

深圳市电科电源股份有限公司 BST POWER(SHENZHEN) LTD

Material Safety Data Sheet

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Section 1 Identification of the substance/preparation and of the company/undertaking

Product details

- **Trade name:**Ni-MH Battery
- **Registration number:**Not available
- **Application of the substance / the preparation:**Consumable
- **Manufacturer/Supplier:**

Company Name: BST POWER (SHENZHEN) LIMITED.

Address: No.37 Xinglong Road, Dakang Village, Henggang Town, Longgang District, Shenzhen City.

TEL: 86-755-84260300

FAX: 86-755-84260306

- **Further information obtainable from:** BST POWER (SHENZHEN) LIMITED.
- **Information in case of emergency:**

XXX

TEL: 86-755-84260300

Email:sales@bstbattery.com

Section 2 Hazards identification

- **Hazard description:**A sealed Ni-Mh Battery is not hazardous in normal use on principle.
- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.






- **Classification system:**

The classification is according to the latest editions of 1907/2006/EC, EU Commission Directive 1999/45/EC,67/548/EEC, and extended by company and literature data.










Section 3 Composition/information on ingredients

- **Chemical characterization**
- **Description:**The substance listed below with nonhazardous additions.

For the wording of listed risk phrases refer to section 16.

| Dangerous components: | | |
|---|---|---------|
| CAS: 7440-02-0 EINECS: 231-111-4 EU number: 028-002-00-7 | nickel Carc. Cat. 3;  T,  Xi; R 40-43-48/23 | 15%-30% |
| CAS: 11113-74-9 EINECS: 234-348-1 EU number: 028-008-00-X | nickel hydroxide Carc. Cat. 1, Muta. Cat. 3, Repr. Cat. 2;  T,  Xi,  N; R 49-61-20/22-38-42/43-48/23-68-50/53 | 20%-40% |

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| | | |
|--|---|-------------|
| CAS: 7439-96-5 EINECS: 231-105-1 | manganese  Xn; R 48 | 4.0%-5.5% |
| CAS: 1310-58-3 EINECS: 215-181-3 EU number: 019-002-00-8 | potassium hydroxide  C,  Xn; R 22-35 | 3%-6% |
| CAS: 7440-48-4 EINECS: 231-158-0 EU number: 027-001-00-9 | cobalt  Xn,  Xi; R 42/43-53 | 1%-5% |
| CAS: 7440-00-8 EINECS: 231-109-3 | neodymium  Xi,  F; R 11-14/15-36/37/38 | 0%-2.5% |
| CAS: 7429-90-5 EINECS: 231-072-3 EU number: 013-002-00-1 | aluminium  F; R 11-15 | 0.2%-1.2% |
| CAS: 7440-10-0 EINECS: 231-120-3 | Praseodymium  F; R 170, | 1.5%-6.0% |
| Non-dangerous components: | | |
| CAS: 7439-89-6 EINECS: 231-096-4 | iron | 10%-20% |
| CAS: 7439-91-0 EINECS: 231-099-0 | lanthanum | 5%-10% |
| CAS: 9003-07-0 | Polipropene 25 | 0.1%-1.0% |
| CAS: 7732-18-5 EINECS: 231-791-2 | pure water | 5%-10% |
| CAS: 7440-45-1 EINECS: 231-154-9 | cerium | 2%-.4.0% |
| CAS: 32131-17-2 | Nylon-66 | 0.2%-6.0% |
| CAS: 8052-42-4 EINECS: 232-490-9 | Asphalt | 0.01%-0.3% |
| CAS: 7440-50-8 EINECS: 231-159-6 | copper | 0.01%-0.10% |

• **Remark:**

Polipropene 25 (CAS No.: 9003-07-0)

Synonym: Polypropylene

Asphalt (CAS No.: 8052-42-4)

Synonym: Asphaltum

Section 4 First aid measures

• **General information:**

If exposure to internal materials within battery due to damaged outer casing, the following actions are recommended.

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- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**Rinse with water.
- **After eye contact:**Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**Drink plenty of water and provide fresh air. Call for a doctor immediately.

Section 5 Fire-fighting measures

- **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Protective equipment:**Wear fully protective suit.

Section 6 Accidental release measures

- **Person-related safety precautions:**Wear protective equipment. Keep unprotected persons away.

- **Measures for environmental protection:**

Do not allow product to reach sewage system or any water source.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

- **Measures for cleaning/collecting:**

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Additional information:**See Section 7 for information on safe handling.

Section 7 Handling and storage

- **Handling**

- **Information for safe handling:**No special measures required.

- **Information about fire - and explosion protection:**

Keep respiratory protective device available.

Protect against electrostatic charges.

Prevent impact and friction.Protect from heat

- **Storage**

- **Requirements to be met by storerooms and receptacles:**Store in a cool location.

- **Information about storage in one common storage facility:**Store away from flammable substances.

- **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Section 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

| 7440-02-0nickel | |
|-----------------|--------------------------------------|
| PEL (USA) | 1 mg/m ³ |
| REL (USA) | 0,015 mg/m ³ Elemental |

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| | |
|-------------------------------------|---|
| TLV (USA) | 1,5* mg/m3 elemental;*as inhalable fraction |
| MAK (Germany) | einatembare Fraktion; vgl.Abschn.XIII |
| 7440-50-8copper | |
| PEL (USA) | 1* 0,1** mg/m3 as Cu *dusts and mists **fume |
| REL (USA) | 1* 0,1 R** mg/m3 as Cu *dusts and mists **fume |
| TLV (USA) | Short-term value: 0,1** mg/m3 Long-term value: 1* 0,2** mg/m3 *dusts and mists; **fume; as Cu0, |
| MAK (Germany) | 1E mg/m3 |
| 7439-96-5manganese | |
| PEL (USA) | Short-term value: C 5* ** mg/m3 as Mn *and inorganic compounds **fume |
| REL (USA) | Short-term value: 3* ** mg/m3 Long-term value: 1* ** mg/m3 |
| TLV (USA) | as Mn *and inorganic compounds **fume 0,2* ** mg/m3 |
| AGW (Germany) | as Mn *and inorganic compounds **fume 0,5E mg/m3 DFG,Y,10 |
| 1310-58-3potassium hydroxide | |
| REL (USA) | C2 mg/m3 |
| TLV (USA) | Short-term value: C 2 mg/m3 |
| 7440-48-4cobalt | |
| PEL (USA) | 0,1* mg/m3 as Co; *for metal dust & fume, as Co |
| REL (USA) | 0,05* mg/m3 inorg. compds.: *metal dust & fume, as Co |
| TLV (USA) | 0,02 mg/m3 as Co; BEI |
| MAK (Germany) | einatembare Fraktion; vgl.Abschn.XIII |
| 7429-90-5aluminium | |
| PEL (USA) | 15* 5** mg/m3 Metal dust *total dust **respirable fraction |
| REL (USA) | 10* 5** mg/m3 Metal dust *total dust **respirable fraction |
| TLV (USA) | 1* mg/m3 *as respirable fraction |
| AGW (Germany) | 3* 10** mg/m3 2(II);*alveolengängige **einatembare Fraktion; AGS |
| 8052-42-4Asphalt | |

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| | |
|---------------|--|
| REL (USA) | Short-term value: C 5* mg/m ³ *15-min |
| TLV (USA) | 0,5* mg/m ³ *inh. fraction; as benzene-soluble aerosol; BEIp |
| MAK (Germany) | Dampf und Aerosol |

- **DNELs:**Not available
- **PNECs:**Not available
- **Additional information:**The lists valid during the making were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves:**The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

Tightly sealed goggles

Section 9 Physical and chemical properties

| | |
|-------------------------------------|----------------------------|
| • General Information | |
| Form: | Columniform, solid battery |
| Colour: | Green fruit |
| Odour: | Odourless |
| • Change in condition | |
| Melting point/Melting range: | Not available |
| Boiling point/Boiling range: | Not available |
| • Flash point: | Not available |

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| | |
|--|--|
| • Flammability (solid,gaseous): | Not available |
| • Ignition temperature: | Not available |
| • Self-igniting: | Product is not selfigniting. |
| • Danger of explosion: | Extreme risk of explosion by fire or other sources of ignition. |
| • Explosion limits: Lower: Upper: • Oxidizing properties | Not available Not available Not available |
| • Vapour pressure: | Not available |
| • Density: • Relative density • Vapour density • Evaporation rate | Not available Not available Not available Not available |
| • Solubility in / Miscibility with water: | Not available |
| • pH-value: | Not available |
| • Segregation coefficient (n-octanol/water): | Not available |
| • Viscosity: Dynamic: | Not available. |

Section 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**No decomposition if used according to specifications.
- **Dangerous decomposition products:**No dangerous decomposition products known

Section 11 Toxicological information

- **Acute toxicity**
- **LD/LC50 values relevant for classification:**
1310-58-3potassium hydroxide
Oral LD50 273 mg/kg (rat)
- **7440-48-4cobalt**
Oral LD50 6170 mg/kg (rat)
- **7439-96-5manganese**
Oral LD50 9000 mg/kg (rat)
- **7439-89-6iron**
Oral LD50 30 mg/kg (rat)
- **Primary irritant effect**
- **on the skin:**No irritant effect.
- **on the eye:**No irritating effect.
- **Sensitization:**No sensitizing effects known.
- **Toxicokinetics, metabolism and distribution:**Not available
- **Acute effects (acute toxicity, irritation and corrosivity):**Not available
- **Repeated dose toxicity:**Not available
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**Not available

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Section 12 Ecological information

- **Information about elimination (persistence and degradability):**Not available
- **Behaviour in environmental systems**
- **Mobility and bioaccumulation potential:**Not available
- **Ecotoxic effects**
- **Aquatic toxicity:**Not available
- **Remark:**Toxic for fish
- **Additional ecological information:**
- **General notes:**

No ecological impacts expected under normal use conditions.

The materials contained in this product may only represent below ecological impact if the integrity of the battery is compromised; physically or electrically abused.

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

- **PBT assessments:**Not available

Section 13 Disposal considerations

- **Product**
- **Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system

- **Uncleaned packaging**
- **Recommendation:**Disposal must be made according to official regulations.

Section 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:**
- **Danger code (Kemler):-**
- **UN-Number:**
- **Packaging group:**
- **Hazard label:**
- **Description of goods:**
- **Limited quantities (LQ):**
- **Transport category:**
- **Tunnel restriction code:**

- **Maritime transport IMDG**

- **IMDG Class:**9
- **UN Number:**UN3496
- **Label:**
- **Packaging group:**SP117,SP963

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- **EMS Number:**F-A,S-I
- **Marine pollutant:**no
- **Segregation groups:** keep away from heat
- **Proper shipping name:**

• **Air transport ICAO-TI and IATA-DGR**

- **ICAO/IATA Class:-**
- **UN/ID Number:-**
- **Label:-**
- **Packaging group:-**
- **Proper shipping name:-**

Transport/Additional information:

According to the IATA dangerous goods regulations(IATA DGR)(57th), the product complies with IATA DGR Special Provisions SPA199 requirement ,and the product are not regulated for air transportation as "dangerous goods",. Such batteries must be packed in inner packagings in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits.

According to the IMO International Maritime Dangerous Goods Code(2010Edition),If the product pack complies with SP117 and SP963, the product are not regulated for Maritime transportation as "dangerous goods".

Section 15Regulatory information

- **Sara**
- **Section 335(extremely hazadous substances):**

None of the ingredients is listed.

- **Section 313(specific toxic chemical listings):**

7440-02-0 nickel

7440-50-8 copper

7439-96-5 manganese

7440-48-4 cobalt

7429-90-5 aluminium

- **TSCA(Toxic Substances Control Act):**

7440-02-0 nickel

7440-50-8 copper

7439-89-6 iron

7439-91-0 lanthanum

9003-07-0 Polipropene 25

7732-18-5 pure water

7439-96-5 manganese

1310-58-3 potassium hydroxide

7440-45-1 cerium

7440-48-4 cobalt

32131-17-2 Nylon-66

7440-00-8 neodymium

7429-90-5 aluminium

7440-10-0 Praseodymium

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8052-42-4 Asphalt

- **Proposition 65**

- **Chemical known to cause cancer:**

7440-02-0 nickel

7440-48-4 cobalt

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenicity categories**

- **EPA(Environmental Protection Agency)**

7440-50-8 copper D

7439-96-5 manganese D

- **IARC(International Agency for Research on Cancer)**

7440-02-0 nickel 2B

9003-07-0 Polypropene 25 3

7440-48-4 cobalt 2B, 2A

8052-42-4 Asphalt 3

- **NTP(National toxicology Program)**

7440-02-0 nickel R

- **TLV(Threshold Limit Value established by ACGIH)**

7440-02-0 nickel A5

7440-48-4 cobalt A3

7429-90-5 aluminium A4

8052-42-4 Asphalt A4

- **NIOSH-Ca(National Institution for Occupational Safety & Health)**

7440-02-0 nickel

8052-42-4 Asphalt

- **OSHA-Ca(Occupational Safety & Health Administration)**

None of the ingredients is listed.

Section 16 Other information

- **Relevant R-phrases**

11 Highly flammable.

14/15 Reacts violently with water, liberating extremely flammable gases.

15 Contact with water liberates extremely flammable gases.

17 Spontaneously flammable in air.

20/22 Harmful by inhalation and if swallowed.

22 Harmful if swallowed.

35 Causes severe burns.

36/37/38 Irritating to eyes, respiratory system and skin.

38 Irritating to skin.

40 Limited evidence of a carcinogenic effect.

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- 42/43 May cause sensitisation by inhalation and skin contact.
- 43 May cause sensitization by skin contact.
- 48 Danger of serious damage to health by prolonged exposure.
- 48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
- 49 May cause cancer by inhalation.
- 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 53 May cause long-term adverse effects in the aquatic environment.
- 61 May cause harm to the unborn child.
- 68 Possible risk of irreversible effects.

The contents and format of this MSDS/SDS are in according with REGULATION(EC) No. 1907/2006,
EU Commission Directive 1999/45/EC, 67/548/EEC.

End of document