

# SDS

## SAFETY DATA SHEET

Prepared For : SHENZHEN FBTECH CO., LTD  
No.8 Tongfuyu Industrial Zone Kukeng, Guanlan Town, longhua new  
District, Shenzhen, Guangdong, China

Prepared By : Shenzhen LCS Compliance Testing Laboratory Ltd.  
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Issue Date : 2017.07.27  
Report Number : LCS170717107AS

Written by: Linda.

Approved by: \_\_\_\_\_



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\* The SDS is prepared based on the information provided by client. The contents and formats of this SDS are revised as per client's request.

## Section 1- Identification

### (a) Product identifier

|              |               |
|--------------|---------------|
| Product name | NI-MH Battery |
|--------------|---------------|

### (b) Other means of identification

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Product description | Model: AAA 300mAh<br>Nominal Voltage: 1.2V<br>Rated Capacity: 300mAh<br>Weight: 7.8g |
|---------------------|--------------------------------------------------------------------------------------|

### (c) Recommended use of the chemical and restrictions on use

|                 |                               |
|-----------------|-------------------------------|
| Recommended use | Battery, Nickel-metal hydride |
|-----------------|-------------------------------|

|                      |                           |
|----------------------|---------------------------|
| Uses advised against | No information available. |
|----------------------|---------------------------|

### (d) Details of the supplier of the safety data sheet

|               |                          |
|---------------|--------------------------|
| Supplier Name | SHENZHEN FBTECH CO., LTD |
|---------------|--------------------------|

|                  |                                                                                                      |
|------------------|------------------------------------------------------------------------------------------------------|
| Supplier Address | No.8 Tongfuyu Industrial Zone Kukeng, Guanlan Town, longhua new District, Shenzhen, Guangdong, China |
|------------------|------------------------------------------------------------------------------------------------------|

|                       |                  |
|-----------------------|------------------|
| Supplier Phone Number | +86-755-33070779 |
|-----------------------|------------------|

### (e) Emergency telephone number

+86-755-33070779

## Section 2- Hazards Identification

### (a) Classification

|                     |            |
|---------------------|------------|
| Acute toxicity-Oral | Category 4 |
|---------------------|------------|

|                           |            |
|---------------------------|------------|
| Skin corrosion/irritation | Category 2 |
|---------------------------|------------|

|                                   |            |
|-----------------------------------|------------|
| Serious eye damage/eye irritation | Category 1 |
|-----------------------------------|------------|

|                           |            |
|---------------------------|------------|
| Respiratory sensitization | Category 1 |
|---------------------------|------------|

|                    |            |
|--------------------|------------|
| Skin sensitization | Category 1 |
|--------------------|------------|

|                        |            |
|------------------------|------------|
| Germ cell mutagenicity | Category 2 |
|------------------------|------------|

|                 |             |
|-----------------|-------------|
| Carcinogenicity | Category 1A |
|-----------------|-------------|

|                       |             |
|-----------------------|-------------|
| Reproductive toxicity | Category 1B |
|-----------------------|-------------|

| (b) GHS Label elements, including precautionary statements                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Emergency Overview                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |
| Signal word                                                                                                                                                                                                                                                                                                                                                                                                                                     | Danger                                                                                                                                                                                                                                                                                                 |
| <b>Hazard Statements</b><br><br>Harmful if swallowed<br>Causes skin irritation<br>Causes severe skin burns and eye damage<br>May cause allergy or asthma symptoms or breathing difficulties if inhaled<br>May cause an allergic skin reaction<br>Suspected of causing genetic defects<br>May cause cancer<br>May damage fertility or the unborn child<br><br> |                                                                                                                                                                                                                                                                                                        |
| <b>Appearance:</b> No information available                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Physical State:</b> Solid<br><b>Odor:</b> No information available                                                                                                                                                                                                                                  |
| <b>Precautionary Statements-Prevention</b>                                                                                                                                                                                                                                                                                                                                                                                                      | Wash face, hands and any exposed skin thoroughly after handling<br>Do not eat, drink or smoke when using this product<br>Use only outdoors or in a well-ventilated area<br>Do not breathe dust/fume/gas/mist/vapors/spray<br>Wear protective gloves/protective clothing/eye protection/face protection |
| <b>Precautionary Statements-Response</b>                                                                                                                                                                                                                                                                                                                                                                                                        | Immediately call a POISON CENTER or doctor/physician<br>Specific treatment (see supplemental first aid instructions on this label)<br>Get medical advice/attention if you feel unwell                                                                                                                  |
| <b>Eyes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician                                                                                                                  |
| <b>Skin</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     | IF ON SKIN: Wash with plenty of soap and water<br>If skin irritation occurs: Get medical advice/attention<br>Take off contaminated clothing and wash before reuse                                                                                                                                      |
| <b>Precautionary Statements-Storage</b>                                                                                                                                                                                                                                                                                                                                                                                                         | Store locked up<br>Store in a well-ventilated place. Keep container tightly closed                                                                                                                                                                                                                     |
| <b>Precautionary Statements-Disposal</b>                                                                                                                                                                                                                                                                                                                                                                                                        | Dispose of contents/container to an approved waste disposal plant                                                                                                                                                                                                                                      |
| <b>(c) Hazards not otherwise classified (HNOC)</b>                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                        |
| Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                        |
| <b>(d) Unknown Toxicity</b>                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                        |

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88.8 % of the mixture consists of ingredient(s) of unknown toxicity  
 11.5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
 88.8 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
 58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
 58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

## (e) Other information

Very toxic to aquatic life with long lasting effects.

## (f) Interactions with Other Chemicals

No information available.

## Section 3- Composition/Information On Ingredients

| Chemical Name       | CAS Number | Weight (%) |
|---------------------|------------|------------|
| Nickel Hydroxide    | 12054-48-7 | 37         |
| Cobalt oxide        | 1307-96-6  | 5          |
| Iron                | 7439-89-6  | 18         |
| Nickel              | 7440-02-0  | 24         |
| PVC                 | 9002-86-2  | 5          |
| Potassium hydroxide | 1310-58-3  | 4          |
| Sodium hydroxide    | 1310-73-2  | 4          |
| Polypropylene       | 9003-07-0  | 3          |

## Section 4- First-aid Measures

### Description of first aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## Section 5- Fire-fighting measures

### (a) Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### (b) Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

### (c) Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release

of irritating gases and vapors.

**(d) Hazardous Combustion Products**

Carbon oxides.

**(e) Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## Section 6- Accidental Release Measures

**(a) Personal precautions, protective equipment and emergency procedures**

If the battery is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the vapors to dissipate. Avoid skin and eyes contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerated. If leakage of the battery happens, liquid could be absorbed with sand, earth or other inert substance and contaminated area should be ventilated meantime.

**(b) Environment precautions**

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.

**(c) Methods and material for containment and cleaning up**

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

## Section 7- Handling and Storage

**(a) Precautions for safe handling**
**Handling**

Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**(b) Conditions for safe storage, including any incompatibilities**
**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Incompatible Products**

Strong acids. Strong oxidizing agents. Strong bases

## Section 8- Exposure Controls/Personal Protection

**(a) Control parameters**

| Chemical Name                     | ACGIH TLV                                           | OSHA PEL                                                             | NIOSH IDLH                                                                                 |
|-----------------------------------|-----------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Nickel<br>7440-02-0               | TWA: 1.5 mg/m <sup>3</sup>                          | TWA: 1 mg/m <sup>3</sup><br>(vacated) TWA: 1 mg/m <sup>3</sup>       | IDLH: 10 mg/m <sup>3</sup><br>TWA: 0.015 mg/m <sup>3</sup>                                 |
| Nickel<br>hydroxide<br>12054-48-7 | TWA: 0.2 mg/m <sup>3</sup> Ni inhalable<br>fraction | TWA: 1 mg/m <sup>3</sup> Ni<br>(vacated) TWA: 1 mg/m <sup>3</sup> Ni | IDLH: 10 mg/m <sup>3</sup> Ni<br>TWA: 0.015 mg/m <sup>3</sup> except Nickel<br>carbonyl Ni |

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|                                  |                                                                                                                                                                     |                                                                                                                                                                                                    |                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Cobalt<br>7440-48-4              | TWA: 0.02 mg/m <sup>3</sup>                                                                                                                                         | TWA: 0.1 mg/m <sup>3</sup> dust and fume<br>(vacated) TWA: 0.05 mg/m <sup>3</sup> dust and fume                                                                                                    | IDLH: 20 mg/m <sup>3</sup> dust and fume<br>TWA: 0.05 mg/m <sup>3</sup> dust and fume     |
| Sodium hydroxide<br>1310-73-2    | Ceiling: 2 mg/m <sup>3</sup>                                                                                                                                        | TWA: 2 mg/m <sup>3</sup><br>vacated) Ceiling: 2 mg/m <sup>3</sup>                                                                                                                                  | IDLH: 10 mg/m <sup>3</sup><br>Ceiling: 2 mg/m <sup>3</sup>                                |
| Potassium hydroxide<br>1310-58-3 | Ceiling: 2 mg/m <sup>3</sup>                                                                                                                                        | (vacated) Ceiling: 2 mg/m <sup>3</sup>                                                                                                                                                             | Ceiling: 2 mg/m <sup>3</sup>                                                              |
| Cobalt hydroxide<br>21041-93-0   | TWA: 0.02 mg/m <sup>3</sup> Co                                                                                                                                      |                                                                                                                                                                                                    |                                                                                           |
| Manganese<br>7439-96-5           | TWA: 0.02 mg/m <sup>3</sup> respirable fraction<br>TWA: 0.1 mg/m <sup>3</sup> inhalable fraction<br>TWA: 0.02 mg/m <sup>3</sup> Mn<br>TWA: 0.1 mg/m <sup>3</sup> Mn | (vacated) TWA: 1 mg/m <sup>3</sup> fume<br>(vacated) STEL: 3 mg/m <sup>3</sup> fume<br>(vacated) Ceiling: 5 mg/m <sup>3</sup><br>Ceiling: 5 mg/m <sup>3</sup> fume Ceiling: 5 mg/m <sup>3</sup> Mn | IDLH: 500 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup> fume<br>STEL: 3 mg/m <sup>3</sup> |
| Other Exposure Guidelines        | Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters  |                                                                                                                                                                                                    |                                                                                           |

## (b) Appropriate engineering controls

|                      |                                                    |
|----------------------|----------------------------------------------------|
| Engineering Measures | Showers<br>Eyewash stations<br>Ventilation systems |
|----------------------|----------------------------------------------------|

## (c) Individual protection measures, such as personal protective equipment

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/Face Protection      | Face protection shield.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Skin and body Protection | Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Respiratory Protection   | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Hygiene Measures         | Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. |

## Section 9- Physical and Chemical Properties

|       |                          |
|-------|--------------------------|
| Form  | Solid                    |
| Color | No information available |
| Odor  | No information available |

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|                                                     |                                                                                          |
|-----------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>pH</b>                                           | No information available                                                                 |
| <b>Melting point/freezing point</b>                 | No information available                                                                 |
| <b>Boiling Point and Boiling range</b>              | No available                                                                             |
| <b>Flash Point</b>                                  | No available                                                                             |
| <b>Upper/lower flammability or explosive limits</b> | No available                                                                             |
| <b>Vapor Pressure</b>                               | No available                                                                             |
| <b>Vapor Density</b>                                | No available                                                                             |
| <b>Relative density</b>                             | No available                                                                             |
| <b>Solubility in Water</b>                          | No available                                                                             |
| <b>Auto-ignition temperature</b>                    | No available                                                                             |
| <b>Decomposition temperature</b>                    | No available                                                                             |
| <b>Evaporation rate</b>                             | No available                                                                             |
| <b>Flammability (soil, gas)</b>                     | No available                                                                             |
| <b>Viscosity</b>                                    | No available                                                                             |
| <b>Section 10- Stability and reactivity</b>         |                                                                                          |
| <b>Reactivity</b>                                   | No information available.                                                                |
| <b>Chemical stability</b>                           | Stable under normal conditions.                                                          |
| <b>Possibility of Hazardous Reactions</b>           | None under normal processing.                                                            |
| <b>Hazardous Polymerization</b>                     | Hazardous polymerization does not occur.                                                 |
| <b>Conditions to avoid</b>                          | Exposure to air or moisture over prolonged periods. Excessive heat.                      |
| <b>Incompatible materials</b>                       | Acids. Bases. Oxidizing agent.                                                           |
| <b>Hazardous Decomposition Products</b>             | Carbon oxides.                                                                           |
| <b>Section 11 – Toxicological Information</b>       |                                                                                          |
| <b>Product Information</b>                          | Product does not present an acute toxicity hazard based on known or supplied information |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | In case of rupture:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                        |
| <b>Irritation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Specific test data for the substance or mixture is not available. Corrosive by inhalation.(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.             |                    |                        |
| <b>Eye contact</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.                                                                                                                                                                                                                                                                           |                    |                        |
| <b>Skin contact</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                        |
| <b>Ingestion</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. |                    |                        |
| <b>Information on toxicological effects</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                        |
| <b>Symptoms</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Redness. Burning. May cause blindness. Coughing and/ or wheezing.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |                        |
| <b>Numerical measures of toxicity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                        |
| <b>Acute Toxicity</b><br>The following values are calculated based on chapter 3.1 of the GHS document .<br>ATEmix (oral) 749.00 mg/kg<br>ATEmix (inhalation-gas) 6,174.00 mg/L<br>ATEmix (inhalation-dust/mist) 2.06 mg/L<br>ATEmix (inhalation-vapor) 15.09 mg/L                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                        |
| <b>Unknown acute toxicity</b><br>88.8 % of the mixture consists of ingredient(s) of unknown toxicity<br>11.5 % of the mixture consists of ingredient(s) of unknown acute oral toxicity<br>88.8 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity<br>58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)<br>58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)<br>58.7 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                        |
| <b>Component Information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                        |
| <b>Chemical name</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Oral LD50</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Dermal LD50</b> | <b>Inhalation LC50</b> |

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|                                  |                      |                         |                          |
|----------------------------------|----------------------|-------------------------|--------------------------|
| Nickel<br>7440-02-0              | >9000 mg/kg ( Rat )  | -                       | -                        |
| Nickel hydroxide<br>12054-48-7   | -                    | -                       | = 1200 mg/m3 ( Rat ) 4 h |
| Iron<br>7439-89-6                | = 984 mg/kg ( Rat )  | -                       | -                        |
| Cobalt<br>7440-48-4              | = 6170 mg/kg ( Rat ) | -                       | > 10 mg/L ( Rat ) 1 h    |
| Sodium hydroxide<br>1310-73-2    | -                    | = 1350 mg/kg ( Rabbit ) | -                        |
| Potassium hydroxide<br>1310-58-3 | = 214 mg/kg ( Rat )  | -                       | -                        |

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                                          |                                                                                                       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Skin corrosion/irritation</b>         | Classification based on data available for ingredients. Causes burns.                                 |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns. |
| <b>Respiratory or skin sensitization</b> | No information available.                                                                             |
| <b>Germ cell mutagenicity</b>            | No information available.                                                                             |
| <b>Carcinogenicity</b>                   | No information available.                                                                             |
| <b>Reproductive toxicity</b>             | No information available.                                                                             |
| <b>STOT - single exposure</b>            | No information available.                                                                             |
| <b>STOT - repeated exposure</b>          | No information available.                                                                             |
| <b>Aspiration hazard</b>                 | No information available.                                                                             |

## Section 12- Ecological Information

| <b>Ecological Toxicity</b>    | Very toxic to aquatic life with long lasting effects.                                                                |                                                                                                                         |                            |                                     |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------|
| Chemical name                 | Toxicity to Algae                                                                                                    | Toxicity to Fish                                                                                                        | Toxicity to Microorganisms | Daphnia Magna (Water Flea)          |
| Nickel<br>7440-02-0           | 72h EC50: = 0.18 mg/ (Pseudokirchneriella subcapitata) 96h EC50: 0.174 - 0.311 mg/ (Pseudokirchneriella subcapitata) | 96h LC50: > 100 mg/L (Brachydanio rerio) 96h LC50: = 1.3 mg/L (Cyprinus carpio) 96h LC50: = 10.4 mg/L (Cyprinus carpio) |                            | 48h EC50: > 100 mg/L EC50: = 1 mg/L |
| Iron<br>7439-89-6             |                                                                                                                      | 96h LC50: = 13.6 mg/L (Morone saxatilis)                                                                                |                            |                                     |
| Cobalt<br>7440-48-4           |                                                                                                                      | 96h LC50: > 100 mg/L (Brachydanio rerio)                                                                                |                            |                                     |
| Sodium hydroxide<br>1310-73-2 |                                                                                                                      | 96h LC50: = 45.4 mg/L (Oncorhynchus mykiss)                                                                             |                            |                                     |
| Potassium hydroxide           |                                                                                                                      | 96h LC50: = 80 mg/L (Gambusia affinis)                                                                                  |                            |                                     |

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|                                                                                                                 |  |                                                                                                                 |  |  |
|-----------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------|--|--|
| 1310-58-3                                                                                                       |  |                                                                                                                 |  |  |
| <b>Persistence and Degradability</b>                                                                            |  | No information available.                                                                                       |  |  |
| <b>Bioaccumulation</b>                                                                                          |  |                                                                                                                 |  |  |
| <b>Chemical name</b>                                                                                            |  | <b>Log Pow</b>                                                                                                  |  |  |
| Potassium hydroxide                                                                                             |  | 0.83                                                                                                            |  |  |
| <b>Section 13- Disposal Considerations</b>                                                                      |  |                                                                                                                 |  |  |
| <b>Waste treatment methods</b>                                                                                  |  |                                                                                                                 |  |  |
| <b>Waste from residues/unused products</b>                                                                      |  | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |  |  |
| <b>Contaminated packaging</b>                                                                                   |  | Do not reuse empty containers.                                                                                  |  |  |
| <b>California Hazardous Waste Codes 141</b>                                                                     |  |                                                                                                                 |  |  |
| This product contains one or more substances that are listed with the State of California as a hazardous waste. |  |                                                                                                                 |  |  |
| <b>Section 14 – Transport Information</b>                                                                       |  |                                                                                                                 |  |  |
| <b>DOT</b><br>Proper Shipping Name<br>Hazard Class                                                              |  | NOT REGULATED<br>NOT REGULATED<br>N/A                                                                           |  |  |
| <b>TDG</b>                                                                                                      |  | NOT REGULATED                                                                                                   |  |  |
| <b>MEX</b>                                                                                                      |  | NOT REGULATED                                                                                                   |  |  |
| <b>ICAO</b>                                                                                                     |  | NOT REGULATED                                                                                                   |  |  |
| <b>IATA</b><br>UN number<br>Proper Shipping Name<br>Hazard Class                                                |  | NOT REGULATED<br>UN3496<br>Nickel-metal hydride Batteries<br>9                                                  |  |  |
| <b>IMDG/IMO</b><br>UN number<br>Hazard Class<br>Marine Pollutant                                                |  | NOT REGULATED<br>UN3496<br>9<br>Product is a marine pollutant according to the criteria set by IMDG/IMO         |  |  |
| <b>RID</b>                                                                                                      |  | NOT REGULATED                                                                                                   |  |  |

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|     |               |
|-----|---------------|
| ADR | NOT REGULATED |
| ADN | NOT REGULATED |

**Transport information:**

This goods shall be considered Not Restricted Goods and need to be complied with the requirements of special provision A199 of 58<sup>th</sup> DGR Manual of IATA or special provision 963 of IMDG CODE (Amdt. 38-16). The words "Not Restricted" and the Special Provision number must be included in the description of the substance on the Air or Sea Waybill.

**Transport Fashion:** By air, by sea, by railway, by road.

## Section 15- Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**
**International Regulations**

**Ozone-depleting substances (ODS)** Not applicable

**Persistent Organic Pollutants** Not applicable

**Export Notification requirements** Not applicable

**International Inventories**

**TSCA** Contact supplier for inventory compliance status.

**DSL/NDL** Contact supplier for inventory compliance status.

**EINECS/ELINCS** Contact supplier for inventory compliance status.

**ENCS** Contact supplier for inventory compliance status.

**KECL** Contact supplier for inventory compliance status.

**PICCS** Contact supplier for inventory compliance status.

**AICS** Contact supplier for inventory compliance status.

**Legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the

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Code of Federal Regulations, Part 372

| <u>Chemical name</u> | <u>CAS-No</u> | <u>Percent %</u> | <u>SARA 313 - Threshold Values %</u> |
|----------------------|---------------|------------------|--------------------------------------|
| Nickel               | 7440-02-0     | 15-40            | 0.1                                  |
| Nickel hydroxide     | 12054-48-7    | 10-30            | 0.1                                  |
| Cobalt               | 7440-48-4     | 1-5              | 0.1                                  |
| Cobalt hydroxide     | 21041-93-0    | 1-5              | 0.1                                  |
| Manganese            | 7439-96-5     | 1-5              | 1.0                                  |

|                                          |    |
|------------------------------------------|----|
| <b>Acute Health Hazard</b>               | No |
| <b>Chronic Health Hazard</b>             | No |
| <b>Fire Hazard</b>                       | No |
| <b>Sudden release of pressure hazard</b> | No |
| <b>Reactive Hazard</b>                   | No |

## CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| <b>Chemical name<br/>CWA - Reportable</b> | <b>Quantities</b> | <b>CWA - Toxic<br/>Pollutants CWA -<br/>Priority</b> | <b>Pollutants</b> | <b>CWA - Hazardous</b> |
|-------------------------------------------|-------------------|------------------------------------------------------|-------------------|------------------------|
| Nickel<br>7440-02-0                       |                   | X                                                    | X                 |                        |
| Nickel hydroxide<br>12054-48-7            |                   | X                                                    |                   | X                      |
| Sodium hydroxide<br>1310-73-2             | 1000 lb           |                                                      |                   | X                      |
| Potassium<br>hydroxide<br>1310-58-3       | 1000 lb           |                                                      |                   | X                      |

## CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| <b>Chemical name</b>           | <b>Hazardous Substances<br/>RQs</b> | <b>Extremely Hazardous<br/>Substances RQs</b> | <b>RQ</b>                                 |
|--------------------------------|-------------------------------------|-----------------------------------------------|-------------------------------------------|
| Nickel<br>7440-02-0            | 100 lb                              |                                               | RQ 100 lb final RQ<br>RQ 45.4 kg final RQ |
| Nickel hydroxide<br>12054-48-7 | 10 lb                               |                                               | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ  |
| Sodium hydroxide<br>1310-73-2  | 1000 lb                             |                                               | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |

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|                                  |         |  |                                           |
|----------------------------------|---------|--|-------------------------------------------|
| Potassium hydroxide<br>1310-58-3 | 1000 lb |  | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
|----------------------------------|---------|--|-------------------------------------------|

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

| Chemical name                    | New Jersey | Massachusetts | Pennsylvania | Rhode Island | Illinois |
|----------------------------------|------------|---------------|--------------|--------------|----------|
| Nickel<br>7440-02-0              | X          | X             | X            | X            | X        |
| Nickel hydroxide<br>12054-48-7   | X          | X             | X            | X            | X        |
| Cobalt<br>7440-48-4              | X          | X             | X            | X            | X        |
| Sodium hydroxide<br>1310-73-2    | X          | X             | X            | X            |          |
| Potassium hydroxide<br>1310-58-3 | X          | X             | X            | X            |          |
| Cobalt hydroxide<br>21041-93-0   |            |               | X            | X            | X        |
| Manganese<br>7439-96-5           | X          | X             | X            | X            | X        |
| Aluminum<br>7429-90-5            | X          | X             | X            | X            |          |
| Cerium<br>7440-45-1              | X          |               |              |              |          |

## Section 16- Other Information

**NFPA**      Health hazards 3      Flammability 0      Instability 0      Physical and Chemical Properties -

**HMIS**      Health hazards 0      Flammability 0      Physical hazards 0      Personal Protection X

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**