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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Written by: Linda. **Approved by:**

** 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: AA 1000mAh Nominal Voltage: 1.2V Rated Capacity: 1000mAh Weight: 17.7g
(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

Hazard Statements

Harmful if swallowed
Causes skin irritation
Causes severe skin burns and eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing genetic defects
May cause cancer
May damage fertility or the unborn child

Appearance: No information available **Physical State**: Solid **Odor**: No information available

Precautionary Statements-Prevention	Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated area Do not breathe dust/fume/gas/mist/vapors/spray Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statements-Response	Immediately call a POISON CENTER or doctor/physician Specific treatment (see supplemental first aid instructions on this label) Get medical advice/attention if you feel unwell
Eyes	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
Skin	IF ON SKIN: Wash with plenty of soap and water If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse
Precautionary Statements-Storage	Store locked up Store in a well-ventilated place. Keep container tightly closed
Precautionary Statements-Disposal	Dispose of contents/container to an approved waste disposal plant

(c) Hazards not otherwise classified (HNOC)
Not applicable
(d) Unknown Toxicity

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	33
Cobalt oxide	1307-96-6	7
Iron	7439-89-6	17
Nickel	7440-02-0	25
PVC	9002-86-2	5
Potassium hydroxide	1310-58-3	5
Sodium hydroxide	1310-73-2	5
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 wit 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 7440-02-0	TWA: 1.5 mg/m^3	TWA: 1 mg/m^3 (vacated) TWA: 1 mg/m^3	IDLH: 10 mg/m^3 TWA: 0.015 mg/m^3
Nickel hydroxide 12054-48-7	TWA: 0.2 mg/m^3 Ni inhalable fraction	TWA: 1 mg/m^3 Ni (vacated) TWA: 1 mg/m^3 Ni	IDLH: 10 mg/m^3 Ni TWA: 0.015 mg/m^3 except Nickel carbonyl Ni

Cobalt 7440-48-4	TWA: 0.02 mg/m^3	TWA: 0.1 mg/m^3 dust and fume (vacated) TWA: 0.05 mg/m3 dust and fume	IDLH: 20 mg/m^3 dust and fume TWA: 0.05 mg/m^3 dust and fume
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3 vacated) Ceiling: 2 mg/m^3	IDLH: 10 mg/m^3 Ceiling: 2 m mg/m^3
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m^3	vacated) Ceiling: 2 mg/m^3	Ceiling: 2 mg/m^3
Cobalt hydroxide 21041-93-0	TWA: 0.02 mg/ mg/m^3 Co		
Manganese 7439-96-5	TWA: 0.02 mg/m^3 respirable fraction TWA: 0.1 mg/m^3 inhalable fraction TWA: 0.02 mg/m^3 Mn TWA: 0.1 mg/m^3 Mn	(vacated) TWA: 1 mg/m^3 fume (vacated) STEL: 3 mg/m^3 fume (vacated) Ceiling: 5 mg/m^3 Ceiling: 5 mg/m^3 fume Ceiling: 5 mg/m^3 Mn	IDLH: 500 mg/m^3 TWA: 1 mg/m^3 fume STEL: 3 mg/m^3
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 Eyewash stations 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

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

	In case of rupture:
Irritation	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.
Eye contact	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.
Skin contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.
Ingestion	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.
Information on toxicological effects	
Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing.
Numerical measures of toxicity	
Acute Toxicity The following values are calculated based on chapter 3.1 of the GHS document . ATEmix (oral) 749.00 mg/kg ATEmix (inhalation-gas) 6,174.00 mg/L ATEmix (inhalation-dust/mist) 2.06 mg/L ATEmix (inhalation-vapor) 15.09 mg/L	
Unknown acute toxicity 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)	
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)	-	-
Cobalt 7440-48-4	= 6170 mg/kg (Rat)	-	> 10 mg/L (Rat) 1 h
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg (Rabbit)	-
Potassium hydroxide 1310-58-3	= 214 mg/kg (Rat)	-	-

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

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

Section 12- Ecological Information

Ecological Toxicity	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 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 7439-89-6		96h LC50: = 13.6 mg/L (Morone saxatilis)		
Cobalt 7440-48-4		96h LC50: > 100 mg/L (Brachydanio rerio)		
Sodium hydroxide 1310-73-2		96h LC50: = 45.4 mg/L (Oncorhynchus mykiss)		
Potassium hydroxide		96h LC50: = 80 mg/L (Gambusia affinis)		

1310-58-3				

Persistence and Degradability	No information available.

Bioaccumulation

Chemical name	Log Pow
Potassium hydroxide	0.83

Section 13- Disposal Considerations

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

California Hazardous Waste Codes 141

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

Section 14 – Transport Information

DOT Proper Shipping Name Hazard Class	NOT REGULATED NOT REGULATED N/A
TDG	NOT REGULATED
MEX	NOT REGULATED
ICAO	NOT REGULATED
IATA UN number Proper Shipping Name Hazard Class	NOT REGULATED UN3496 Nickel-metal hydride Batteries 9
IMDG/IMO UN number Hazard Class Marine Pollutant	NOT REGULATED UN3496 9 Product is a marine pollutant according to the criteria set by IMDG/IMO
RID	NOT REGULATED

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 58th 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/NDSL	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/NDSL - 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

Code of Federal Regulations, Part 372

Chemical name	CAS-No	Percent %	SARA 313 - Threshold Values %
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

Acute Health Hazard No

Chronic Health Hazard No

Fire Hazard No

Sudden release of pressure hazard No

Reactive Hazard 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)

Chemical name CWA - Reportable	Quantities	CWA - Toxic Pollutants CWA - Priority	Pollutants	CWA - Hazardous
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

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)

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 1000 lb final RQ RQ 454 kg final RQ

Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ 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 7440-02-0	X	X	X	X	X
Nickel hydroxide 12054-48-7	X	X	X	X	X
Cobalt 7440-48-4	X	X	X	X	X
Sodium hydroxide 1310-73-2	X	X	X	X	
Potassium hydroxide 1310-58-3	X	X	X	X	
Cobalt hydroxide 21041-93-0			X	X	X
Manganese 7439-96-5	X	X	X	X	X
Aluminum 7429-90-5	X	X	X	X	
Cerium 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