

BST Rechargeable Battery

Material Safety Data Sheet

Document No.: MSDS2582

| | |
|---|---|
| IDENTITY (As Used on Label and List) | Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that. |
| NICKEL METAL HYDRIDE RECHARGEABLE BATTERY | |

Section I – Information of Manufacturer

| | |
|---|----------------------------------|
| Manufacturer's Name | Emergency Telephone Number |
| BST POWER (SHENZHEN) LIMITED | |
| Address (Number, Street, City State, and ZIP Code) | Telephone Number for information |
| | 86-755-84260303 |
| No.9, Longxing Road, Xintang New Industrial Zone, Dakang Village, Henggang Town, Longgang District, Shenzhen 518115 | Date Prepared |
| | 8-Feb-12 |
| | Signature of Preparer (optional) |

Section II – Hazardous Ingredients / Identity Information

| | |
|-----------------------|-------------------------------|
| Hazardous Components: | |
| Description: | Approximate % of total weight |
| Nickel Hydride | 36% |
| KOH | 2% |
| Electrolyte | 2% |
| Ni(OH) ₂ | 24% |
| Other | 36% |

Section III – Physical / Chemical Characteristics

| | |
|------------------------|---------------------------------------|
| Boiling Point | Specific Gravity (H ₂ O=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 – Hazard Classification

| |
|----------------|
| Classification |
| N.A. |

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Section V – Reactivity Data

| | | |
|-----------|----------|---------------------|
| Stability | Unstable | Conditions to Avoid |
| | Stable | X |

Incompatibility (Material to Avoid)

Hazardous Decomposition or Byproducts

| | | |
|--------------------------|----------------|---------------------|
| Hazardous Polymerization | May Occur | Conditions to Avoid |
| | Will Not Occur | X |

Section VI – Health Hazard Data

| | | | |
|-------------------|-------------|-------|------------|
| Route(s) of Entry | Inhalation? | Skin? | Ingestion? |
| | N.A. | N.A. | N.A. |

Health Hazard (Acute and Chronic) / Toxicological information

- Ø In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.
- Ø In contact with electrolyte can cause severe irritation and chemical burns.
- Ø Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs

Section VII – First Aid Measures

First Aid Procedures

- Ø If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.
- Ø If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen minutes, and contact a physician.
- Ø If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area.

Section VIII – Fire and Explosion Hazard Data

| | | | |
|---------------------------|----------------|-------------------|------|
| Flash Point (Method Used) | Ignition Temp. | Flammable Limited | LEL |
| N.A. | N.A. | N.A. | N.A. |

Extinguishing Media

Carbon Dioxide, Dry Chemical or Foam extinguishers

Special Fire Fighting Procedures

N.A.

Unusual Fire and Explosion Hazards

- Do not dispose of battery in fire - may explode.
- Do not short-circuit battery - may cause burns.

Section IX – Accidental Release or Spillage

Steps to be taken in case material is released or spilled

- Ø Batteries that are leakage should be handled with rubber gloves.
- Ø Avoid direct contact with electrolyte.
- Ø Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).

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Section X – Handling and Storage

Safe handling and storage advice

- Ø Batteries should be handled and stored carefully to avoid short circuits.
- Ø Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries.
- Ø Never disassemble a battery.
- Ø Do not breathe cell vapors or touch internal materials with bare hands.
- Ø Keep batteries between -30°C and 35°C for prolong storage.

Section XI – Exposure Controls / Person Protection

Respiratory Protection (Specify Type)

N.A.

| | | |
|-------------------|----------------------|----------------|
| Ventilation | Local Exhausts | Special |
| | N.A. | N.A. |
| | Mechanical (General) | Other |
| | N.A. | N.A. |
| Protective Gloves | | Eye Protection |
| | N.A. | N.A. |

Other Protective Clothing or Equipment

N.A.

Work / Hygienic Practices

N.A.

Section XII – Ecological Information

N.A.

Section XIII – Disposal Method

Dispose of batteries according to government regulations.

Section XIV -- Transportation Information

BST batteries are considered to be "Dry Cell" batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) and Maritime Dangerous Goods Regulations (IMDG). The only DOT requirement for shipping these batteries is special provision 130 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 is Special Provision A123 i.e. "An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals) is forbidden from transportation". As of 1/1/97 IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting with special provision 304 of IMDG. Must comply with packing instruction of IATA DGR 52rd

Section XV – Regulatory Information

Special requirement be according to the local regulatory..

Section XVI – Other Information

The data in this Material Safety Data Sheet relates only to the specific material designated herein.

Section XVII – Measures for fire extinction

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.

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