

MATERIAL SAFETY DATA SHEET

1. Chemical Product and Company Identification

Product Name: Nickel Metal Hydride Rechargeable Battery

Manufacturer: Chung Pak Battery Works Ltd.

Address: 7/F., Chung Pak Commercial Bldg., 2 Cho Yuen St., Yau Tong Bay, Kowloon, Hong Kong

Telephone: (00852)27171338

Effective Date: 2010/06/15

Note: Blank space are not pemmitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

2. Composition/Information on Ingredients

Designation		H40BC
Hazardous Components	CAS No.	wt%
Mercury (Hg)	7439-97-6	≤0.0001
Cadmium (Cd)	7440-43-9	≤0.001
Lead (Pb)	7439-92-1	≤0.0001

3. Hazards Identification

Routes of Entry: Not applicable under normal conditions

Health Hazards: In case of leakage, will be cause itchy and/or chemical burns when direct contact with electrolyte

Hazards to Environment: Not applicable

Fire and Explosion Hazards: Not applicable

4. First-aid Measures

Skin Contact: If exposed to a leaking battery, remove contaminated clothing. Wash exposed areas with plenty of water and soap. If irritation occurs, consult a physician.

Eyes Contact: If a battery is leakage and materials contact eyes, flush immediately with running water for at least 15 minutes. Consult an ophthalmologist at once.

Inhalation: If vapor from vented or leaked batteries are inhalation, move to fresh air and get medical attention.

Ingestion: Get immediately medical attention, do not induce vomiting or give a liquid to unconscious person.

5. Fire Fighting Measures

Hazard Characteristic: Not available

Hazards Expose to Combustion Products: In case of fire, carbon dioxide, carbon monoxide and other toxic organic substances will be generated. Do not inhale fumes and smoke.

Extinguishing Media: Dry Chemical, Foam, Water, Carbon Dioxide

Special Fire Fighting Procedures: Fire fighters should wear self-contained breathing apparatus.

6. Accidental Release Measures

Precautions: Avoid direct contact with the leaking or ruptured batteries. Avoid short circuit.

Methods for clean up: Care for well-ventilated conditions. Recycle or dispose of the materials in an appropriate way.

7. Handling and Storage

Precaution: Handling and transfer the products carefully, make sure the packing always in good condition. Damaged packing may cause batteries contact together, in this case batteries may short circuit or improperly connected, it cause batteries venting, leaking or exploding.

Handling & Storage: Batteries in the charged state should be handled and stered carefully to avoid short circuits. Do not store in disorderly fashion, or allow metal objets to be mixed with stored, Never dissemble a battery.

8. Exposure Control/Personal Protection

Exposition/Technical Measures: Atmospheric vapor concentrations must be minimized by adequate ventilation.

Protection of Hands, Eyes, and Skin: None required under normal use conditions. When handling leaking batteries, use gloves and wear safety glasses to protect hands, eyes and skin.

General Safety and Hygiene Measures: Use only as directed.

9. Physical and Chemical Properties

Boiling point	N/A	Specific Gravity (H ₂ O=1)	N/A
Vapor Pressure (mm Hg)	N/A	Melting Point	N/A
Vapor Density (Air=1)	N/A	Evaporation Rate (Butyl Acetate=1)	N/A
Solubility in water	N/A		
Appearance and odor	Prismatic Shape	Odorless	

10. Stability and Reactivity

Stability: Stable

Incompatibility: Reactive with strong oxidizing agents

Condition to Avoid: Avoid shorting, mechanical & thermal abuse

Hazardous Polymerization: Will not occur

Hazardous Decomposition: None

11. Toxicological Information

Note: Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

Toxicity to Animals: Not applicable

Chronic Effects on Human: Not applicable

12. Ecological Information

This product has not been tested for environmental effects.

13. Disposal Consideration

Dispose in accordance with Federal, States and local regulations

14. Transport Information

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in “strong outer packaging” that prevents spillage of contents. All original packaging for Chung Pak nickel metal hydride batteries has been designed to be compliant with these regulatory concerns.

Chung Pak nickel metal hydride batteries (sometimes referred to as “Dry cell” batteries) are not defined as dangerous goods under the IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations as they are compliant with the requirements contained in the following special provisions.

Regulatory Body Special Provisions

Regulatory	Body Special Provisions
ADR	295 - 304, 598
IMDG	UN 3028 Provisions 295 - 304
UN	UN 3028 Provisions 295 - 304
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	UN 3028 Provisions 295 - 304

In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

15. Regulatory Information

Main Chemical Limitation of EEC, RoHS, TCLP & US Public Law

Chemical	EEC (2006_66_EC) wt%	RoHS** (2002_95_EC) mg/kg	TCLP (Toxic Characteriestics Leaching Procedure) mg/kg	US Public Law*** mg/cell
Mercury (Hg)	<0.0005%*	1000mg/kg	0.2	25
Cadium (Cd)	<0.002%	100mg/kg	1	-
Lead (Pb)	<0.4%	1000mg/kg	5	-

Notes:

* Button cells with a mercury content of no more than 2% by wegiht is exempted (Article 4,

2006/66/ec)

** Quoted limit is referred to RoHS Directive 2002/95EC and 2005/618/EC. According to the document of Frequently Asked Questions on RoHS and WEEE published from European Commission in May 2005, the battery does not apply to RoHS Directive.

*** According to the US Mercury-Containing Battery Management Act. Public Law No.104-142 (1996) SEC 204 Zinc-Carbon battery should not contains mercury that was intentionally introduced.

16. Other information

Do not heat or dispose of in fire. Do not disassemble the battery.

Notice to reader:

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