0 / R0BATT00E14A0

PRODUCT USE:	Power supply for Autec radio remote control
SUPPLIER:	AUTEC srl
ADDRESS:	Via Pomaroli 65, 36030 Caldogno Vicenza, ITALY
MAIL:	info@autecsafety.com
TELEPHONE NUMBER:	+390444901000

Section 2. HAZARDS IDENTIFICATION

As a solid manufactured article, no exposure to hazardous ingredients is expected with normal use. This battery is hermetically sealed and 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.

Exposure to the ingredients contained within could be harmful to the skin or to the eye. Their combustion could be harmful (risk of explosion and inhalation of harmful fumes), so we recommend to follow these safety measure:

- Do not short-circuit
- Do not reverse the polarity,
- 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 submit to excessive mechanical stress,
- Do not put in contact with water

Follow the instructions reported in the users manual prepared by the manufacturer.

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

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Section 3.

COMPOSITION / INFORMATION ON INGREDIENTS

Material	CAS #	EC #	Content %
Hydrogen Adsorbing Alloys	7440-02-0 (Ni) 7440-48-4 (Co) 7439-96-5 (Mn) 7429-90-5 (Al)	231-111-4 231-158-0 231-105-1 231-072-3	15 – 35 %
Nickel	7440-02-0	231-111-4	3 – 15 %
Iron	7439-89-6	231-096-4	10 – 40 %
Oxides	7440-02-0 (Ni) 7440-48-4 (Co) 7439-96-5 (Zn)		0 – 25 %
Nickel Hydroxide	12054-48-7	235-008-5	0 – 25 %
Material	**CAS #**	**EC #**	**Content %**
Cobalt Hydroxide	21041-93-0	244-166-4	0 – 5 %
Potassium Hydroxide	1310-58-3	215-181-3	0 – 15 %
Sodium Hydroxide	1310-73-2	215-185-5	
Lithium Hydroxide	1310-65-2	215-183-4	
Carbon Black	1333-86-4	215-609-9	0 – 1 %

This article do not contain SVHC substances according to REACH (Article 33)

Section 4.

FIRST-AID MEASURES

Under normal conditions of use, the battery is hermetically sealed. Don't handle or enter in direct contact with an open battery or electrolyte leaked from a battery. If this accidentally happens follow those measures:

Skin Contact Contents of an open battery can cause skin irritation and/or dermatites. Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

Eye Contact The electrolyte leaked from a battery is a strong alkali and may seriously damage the cornea and lead to blindness. Immediately flush eyes with plenty of water for at least 15 minutes. Provide eyewash station. Remove contact lenses, if present and easy to do. Continue rinsing and get medical attention.

Inhalation Contents and fumes of an open battery can affect the respiratory tract and the lungs and cause cough, chest pain and dyspnea, bronchitis and pneumonia. It's possible that it could be carcinogen. Supply fresh air or, in case of dyspnea or asphyxia, use an artificial respirator. Call for doctor for medical treatment.

Ingestion Swallowing a battery can be harmful. Exposure to contents of an open or damaged battery can cause serious irritation of the mouth, esophagus, and gastrointestinal tract, vomiting, hematemesis, stomach pains and diarrhea. Rinse mouth and let drink plenty of water. Do not induce vomiting. Seek medical attention immediately.

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Section 5.

FIRE-FIGHTING MEASURES

Under normal use, the battery does not exhibit flammable properties.

In case of fire the more suitable extinguishing media are dry sand and chemical powder fire extinguisher but any class of extinguishing medium may be used.

Fire fighters should wear self-contained breathing apparatus and protective clothing. Nickel-MH batteries involved in a fire can vent and produce acrid or harmful fumes including nickel and cobalt oxides.

Section 6.

ACCIDENTAL RELEASE MEASURES

Spill and leaks are unlikely because cells are contained in an hermetically-sealed case.

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Avoid contact with skin, eyes or clothing. Wear protective clothing. Use personal protective equipment as described in section 8 of this safety data sheet.
Environmental Precautions	Prevent from penetration in the soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: Disposal Considerations.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so. For waste disposal, see Section 13 of the SDS.
Methods for Clean-Up	Absorb or pack spill residues in inert material and dispose in accordance with local regulations.

Section 7.

HANDLING AND STORAGE

Storage:	Store in a cool, well ventilated area. Avoid direct sunlight, high temperature and high humidity and do not expose the battery to condensation, rain or frozen condition. Elevated temperatures can result in a reduced battery service life. Optimum storage temperatures are between -20 and +30 °C. Keep away from water. Do not allow battery terminals to enter in contact each other or with other conductive goods (i.e. metal) while packed and provide partitions or non conductive (i.e. plastic) bags in order not to mix the batteries.
Handling:	Short circuits will cause high cell temperatures which can cause skin burns as well as shorten the battery life. Sources of short circuits include batteries in bulk containers, metal jewelry, and metal covered tables or metal belts used for assembly of batteries into devices. Never disassemble a battery or bypass any safety device. 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.
Charging:	This battery is made to be charged many times. Use only approved chargers and procedures since improper charging can cause heat damage or even ignition. Observe proper charging polarity.

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Section 8.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Under normal condition of use no special personnel protection is required.

Ventilation Requirements: General ventilation normally adequate.

Respiratory Protection: Not necessary under normal conditions. Leak from a damaged or opened battery: Wear suitable respiratory protection.

Eye Protection: Not necessary under normal conditions. Wear safety glasses with side shields if handling an open or leaking battery to be protected by liquid splashes.

Skin Protection: Not necessary under normal conditions. Use neoprene or natural rubber gloves if handling an open or leaking battery.

General considerations: Do not allow metallic articles to contact the battery terminals during handling. Avoid contact with the internal components of the battery. Do not store food, drink and tobacco near the product.

Section 9.

PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical property	Value
Physical state	Solid Article
Appearance	Plastic resin case or tube
Odor	Not determined
Color	Not determined
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	Not determined
Boiling Point/Boiling Range	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Will burn if involved in a fire
Upper Flammability Limits	Not determined
Lower Flammability Limit	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Specific Gravity	Not determined
Water Solubility	Insoluble
Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Auto-ignition Temperature	Not determined
Decomposition Temperature	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive properties	Not explosive
Oxidising properties	Not oxidising

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Section 10.

STABILITY AND REACTIVITY

This product is stable under normal conditions at ambient temperature.

Conditions to avoid:	Shorting batteries such as creating a contact across terminals with any metal object. Heat above 60 °C or incinerate. Deform, mutilate, crush, pierce, disassemble. Exposure to direct sunlight.
Incompatibility (Materials to avoid):	Conductive materials, water, seawater, strong oxidizers and strong acids.

Section 11.

TOXICOLOGICAL INFORMATION

Battery is not harmful as its ingredients are in a hermetically sealed state.

In case of an accidental release see information in section 4 and 6.

Section 12.

ECOLOGICAL INFORMATION

There is no ecological harm when batteries are used correctly and recycled after use has ended.

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

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.

For more information see Section "Sustainability":

https://www.autecsafety.com/en/sustainability

As a waste their European Waste Code (EWC) is 16 06 05 (not hazardous).

As all battery systems, Nichel Metal Hydride cells must be collected separately from other waste and recycled. Never incinerate Nichel Metal Hydride batteries. Never dispose of Nichel Metal Hydride batteries in landfills.

Residual waste: if contaminated by a leaking or damaged battery, empty containers should be taken to an approved waste handling site for recycling or disposal.

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Section 14.

TRANSPORT INFORMATION

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

These batteries must be compliant with the requirements contained in the following special provisions and are regulated only when transported by sea.

IMDG – Sea Transportation	UN3496 BATTERIES NICKEL METAL HYDRIDE, class 9 Packing group not applicable Emergency Schedule F-A, S-I Marine Pollutant: NO Special Provisions: 117 , 963 Ni-MH cells or batteries packed with or contained in equipment are not subject to the provisions of this code.
IATA – Air Transportation	These batteries are considered not restricted once the shipper complies with Special Provision A199 which implies that batteries are packaged in a manner that prevents short circuits and be contained in “strong outer packaging” that prevents spillage of contents or unintentional activation.

Section 15.

REGULATORY INFORMATION

According to Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators all batteries must be marked with the crossed wheel bin symbol.

Section 16.

OTHER INFORMATION

General remark

This “Safety Information” is provided as a service to our customers. The information contained in this Safety Data Sheet are 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.

Legal remark

E.U.	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.
U.S.A.	Safety Data Sheets are a sub-requirement of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR Subpart 1910.1200. This Hazard Communication Standard does not apply to various subcategories including anything defined by OSHA as an “article”. According to

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OSHA, Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

As these batteries are defined as “articles”, they are exempted from the requirements of the Hazard Communication Standard.

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.

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