



**ACCU POWER** Forschungs-, Entwicklungs-  
und Vertriebsgesellschaft mbH.  
Kaerntnerstraße 87 A-8053 Graz,  
AUSTRIA

## MATERIAL SAFETY DATA SHEET

### I – PRODUCT IDENTIFICATION

**Brand:** ACCUPOWER  
**Nominal Voltage:** 1.2 V  
**Product Name:** Nickel Metal Hydride Battery  
**Chemical System:** Nickel Metal Hydride  
**Rechargeable:** Yes

### II – HAZERDOUS INGREDIENTS

**IMPORTANT NOTE:** The battery is contained in a hermetically sealed case, designed to withstand temperatures and pressures encountered during normal use, hazardous materials are fully contained inside the battery. 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
Misch meal	<20
Including Lanthanum, Cerium, Neodymium and	
Praseodymium	<0.2
Lithium Hydroxide	<4
Potassium Hydroxide	<1.5
Sodium Hydroxide	<0.5
Graphite	<1
PTFE	0-4
Lead	free
Cadmium	free
Mercury	free
For single cell	
Flash point	over 150 deg. C
Flavor	none
Toxicity	none
Corrosiveness	none



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### 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 hydroxide 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 hydroxide 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 hydroxide batteries can produce toxic fumes including oxide of nickel, cobalt, aluminum, lanthanum, cerium, neodymium, and praseodymium.

### 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.

**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 the chemical remains. Seek medical attention. The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. ACCU POWER GmbH. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.



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## V –PRECAUTIONS FOR SAFE HANDLING AND USE

**Storage:** store in a cool, well-ventilated area. Elevated temperature can result in battery life.

**Mechanical containment:** never seals or encapsulate nickel metal hydroxide 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 burn. 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:** The 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 normal label warnings are not visible, it is important to provide a device label stating: **CAUTION:** Do not dispose in fire, mix with other battery types, charge above specified rate, connect improperly, or short circuit, which may result in overheating, explosion or leakage of cell contents.

## 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.

**Glove:** not necessary under normal conditions. Use neoprene or natural rubber glove 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.

## VII –TRANSPORTATION

The sealed Nickel Metal Hydride batteries are considered to be "dry cell" batteries and are not subject to dangerous goods. Batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting.

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