深圳市艾尔文科技有限公司

Material Safety Data Sheet

MSDS NO.: EWT20113

| Nickel Metal Hydride Battery | | |
|------------------------------|--------|--|
| | 镍氢充电电池 | |

1. Identification of the Substance or Preparation and Company

| Product | Nickel Metal Hydride Battery |
|--------------|--|
| | 镍氢充电电池 |
| Product site | EVERWIN TECH CO.,LIMITED |
| | Building 9, FuTing industrial park,ZhuCun,GuanLan, |
| | Shenzhen, P. R. China |
| | Tel: 0755-81752844 |
| | Fax: 0755-81752840 |

NiMH Material Safety Data Sheet

Product Name: <u>Nickel Metal Hydride Battery</u>
Chemical Systems: <u>Nickel Metal Hydride</u>

Designed for Recharge: Yes

SECTION I - MANUFACTURER INFORMATION

EVERWIN TECH CO.,LIMITED SHENZHEN, P. R. China

Telephone Number for Information: 86-755-81752840

SECTION II - HAZARDOUS INGREDIENTS

IMPORTANT NOTE:

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

A) The content of elements are based on homogeneous materials level of NiMH battery:

| Element | Lead | Cadmium | Hexavalent | Mercury | Polybrominated | Polybrominated |
|---------|------|---------|------------|---------|----------------|----------------|
| | | | Chromium | | Biphenyls | Diphenyls |
| | | | (Cr6+) | | (PBBs) | Ethers(PBDEs) |
| % W. t. | <0.1 | < 0.01 | <0.1 | < 0.1 | <0.1 | <0.1 |

B) The content of elements are based on total weight of NiMH battery:

| MATERIAL OR INGREDIENTS | % W. t. |
|---|----------|
| Nickel | 30-50 |
| as nickel hydroxide | |
| nickel oxide | |
| nickel powder | |
| Potassium Hydroxide | < 20 |
| Cobalt | 2.5-6.0 |
| as cobalt metal | |
| cobalt oxide | |
| cobalt hydroxide | |
| Sodium Hydroxide | < 20 |
| Zinc | < 3 |
| as zinc metal | |
| zinc oxide | |
| zinc hydroxide | |
| Mercury | 0-0.0005 |
| Lead | 0-0.004 |
| as lead metal | |
| lead oxide Cadmium | <0.002 |
| as cadmium metal | <0.002 |
| | |
| cadmium oxide cadmium hydroxide | |
| Hexavalent Chromium (Cr ⁶⁺) | 0-0.0005 |
| Polybrominated Biphenyls (PBBs) | Nil |
| Polybrominated Diphenyls Ethers(PBDEs) | Nil |

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

| Boiling Point | Specific Gravity (H2O=1) | |
|-----------------------------|----------------------------------|--|
| N.A. | N.A. | |
| Vapor Pressure (mm Hg) | Melting Point | |
| N.A. | N.A. | |
| Vapor Density (AIR=1) | Evaporation Rate (Butyl Acetate) | |
| N.A. | N.A. | |
| Solubility in Water | | |
| N.A. | | |
| Appearance and Odor | | |
| Cylindrical Shape, odorless | | |

SECTION IV - REACTIVITY DATA

| Stability | Unstable | | Conditions to Avoid | |
|---------------------------------------|----------------|---|---------------------|--|
| | Stable | X | | |
| Incompatibility (Materials to Avoid) | | | | |
| Hazardous Decomposition or Byproducts | | | | |
| Hazardous Polymerization | May Occur | | Conditions to Avoid | |
| | Will Not Occur | X | | |

SECTION V -FIRE AND EXPLOSION HAZARD DATA

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 VI. TRANSPORTATION INFORMATION

In the case of transportation, confirm no leakage and no overspill from a container. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a cell. Please refer to Section

EWT Sealed Nickel Metal Rechargeable battery 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, the International Civil Aviation Administration, the international Air Transport Association or the International Maritime Dangerous Goods regulations. The only DOT requirements for shipping Nickel Metal batteries is Special Provision A123 under 51th which states: "Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals)." IATA requires that batteries being transported by air must be protected from short-circuiting and protect from movement that could lead to short-circuiting.

SECTION VII - HEALTH HAZARD DATA

Name: MICHAEL LIN

Title: SALES MANAGER

Date: <u>2012-09-09</u>