

# Safety Data Sheet

Date of Issue: July, 24, 2017

File No.: GRP20170720WERCS01

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product Identifier

**Name of Product:** Nickel metal hydride rechargeable battery pack

### 1.2 Other means of identification

**Product Models:** GREPOW Ni-MH 8\*SC3000mAh 9.6V

**Nominal Voltage:** 9.6V

**Nominal capacity:** 3000mAh

**Nominal Power:** 28.8Wh

**Weight:** 445g±20g

### 1.3 Recommended use of the chemical and restriction on use

**Recommended Use:** Rechargeable Ni-MH Battery

**Restriction on Use:** No information available

### 1.4 Information of Supplier:

**Company Name:** Hunan Grepow New Energy Co.,Ltd

**Address:** West Road East River, Nonferrous Metals Industrial Park ( Export Processing Zone),  
Chenzhou City , Hunan Province, P.R.China

**Zip code:** 423500

**Contact person:** Zhang Chuanping

**Tel:** +86-735-2659371

**E-mail:** zhangchuanping@grepow.com

### 1.5 Emergency Telephone

**+86-735-2659371**

## 2. Hazard(s) Identification

### 2.1 Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1B

### 2.2 Label elements

**2.2.1 Signal Word**      **Danger**

#### **2.2.2 Hazard Statements**

Harmful if swallowed

Toxic if swallowed

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Causes skin irritation  
Causes serious eye damage  
Suspected of causing cancer  
Causes damage to organs through prolonged or repeated exposure

## 2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance. This is a battery. In case of rupture: the above hazards exist.

## 2.3 Precautionary Statements

### 2.3.1 Precautionary Statements – Prevention

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Use personal protective equipment as required.  
Wash face, hands and any exposed skin thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Keep away from flames and hot surface –no smoking.  
Do not breath dust/fume/gas/mist/vapors/spray.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves

### 2.3.2 Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

#### **Skin**

If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

#### **Eye**

If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

#### **Inhalation**

If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

#### **Ingestion**

Immediate medical attention is required. Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Centre immediately.

### 2.3.3 Precautionary Statements – Storage

Store locked up

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## 2.3.4 Precautionary Statements – Disposal

Dispose of contents/container to an approved waste disposal plant.

## 2.4 Hazards not otherwise classified (HNOC)

Not applicable

## 2.5 Unknown Toxicity

13% of the mixture consists of ingredient(s) of unknown toxicity.

## 2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

## 3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
NickeLous hydroxide	Ni (OH) <sub>2</sub>	12054-48-7	29.820
Cobalt hydroxide	Co(OH) <sub>2</sub>	21041-93-0	1.924
Nickel	Ni	7440-02-0	28.797
Lanthanum	La	7439-91-0	10.858
Cerium	Ce	7440-45-1	1.551
Aluminum	Al	7429-90-5	0.659
Poly 【 imino(1,6-dioxo-1,6-hexanediyl)i mino-1,6-hexanediyl】	(C <sub>12</sub> H <sub>22</sub> N <sub>2</sub> O <sub>2</sub> ) <sub>3</sub>	32131-17-2	0.449
Manganese	Mn	7439-96-5	1.357
Iron	Fe	7439-89-6	14.568
Potassium hydroxide	KOH	1310-58-3	0.538
Sodium hydroxide	NaOH	1310-73-2	2.160
Lithium hydroxide momohydrdte	LiOH H <sub>2</sub> O	1310-66-3	0.190
Copper	Cu	7440-50-8	4.955
PolypropyLene	(C <sub>3</sub> H <sub>6</sub> ) <sub>n</sub>	9003-07-0	1.957
Polyethylene	(C <sub>2</sub> H <sub>4</sub> ) <sub>n</sub>	9002-88-4	0.217

## 4. First Aid Measures

### 4.1 General Advice

Immediate medical attention is required. Show this safety data sheet to the doctor in

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attendance. IF exposed or concerned: Get medical advice/attention.

## **4.1.1 Eye contact**

Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

## **4.1.2 Skin Contact**

Immediate medical attention is required. Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.

## **4.1.3 Inhalation of Vented Gas**

Immediate medical attention is required. Move to fresh air. If symptoms persist, call a physician.

## **4.1.4 Ingestion**

Immediate medical attention is required. Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Centre immediately.

## **4.1.5 Self-protection of the first aider**

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section 8).

## **4.2 Most important symptoms and effects, both acute and delayed**

Burning sensation. Itching. Rashes. Hives, Coughing.

## **4.3 Indication of any immediate medical attention and special treatment needed**

### **Notes to physician**

Treat symptomatically.

## **5. Fire –Fighting Measures**

### **5.1 Suitable Extinguishing Media**

Dry powder, carbon dioxide (CO<sub>2</sub>), sand.

### **5.2 Unsuitable Extinguishing Media**

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

### **5.3 Specific Hazards Arising from the chemical**

Risk of receptacle bursting.

### **Hazardous Combustion products**

Nickel and cobalt compounds.

### **5.4 Explosion Data**

**Sensitivity to Mechanical Impact :No.**

**Sensitivity to Static Discharge: No.**

### **5.5 Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Use personal protective equipment.

## 6. Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### 6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

### 6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

### 6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.  
Dispose of in accordance with local regulations.

## 7. Handling and Storage

### 7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

### 7.2 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 agent. Strong bases.

## 8. Exposure Controls/Personal Protection

### 8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel-hydroxide 12054-48-7	TWA:0.2mg/m <sup>3</sup> Ni inhalable fraction	TWA: 1 mg/m <sup>3</sup> (vacated) ( as Ni ) TWA: 1 mg/m <sup>3</sup> ( as Ni )	IDLH: 10 mg/m <sup>3</sup> ( as Ni ) TWA: 0.015 mg/m <sup>3</sup> ( except Nickel carbonyl Ni )
Nickel 7440-02-0	TWA:1.5mg/m <sup>3</sup>	TWA:1mg/m <sup>3</sup> (vacated) TWA: 1mg/m <sup>3</sup>	IDLH:10mg/m <sup>3</sup> TWA:0.015mg/m <sup>3</sup>
Manganese 7439-96-5	TWA: 0.02 mg/m <sup>3</sup> respirablefraction TWA: 0.1	(vacated) TWA: 1 mg/m <sup>3</sup> fume (vacated) STEL: 3 mg/m <sup>3</sup> fume (vacated) Ceiling: 5 mg/m <sup>3</sup>	IDLH:500 mg/m <sup>3</sup> ( as Mn) TWA: 1mg/m <sup>3</sup>

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	mg/m <sup>3</sup> inhalable fraction TWA: 0.02mg/m <sup>3</sup> Mn TWA: 0.1 mg/m <sup>3</sup> Mn	Ceiling: 5 mg/m <sup>3</sup> fume Ceiling: 5mg/m <sup>3</sup> Mn	ST: 3 mg/m <sup>3</sup>
Potassium-hydroxide 1310-58-3	TWA: C 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	TWA: C 2mg/m <sup>3</sup>
Copper 7440-50-8	TWA: 0.2 mg/m <sup>3</sup> fume TWA: 1mg/m <sup>3</sup> Cu dust and mist	TWA: 0.1 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> dust and mist (vacated) TWA: 0.1 mg/m <sup>3</sup> Cu dust, fume, mist	IDLH: 100 mg/m <sup>3</sup> dust, fume and mist TWA: 1 mg/m <sup>3</sup> dust and mist TWA: 0.1 mg/m <sup>3</sup> fume
Aluminum 7429-90-5	TWA: 1mg/m <sup>3</sup>	TWA: 15mg/m <sup>3</sup> total dust TWA: 5mg/m <sup>3</sup> respirable fraction (vacated)	TWA: 10mg/m <sup>3</sup> Total dust TWA: 5mg/m <sup>3</sup> Respirable dust
Sodium-hydroxide 1310-73-2	TWA: C 2 mg/m <sup>3</sup>	OSHA: 10 mg/m <sup>3</sup> TWA: C 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>
Cobalt hydroxide 21041-93-0	TWA 0.1 mg/m <sup>3</sup>	-	-

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value  
OSHA PEL : Occupational Safety and Health Administration-Permissible Exposure Limits  
NIOSH IDLH Immediately Dangerous to Life or Health

### Other Exposure Guidelines:

Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

## 8.2 Appropriate engineering controls

### Engineering Measures:

Showers, Eyewash stations, Ventilation systems

## 8.3 Individual protection measures, such as personal protective equipment

**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.

**Eye /face protection:** if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

**Skin protection:** Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

**Hygiene Measure:** 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. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

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## 9. Physical and Chemical Properties

**Physical State:** Solid

**Color:** Black

**Odor:** Odorless

**Odor Threshold:** No information available

**pH:** No data available

**Melting/freezing point:** No data available

**Boiling point/boiling range:** No data available

**Flash Point:** No data available

**Evaporation Rate:** No data available

**Flammability (Solid, gas):** No data available

**Flammability Limit in Air:**

**Upper flammability limit:** No data available

**Lower flammability limit:** No data available

**Vapor pressure:** No data available

**Vapor density:** No data available

**Specific Gravity:** No data available

**Solubility:** Insoluble in water

**Partition coefficient: n-octanol/water:** No data available

**Auto ignition temperature:** No data available

**Decomposition temperature:** No data available

**Kinematic viscosity:** No data available

**Dynamic viscosity:** No data available

## 10. Stability and Reactivity

**Reactivity:**

No data available

**Chemical stability:**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:**

None under normal processing.

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**Hazardous Polymerization:**

Hazardous polymerization does not occur.

**Conditions to avoid:**

Do not subject battery to mechanical shock. Keep away from openflames, high temperature.

**Incompatible materials:**

Strong acids, Strong oxidizing agents. Strong bases. Do not exposure to moisture

**Hazardous decomposition products:**

Nickel and cobalt compounds.

## 11. Toxicological Information

### 11.1 Information on likely routes of exposure

**Product information:**

Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture:

**Inhalation:**

Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

**Eye Contact:**

Specific test data for the substance or mixture is not available. Cause burns. ( based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

**Skin Contact:**

Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

**Ingestion:**

Specific test data for the substance or mixture is not available. Cause burns. ( based on components). Ingestion cause 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. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.



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## Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nickel 7440-02-0	> 9000 mg/kg ( Rat )	-	-
Nickel hydroxide 12054-48-7	-	-	= 1200 mg/m3 ( Rat ) 4 h
Iron 7439-89-6	= 984 mg/kg ( Rat )	-	-
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg( Rabbit )	-
Potassium hydroxide 1310-58-3	= 214 mg/kg ( Rat )	-	-

## 11.2 Information on toxicological effects

### Symptoms:

Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

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

**Sensitization:** May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

**Mutagenic Effects:** No information available.

**Carcinogenicity:** the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Nickel 7440-02-0		Group 2B	Reasonably Anticipated	X
Nickel hydroxide 12054-48-7	A1	Group 1	Known	X
Cobalt hydroxide 21041-93-0	A3	Group 2B		X

**ACGIH** (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A3- Animal Carcinogen

**IARC** (International Agency for research on Cancer)

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1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B- Possibly Carcinogenic to humans

**NTP** (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.

**OSHA** (Occupational safety and Health Administration of the US Department of Labor)

X-Present

**Reproductive Toxicity:** Contains a known or suspected reproductive toxin.

**STOT- single exposure:** No information available.

**STOT- repeated exposure:** Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. ( STOT RE )

**Chronic Toxicity:** Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

**Target Organ Effects:** Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

**Aspiration Hazard:** No information available.

## 11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.

ATE mix (oral): 1518 mg/kg

ATE mix (dermal): 68931mg/kg (ATE)

ATE mix (inhalation -gas): 21328 ppm (4 hr)

## 12. Ecological Information

**Ecotoxicity :** Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Aglae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Nickel 7440-02-0	72h EC50: = 0.18 mg/L (Pseudokirchneriella subcapitata) 96h EC50:0.174 - 0.311 mg/L(Pseudokirchneriella subcapitata)	96h LC50: > 100 mg/L (Brachydanio rerio) 96h LC50: = 1.3 mg/L (Cyprinus carpio) 96h LC50: = 10.4mg/L (Cyprinus carpio)		

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Iron 7439-89-6		96h LC50: = 13.6 mg/L (Morone saxatilis)		
Sodium hydroxide 1310-73-2		96h LC50: = 45.4 mg/L (Oncorhynchus mykiss)		
Potassium hydroxide 1310-58-3		96h LC50: = 80 mg/L (Gambusia affinis)		
Cooper 7440-50-8	96h EC50:0.31-0.045 mg/l  (pseudokirchneri ella subcapitata)  72h EC50:0.426-0.053 5mg/l  (pseudokirchneri ella subcapitata)	96h LC50:0.068-0.0156mg/L (pimephales promelas)  96h LC50:=0.112mg/L(Poecilia reticulate)  96h LC50=0.3mg/L(Cyprinus marpio)  96h LC50=0.8mg/L((Cyprinus marpio)  96h LC50=1.25mg/L(Lepomis macrochirus) 96h LC50=0.052mg/L(Oncorhync hus mykiss) 96h LC50=0.2mg/L(Pimephales promelas) 96h LC50: < 0.3mg/L(Pimephales promelas)		48h EC50:=0.03mg/l

**Persistence and Degradability:** No information available

**Bioaccumulation:**

Chemical Name	Log Pow
Potassium hydroxide 1310-58-3	0.83

**Other adverse effects:** No information available

## 13. Disposal Considerations

### 13.1 Waste treatment methods

**Disposal methods:**

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in

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contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

## Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

Chemical Name	RCRA	RCRA-Basisfor listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel 7440-02-0	(hazardous constituent – no waste number)	Included in waste streams: F006, F039		
Nickel hydroxide 12054-48-7	(hazardous constituent – no waste number)			

## California Hazardous Waste Codes 141

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Nickel 7440-02-0	Toxic powder Ignitable powder
Potassium hydroxide 1310-58-3	Toxic Corrosive
Cobalt hydroxide 21041-93-0	Toxic
Manganese 7439-96-5	Ignitable powder
Copper 7440-50-8	Toxic

## 14. Transportation Information

According to IATA DGR 56<sup>th</sup> Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station. The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of road transportation, the driver

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should drive in accordance with regulated routed, don't stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

International Maritime Organization (IMO), IMDG Code :Regulated as "Batteries ,nickel-metal hydride,UN3496,Special provision 963 : Nickel-metal hydride cells or batteries shall be securely packed and protected from short circuit. They are not subject to other provision of this code provide that they are loaded in a cargo transport unit in a total quantity of 100kg gross mass of more, they are not subject to other provision if this code except those of 5.4.1 , 5.4.3 and column (16)of the dangerous goods list in chapter 3.2" .

**DOT:** NOT REGULATED

**Proper Shipping Name:** NON REGULATED

**Hazard Class:** N/A

**TDG:** Not regulated

**MEX:** Not regulated

**ICAO:** Not regulated

**IATA:** Not regulated

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not regulated

**IMDG/IMO:** Not regulated

**Marine Pollutant:** Product is a marine pollutant according to the criteria set by IMDG/IMO

**Proper Shipping Name:** NON REGULATED

**Hazard Class:** N/A

**Ems No.:** F-A, S-1

**RID:** Not regulated

**ADR:** Not regulated

**AND:** Not regulated

## 15. Regulatory information

### 15.1 International Inventories

TSCA Complies

DSL All components are listed either on the DSL or NDSL.

TSCA – United State Toxic Substance Control Act Section 8(b) Inventory

DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

### 15.2 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 Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Nickel 7440-02-0	28.797	0.1

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Nickel hydroxide 12054-48-7	29.820	0.1
Cobalt hydroxide 21041-93-0	1.924	0.1
Manganese 7439-96-5	1.357	1.0
Copper 7440-50-8	4.955	1.0

## 15.3 SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

## 15.4 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)

Chemical Name	CWA-Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA Hazardous Substances
Nickel 7440-02-0		X	X	
Nickel hydroxide 12054-48-7		X		X
Sodium hydroxide 1310-73-2	1000 lb			X
Potassium hydroxide 1310-58-3	1000 lb			X
Copper 7440-50-8		X	X	

## 15.5 CERCLA

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

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Nickel 7440-02-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Nickel hydroxide 12054-48-7	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Sodium hydroxide 1310-73-2	1000 lb		RQ 100 0lb final RQ RQ 454 kg final RQ
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Copper 7440-50-8	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

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## 15.6 US State Regulations

### **California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Nickel 7440-02-0	Carcinogen
Nickel hydroxide 12054-48-7	Carcinogen
Cobalt 7440-48-4	Carcinogen
Sodium hydroxide 1310-73-2	Carcinogen

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Nickel hydroxide 12054-48-7	X	X	X	X	X
Cobalt hydroxide 21041-93-0			X	X	X
Nickel 7440-02-0	X	X	X	X	X
Cerium 7440-45-1	X				
Aluminum 7429-90-5	X	X	X	X	
Manganese 7439-96-5	X	X	X	X	X
Potassium hydroxide 1310-58-3	X	X	X	X	
Sodium hydroxide 1310-73-2	X	X	X	X	
Lithium hydroxide monohydrate 1310-66-3	X				
Copper 7440-50-8	X	X	X	X	X

## 15.7 International Regulations

### **Canada**

WHMIS Hazard Class

Non-controlled

### **Mexico**

#### **National occupational exposure limits**

Chemical Name	Carcinogen Status	Exposure Limits
Nickel 7440-02-0		Mexico: TWA 1 mg/m <sup>3</sup>
Nickel hydroxide 12054-48-7		Mexico: TWA= 0.1 mg/m <sup>3</sup> Mexico: STEL= 0.3 mg/m <sup>3</sup>
Sodium hydroxide 1310-73-2		Mexico: Ceiling 2 mg/m <sup>3</sup>
Manganese 7439-96-5		Mexico: TWA 0.2 mg/m <sup>3</sup> Mexico: TWA 1 mg/m <sup>3</sup> Mexico: STEL 3 mg/m <sup>3</sup>

Mexico – Occupational Exposure Limits – Carcinogens

A3-Confirmed Animal Carcinogen

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## **16. Other Information**

### **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 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 material used in combination with any other materials or in any process, unless specified in the test.

**Prepared By:** Guangzhou MCM Certification and Testing Co., Ltd.

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