



## Safety Data Sheets (SDSs)

### Section 1 - Identification

**Product Name:** Nickel Metal Hydride Rechargeable Battery (NIMH Battery)

**Manufacturer / Distributor Name:** AA Portable Power Corp

**Address:** 825 S 19<sup>th</sup> Street, Richmond, CA 94804, **Tel:** 510-525-2328 **Fax:** 510-439-2808

**Email:** [sales@batteryspace.com](mailto:sales@batteryspace.com)

**Emergency Tel (Within USA and Canada):** Here should be your company's emergency tel.

**Emergency Tel (Outside USA and Canada) for Shipment to USA:** Here should be your company's emergency tel.

**Recommended Use:** General use

**Restrictions on Use:** N/A

### Section 2 – Hazard(s) Identification

**GHS classification:** N/A

**Signal Word:** N/A

**Hazard Classification:** N/A

Under normal conditions of use, the battery is hermetically sealed.

**Ingestion:** Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

**Inhalation:** Contents of an open battery can cause respiratory irritation. Hypersensitivity to nickel can cause allergic pulmonary asthma.

**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 an allergic contact dermatitis.

**Eye Contact:** Contents of an open battery can cause severe irritation and chemical burns.

**Note:** Nickel, nickel compounds, cobalt and cobalt compounds are listed as possible carcinogens by the International Agency for Research on Cancer (IARC) or National Toxicology Program (NTP).

### Section 3 – Composition/Information on Ingredients

Information about the chemical nature of product

Common chemical name /General name	CAS number	Concentration /Concentration range	Classification and hazard labeling
Hydrogen Absorbing Alloy	7440-02-0(Ni) 7440-48-4(Co) 7439-96-5(Mn) 7429-90-5(Al)	20-40%	specific hazard
Nickel-Cobalt-Zinc oxide	7440-02-0(Ni) 7440-48-4(Co) 7440-66-6(Zn)	15-25%	acute toxicity specific hazard
Nickel	7440-02-0	5-15%	specific hazard
Iron	7439-89-6	20-40%	
Carbon Black	1333-86-4	0-1%	specific hazard
Potassium Hydroxide	1310-58-3	0-15%	acute toxicity
Sodium Hydroxide	1310-73-2		corrosivity
Lithium Hydroxide	1310-65-2		irritant property



#### Section 4 – First-aid Measures

Under normal conditions of use, the battery is hermetically sealed.

**Eye Contact:** Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

**Skin Contact:** Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

**Inhalation:** Provide fresh air and seek medical attention.

**Ingestion:** Swallowing a battery can be harmful. Do not induce vomiting or give food or drink. Seek medical attention immediately.

#### Section 5 – Fire-fighting Measures

If fire or 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 METL-X, 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 hydride 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 this situation, smothering agents are recommended.

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

#### Section 6 - Accidental Release Measures

To cleanup leaking batteries:

**Ventilation Requirements:** Room ventilation may be required in areas where there are open or leaking batteries.

**Eye Protection:** Wear safety glasses with side shields if handling an open or leaking battery.

**Gloves:** Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak-proof container.

#### Section 7 - Handling and Storage

**Storage:** Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

**Mechanical Containment:** If potting or sealing the battery in an airtight or watertight container is required, consult us for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

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. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, consult us for proper precautions to prevent seal damage or short circuit.



Do not open battery. The negative electrode material may be pyrophoric. 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 times. 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.

**Labeling:** If the Energizer label or package warnings are not visible, it is important to provide a package and/or device label stating:

**WARNING:** CHARGE ONLY WITH SPECIFIED CHARGERS ACCORDING TO DEVICE MANUFACTURER'S INSTRUCTIONS. DO NOT OPEN BATTERY, DISPOSE OF IN FIRE OR SHORT CIRCUIT - MAY IGNITE, EXPLODE, LEAK OR GET HOT CAUSING PERSONAL INJURY.

Where accidental ingestion of small batteries is possible, the label should state:

**WARNING:** (1) KEEP AWAY FROM SMALL CHILDREN. IF SWALLOWED, PROMPTLY SEE DOCTOR.  
(2)CHARGE ONLY WITH SPECIFIED CHARGERS ACCORDING TO DEVICE MANUFACTURER'S INSTRUCTIONS. DO NOT OPEN BATTERY, DISPOSE OF IN FIRE OR SHORT CIRCUIT-MAY IGNITE, EXPLODE, LEAK OR GET HOT CAUSING PERSONAL INJURY.

## Section 8 - Exposure Controls / Personal Protection

**Ventilation Requirements:** Not necessary under normal conditions.

**Respiratory Protection:** Not necessary under normal conditions.

**Eye Protection:** Not necessary under normal conditions.

**Gloves:** Not necessary under normal conditions.

## Section 9 - Physical and Chemical Properties

Please refer most updated information by searching the product part# at [www.batteryspace.com](http://www.batteryspace.com)

Boiling Point: N.A.	Specific Gravity (H <sub>2</sub> O=1): N.A.
Vapor Pressure (mm Hg): N.A.	Melting Point: N.A.
Vapor Density (AIR=1): N.A.	Evaporation Rate (Butyl Acetate): N.A.
Solubility in Water: N.A.	Appearance and Odor: Cylindrical Shape, odorless

## Section 10 - Stability and Reactivity

- Stability: Stable under normal use.
- Hazardous reactions occurring under specific conditions.
  - By misuse of a battery cell or the like, oxygen or hydrogen accumulates in the cell and the internal pressure rises. These gases may be emitted through the gas release vent. When fire is near, these gases may take fire.
  - When a battery cell is heated strongly by the surrounding fire, acrid or harmful fume may be emitted
- Conditions to avoid: Direct sunlight, high temperature and high humidity
- Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids
- Hazardous decomposition products: Acrid or harmful fume is emitted during fire.



### Section 11 - Toxicological Information

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

**Numerical Measures of Toxicity:** No toxicity.

### Section 12 - Ecological Information

**Ecological toxicity:** No information available.

**Biodegradability:** No information available.

**Non- biodegradability:** No information available.

Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.

### Section 13 - Disposal Considerations

Dispose of batteries according to government regulations.

### Section 14 - Transport Information

This battery does not require the following items.

- TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR(ICAO)
- IATA Dangerous Goods Regulations – 63 rd Edition Effective 1st January 2022 (IATA)
- code of federal regulations (U.S.DOT)

This battery requires the following items.

- INTERNATIONAL MARITIME DANGEROUS GOODS CODE – 2018 Edition (IMO)

Nickel-Metal Hydride Batteries is classed as Dangerous Goods, Class 9 in accordance with United Nations Recommendations on the Transport of Dangerous Goods and will have the following UN Number:

UN No.	Proper Shipping Name	Class or division	Packing group	Special provisions
3496	BATTERIES, NICKEL-METAL HYDRIDE	9	-	117 963

Instructions and contents of Special Provisions (117 and 963) for this UN number include:

- Specifying it is only regulated when transported by sea,
- Ni-MH button cells are not subject to the provisions of this code.
- 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 provided they are loaded in a cargo transport unit in a total quantity of less than 100 Kg gross mass.

A maritime cargo transport unit (container) falls under Class 9 Dangerous Goods when its contents are equal to or greater than 100kg in total mass. However, the labelling, marking, or display of this information is not required.

Prior to transportation, confirmation that there is no leakage and no spillage from a container is necessary. Cargo must be handle without falling, dropping or breakage. Care must be taken to prevent the collapse of cargo piles or saturation by rain. Containers must be handled carefully. Packaging is constructed to prevent short-circuiting and/or electric shock. The product is handled as Non-Dangerous Goods by based on IATA(Special Provision A199) for air shipment.

#### Notes

Our Ni-MH batteries and the packages we ship are not covered by the following transportation test report and packaging requirements which



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are related to other chemistry batteries.

UN / Recommendations on the transport of dangerous goods

- Subsection 38.3, Part III, UN Manual of Test and Criteria
- 4G packaging and marking

Regulation for air transportation in the USA

- Parts 171, 172, 173 and 175 of 49CFR (Code of Federal Regulations, Title 49)

### Section 15 - Regulatory Information

Regulations specifically applicable to the product:

Wastes Management and Public Cleaning Law (United State of America)

Commission Directive 2006/66/EC (EU).

### Section 16 - Other 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.

SDSs Creation Date: January 22, 2010

SDSs Revision Date: May 16, 2023