

# Material Safety Data Sheet

## **SECTION I: PRODUCT IDENTIFICATION**

### **Ni-MH Battery**

EGLO USA, Inc.  
3640 Royal South Parkway  
Atlanta, GA 30349

Emergency No.: 800-222-1222

Phone No.: 877-892-0007

Date Prepared: 07/12/2013

## **SECTION II: HAZARDOUS INGREDIENTS**

| <b>Chemical Name</b> | <b>CAS No.</b> | <b>OSHA PEL<br/>(mg/m<sup>3</sup>)</b> | <b>ACGIH TLV<br/>(mg/m<sup>3</sup>)</b> |
|----------------------|----------------|--|---|
| Cerium               | 7440-45-1      | N/A                                    | N/A                                     |
| Cobalt               | 7440-48-4      | 0.1 TWA                                | Dust: .005<br>Fume: .005                |
| Lanthanum            | 7439-91-0      | N/A                                    | N/A                                     |
| Lithium Hydroxide    | 1310-65-2      | N/A                                    | N/A                                     |
| Manganese            | 7439-96-5      | Fume: 5<br>Ceiling Limit               | Dust: 5<br>Fume: 1                      |
| Nickel Hydroxide     | 12054-48-7     | 1 TWA                                  | 1 TWA                                   |
| Nickel Powder        | 7440-02-0      | 1 TWA                                  | 1 TWA                                   |
| Potassium Hydroxide  | 1310-58-3      | N/A                                    | 2 Ceiling Limit                         |
| Sodium Hydroxide     | 1310-73-2      | 2 TWA                                  | 2 Ceiling Limit                         |

Note: The battery cell is contained in a hermetically-sealed case, designed to withstand temperatures and pressure encountered during normal use. As a result, during normal use, hazardous materials are fully contained inside the battery cell. The battery cell should not be opened or exposed to heat because exposure to the following ingredients contained within could be harmful under some circumstances.

\*The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. EGLO USA, Inc. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

### **SECTION III: PHYSICAL CHARACTERISTICS**

|                  |     |                  |         |
|------------------|-----|------------------|---------|
| Boiling Point    | N/A | Specific Gravity | N/A     |
| Vapor Pressure   | N/A | Melting Point    | N/A     |
| Vapor Density    | N/A | Evaporation Rate | N/A     |
| Water Solubility | N/A | Appearance/Odor  | No Odor |

### **SECTION IV: FIRE AND EXPLOSION HAZARD DATA**

Flash Point: N/A

Lower Explosive Limit: N/A

Upper Explosive Limit: N/A

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

Special Fire Fighting Procedures: Exposure to temperatures of above 212°F can cause venting of the liquid electrolyte. Internal shorting could also cause venting of the electrolyte. There is potential for exposure to iron, nickel, cobalt, rare earth metals (cerium, lanthanum neodymium and, a praseodymium), manganese, and aluminum fumes during fire; use self-contained breathing apparatus.

### **SECTION V: REACTIVITY DATA**

#### Stability:

The batteries are stable under normal operating conditions.

#### Potential Incompatibilities:

The battery cells are encased in a non-reactive container; however, if the container is breached, avoid contact of internal battery components with acids, aldehydes, and carbamate compounds.

#### Hazardous Decomposition or Byproducts:

Oxides of nickel, cobalt, manganese, lanthanum, and cerium

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Hazardous Polymerization:

Hazardous polymerization will not occur.

Conditions to Avoid:

Heat, open flames, sparks, and moisture

**SECTION VI: HEALTH HAZARD DATA**

Routes of Entry:

Inhalation: During normal use inhalation is an unlikely route of exposure due to containment of hazardous materials within the battery case. However, should the batteries be exposed to extreme heat or pressures causing a breach in the battery cell case, exposure to the constituents may occur. Inhalation of cobalt dusts may result in pulmonary conditions.

Skin Absorption: No evidence of adverse effects from available data.

Skin Contact: Exposure to the electrolyte contained inside the battery may result in chemical burns. Exposure to nickel may cause dermatitis in some sensitive individuals.

Eye Contact: Exposure to the electrolyte contained inside the battery may result in severe irritation and chemical burns.

Ingestion: If the battery case is breached in the digestive tract, the electrolyte may cause localized burns.

Carcinogenicity:

NTP (National Toxicology Program): Nickel has been identified by the NTP as reasonably anticipated to be a carcinogen.

IARC (International Agency for Research on Cancer): Cobalt has been identified by IARC as a 2B carcinogen.

Other Effects of Repeated (Chronic) Exposure:

Chronic overexposure to nickel may result in cancer; dermal contact may result in dermatitis in sensitive individuals.

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### Medical Conditions Aggravated by Overexposure:

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

### Emergency and First Aid Procedures:

Swallowing: Do not induce vomiting. Seek medical attention immediately.

Skin: If the internal cell materials of an opened battery cell comes into contact with the skin, immediately flush with water for at least 15 minutes.

Inhalation: If potential for exposure to fumes or dusts occurs, remove immediately to fresh air and seek medical attention.

Eyes: If the contents from an opened battery comes into contact with the eyes, immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention.

## **SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE**

### Steps to be taken in case material is released or spilled:

If the battery case is breached, wear protective clothing that is impervious to caustic materials and absorb or pack spill residues in inert material.

### Waste disposal method:

Dispose in accordance with applicable state and federal regulations.

### Precautions to be taken in handling and storing:

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

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 -31F and 95F.

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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 of the battery cell case. Batteries packaged in bulk containers should not be shaken. Metal covered tables or belts used for assembly of batteries into devices can be the source of short circuits; apply insulating material to assembly work surface.

## **SECTION VIII: CONTROL MEASURES**

Respiratory Protection: No required under normal use

Ventilation: No required under normal use

Protective Gloves: No required under normal use

Eye Protection: No required under normal use

Other Protective Clothing or equipment: No required under normal use

Work/Hygienic Practices: N/A