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Report No.: MZITQF0A12299716

MSDS Report

Sample Description
& Model

ALKALINE Battery (LR6)

Applicant

SHENZHEN TCBEST TECHNOLOGY CO., LTD.

Address

5F, Building A6, Yintian Industrial Zone, Bao'an District,
Shenzhen, China

No.: MZITQF0A12299716

Code: c8c5y2p



PONY 谱尼测试
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Add: 北京市海淀区苏州街49-3号盈智大厦	上海市徐汇区杜平路680号35号楼4层	深圳市南山区创业路中兴工业城6栋1层	青岛市崂山区株洲路190号8层
Tel: (010) 82618116	(021) 64851999	(0755) 26050909	(0532) 88706866
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Tel: (022) 27360730	(0574) 87736499	(020) 89224310	



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Material Safety Data Sheet

According to ST/SG/AC.10/30/Rev.5 (GHS)

Section 1 - Chemical Product and Company Identification

Chemical product identification

Sample Description: ALKALINE Battery

Sample Model: LR6

Recommended Uses: N/A

Restrictions on use: N/A

Supplier name: SHENZHEN TCBEST TECHNOLOGY CO., LTD.

Address: 5F, Building A6, Yintian Industrial Zone, Bao'an District, Shenzhen, China

Phone number: 0755-29367589

FAX: 0755-29367689

E-mail: info@tcbest.com.cn

Emergency phone number: 0755-29367589

Section 2 - Hazards Identification

Emergency overview: N/A

Classification according to GHS

Not a dangerous substance according to GHS.

Label elements

Hazard pictogram(s): No available

Signal word: No available

Hazard statement(s): No available

Precautionary statement(s):

Prevention: No available

Response: No available

Disposal: No available

Environmental hazards: no relevant information.

Important symptoms: See Section 11 for more information.

Emergency overview: In case of accident or if you feel unwell, seek medical advice immediately. See Section 4 for more information.

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Section 3 - Composition, Information on Ingredients

Chemical characterization: Mixture

Chemical Composition	CAS No.	EC#	Weight (%)
Manganese dioxide	1313-13-9	215-202-6	40
Potassium hydroxide (Liquid)	1310-58-3	215-181-3	18
Zinc powder	7440-66-6	231-592-0	16
Steel shell	7439-89-6	231-096-4	15
Copper nail	7440-50-8	231-159-6	6
Graphite	7782-42-5	231-955-3	5

Section 4 - First Aid Measures

Description of first aid measures

General information No special measures required.

After eye contact

Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After inhalation

Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallowing

Do not induce vomiting. Get medical attention.

Personal protective equipment for first-aid responders:

No further relevant information available.

Most important symptoms/effects, acute and delayed:

No further relevant information available.

Indication of immediate medical attention and special treatment needed:

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No further relevant information available.

Section 5 - Fire Fighting Measures

Suitable extinguishing media:

Use extinguishing agent suitable for local conditions and the surrounding environment .
Such as dry powder , CO2.

Unsuitable extinguishing media:

No further relevant information available.

Specific Hazards arising from the chemical:

Special hazards arising from the substance or mixture

Battery may burst and release hazardous decomposition products when exposed to a fire situation. Batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150°C (302°F)), when damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

Specific protective actions for fire-fighters:

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

Section 6 - Accidental Release Measures

Personal precautions:

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Protective equipment:

No further relevant information available.

Emergency procedures:

Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and materials for containment and cleaning up:

All waste must refer to the United Nations, the national and local regulations for disposal.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.



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北京实验室: (010) 82618116	长春实验室: (0431) 85150908	上海实验室: (021) 64851999	深圳实验室: (0755) 26050909
青岛实验室: (0532) 88706866	大连实验室: (0411) 84650820	宁波实验室: (0574) 87736499	广州实验室: (020) 89224310
天津实验室: (022) 27360730	郑州实验室: (0371) 69350670	杭州实验室: (0571) 87219096	武汉实验室: (027) 83997127



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See Section 13 for disposal information.

Section 7 - Handling and Storage

Precautions for safe handling:

Consumption of food and beverage should be avoided in work areas.

Wash hands with soap and water before eating, drinking.

Ground containers when transferring liquid to prevent static accumulation and discharge.

Information about fire and explosion protection

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles

Store in a cool, dry, well-ventilated place.

Information about storage in one common storage facility

Keep away from heat, avoiding the long time of sunlight.

Further information about storage conditions

Keep container tightly sealed.

Specific and use

No further relevant information available.

Section 8 - Exposure Controls, Personal Protection

Control parameters

CAS No.	ACGIH	NIOSH	OSHA
1313-13-9	TLV-TWA 0.1mg/m ³ TLV-TWA 0.02mg/m ³	N/A	Peak-TWA 5mg/m ³
1310-58-3	TLV-Peak 2mg/m ³	REL-Peak 2mg/m ³	N/A
7440-66-6	N/A	N/A	PELs-TWA 5mg/m ³ PELs-TWA 15mg/m ³
7439-89-6	N/A	N/A	PEL-TWA 5mg/m ³ PEL-TWA 15mg/m ³
7440-50-8	TLV-TWA 0.2mg/m ³ TLV-TWA 1mg/m ³	RELs-TWA 1mg/m ³	PELs-TWA 5mg/m ³ PELs-TWA 15mg/m ³
7782-42-5	TLV-TWA 2mg/m ³	RELs-TWA 2.5mg/m ³	PELs-TWA 15mppcf

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Appropriate engineering controls:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Personal Protective Equipment

Respiratory protection: Wear suitable protective mask in order to reduce the respiratory system. A large number of leakage, wear chemical protective clothing, including self-contained breathing apparatus.

Hand Protection: Wear appropriate protective gloves to reduce skin contact.

Eyes Protection: Wear safety goggles or eye protection combined with respiratory protection.

Skin and Body Protection: Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

General information

Appearance:	Blue.
Form:	Cylindrical.
Odour:	Not available.
Odour threshold:	Not available.
pH:	Not available.
Melting point/freezing point:	Not available.
Initial boiling point and boiling range:	Not available.
Flash Point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Explosion Limits (vol% in air):	Not available.
Vapour pressure, kPa at 20°C:	Not available.
Vapor density:	Not available.

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Density/Relative density (water = 1):	Not available.
Solubility(ies):	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Other information:	
Voltage	1.5V

Section 10 - Stability and Reactivity

Reactivity: Data not available.

Chemical stability: Stable.

Possibility of hazardous reactions: Data not available.

Conditions to Avoid: Flames, sparks, and other sources of ignition, incompatible materials.

Incompatibilities materials: Oxidizing agents, acid, base.

Hazardous decomposition products: Carbon monoxide, carbon dioxide.

Section 11 - Toxicological Information

Acute Toxicity:

CAS No.	LC50/LD50
1313-13-9	Oral (Rat) LD50: >3478 mg/kg
1310-58-3	Oral (rat) LD50: 273mg/kg
7440-66-6	Not available.
7439-89-6	Oral (rat) LD50: 98600mg/kg
7440-50-8	Oral (rat) LD50: 5800 mg/kg
7782-42-5	Not available.

Skin irritation/corrosion:

Eye damage/irritation: No further relevant information available.

Respiratory or Skin sensitisation: No further relevant information available.

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Reproductive Cell Mutagenicity: No further relevant information available.

Carcinogenicity: No further relevant information available.

Reproductive Toxicity: No further relevant information available.

Specific target organ toxicity-Single exposure: No further relevant information available.

Specific target organ toxicity-Repeated exposure: No further relevant information available.

Aspiration hazard: No further relevant information available.

Potential Health Effects: No further relevant information available.

Inhalation: No further relevant information available.

Skin contact: No further relevant information available.

Eye contact: No further relevant information available.

Ingestion: No further relevant information available.

Section 12 - Ecological Information

Ecological Toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative Potential: No further relevant information available.

Mobility in Soil: No further relevant information available.

Other adverse effects: No further relevant information available.

Section 13 - Disposal Considerations

Disposal methods:

Recommendation:

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.



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Section 14 - Transport Information

UN Number	
IATA, IMDG, Model Regulation	N/A
UN Proper shipping name	
IATA, IMDG, Model Regulation	N/A
Transport hazard class(es)	
IATA, IMDG, Model Regulation	N/A
Packing group	
IATA, IMDG, Model Regulation	N/A
Packaging Sign	
IATA, IMDG, Model Regulation	N/A
Environmental hazards	
Marine pollutant:	No
Special precautions for user	Not applicable.

Transport information: ALKALINE Battery (LR6) is exempt from dangerous goods. It is considered non-dangerous goods by the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), IATA Special Provisions A123, International Maritime Dangerous Goods Regulations (IMDG), or the 《Recommendations on the Transport of Dangerous Goods Model Regulations》.

S.P.A123 This entry applies to Batteries, electric storage, not otherwise listed in Subsection 4.2–List of Dangerous Goods. Examples of such batteries are: alkali-manganese, zinc-carbon and nickel-cadmium batteries. Any electrical battery or battery powered device, equipment or vehicle having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent

(a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transport; and

(b) accidental activation

The words “Not Restricted” and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.

Separate batteries when shipping to prevent short-circuiting. They should be packed in

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strong packaging for support during transport.

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

CAS No.	TSCA	IECSC	DSL/NDSL	EINECS/ ELINCS/ NLP
1313-13-9	Listed	Listed	Listed DSL	Listed
1310-58-3	Listed	Listed	Listed DSL	Listed
7440-66-6	Listed	Listed	Listed DSL	Listed
7439-89-6	Listed	Listed	Listed DSL	Listed
7440-50-8	Listed	Listed	Listed DSL	Listed
7782-42-5	Listed	Listed	Listed DSL	Listed

Section 16 - Additional Information

Issue Time: 2015-02-09

Issue Department: Technical department

Modification record:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other Information:

CAS: (Chemical Abstracts Service);

EC: (European Commission);

ACGIH: (American Conference of Governmental Industrial Hygienists);

NIOSH: (US National Institute for Occupational Safety and Health);

OSHA: (US Occupational Safety and Health);

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TLV: (Threshold Limit Value)
 TWA: (Time Weighted Average);
 STEL: (Short Term Exposure Limit);
 PEL: (Permissible Exposure Level);
 REL: (Recommended Exposure Limit);
 PC-STEL: (Permissible concentration-time weighted average);
 PC-TWA: (Permissible concentration-short time exposure limit);
 LC50: (Lethal concentration, 50 percent kill);
 LD50: (Lethal dose, 50 percent kill);
 IARC: (International Agency for Research on Cancer);
 EC50: (Median effective concentration);
 BCF: (Bioconcentration Factor);
 BOD: (Biochemical oxygen demand);
 NOEC: (No observed effect concentration);
 NTP: (US National Toxicology Program);
 RTECS: (Registry of Toxic Effects of Chemical Substances);
 IATA: (International Air Transport Association);
 IMDG: (International Maritime Dangerous Goods);
 TDG: (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations);
 TOC: (Total Organic Carbon);
 TSCA: (Toxic Substances Control Act of USA);
 DSL: (the Domestic Substances List of Canada);
 NDSL: (the Non-domestic Substances List of Canada)

End of report



SAFETY DATA SHEET

For

Everwin Tech Co., Limited

Building 1, Meilan Industrial Park, No.1, Lianwei St, South Road of Dalang, Baoan Dist., Shenzhen, China

And for their product

Ni-MH Battery

Model/type reference: Nimh 12v 3000mAh

Nominal Voltage: 12V

Typical Capacity: 3300mAh

Version number: V2.0

Revision date: 5-July-2016

Prepared by: **Shenzhen NTEK Testing Technology Co., Ltd.**
Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P. R. China

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Compiled by (name+ signature) ..: Scarlett He

Approved by (+ signature): Kevin Zou


Scarlett He
Kevin Zou

Section 1- Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product Name: Ni-MH Battery

Model No.: Nimh 12v 3000mAh

Other means of identification

Synonyms: None

Recommended use of the chemical and restrictions on use

Recommended Use: Nickel Metal Hydride (NiMH) Battery

Uses advised against: No information available

Details of the supplier of the safety data sheet

Manufacturer's / Supplier Name: Everwin Tech Co., Limited

Address: Building 1, Meilan Industrial Park, No.1, Lianwei St, South Road of Dalang, Baoan Dist., Shenzhen, China

Telephone number of the manufacturer/supplier: +86-13538162740

Emergency Telephone Number (24h): +86-13538162740

E-mail address: sales01@ewtbattery.com

Section 2 – Hazards Identification


Classification

This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Carcinogenicity	Category 2
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GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Warning	
Hazard Statements	Suspected of causing cancer	
		
Appearance Black	Physical State Solid	Odor Odorless

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
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Precautionary Statements - Response	IF exposed or concerned: Get medical advice/attention
Precautionary Statements - Storage	Store locked up
Precautionary Statements - Disposal	Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	Not applicable
Unknown Toxicity	-
Other information	No information available
Interactions with Other Chemicals	No information available.

Section 3 – Composition/Information on Ingredients

Chemical Name	CAS Number	Weight-%	Trade Secret
Nickelous hydroxide	12054-48-7	30-50	*
nickel oxide	1314-06-3		*
Nickel	7440-02-0		*
Potassium Hydroxide	1310-58-3	<20	*
cobalt	7440-48-4	2.5-6.0	*
cobalt oxide	11104-61-3		*
Cobalt Hydroxide	21041-93-0		*
Sodium Hydroxide	1310-73-2	<20	*
zinc	7440-66-6	<3	*
zinc oxide	1314-13-2		*
zinc hydroxide	20427-58-1		*
Mercury	7439-97-6	0-0.0005	*
lead	7439-92-1	0-0.004	*
lead oxide	1314-41-6		*



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.
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Section 6 – Accidental Release Measures

Personal Precautions, protective equipment, and emergency procedures	Personal Precautions: Avoid contact with eyes. Other Information: Refer to protective measures listed in Sections 7 and 8.
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.
Methods and material for containment and cleaning up	Methods for Containment: Prevent further leakage or spillage if safe to do so. Methods for cleaning up: In case of rupture: Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Section 7 – Handling and Storage

Precautions for safe handling	Handling: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
Conditions for safe storage, including any incompatibilities	Storage: Keep containers tightly closed. Incompatible Products: None known based on information supplied.

Section 8 – Exposure Controls and Personal Protection

Control parameters

Exposure Guidelines

Exposure Guidelines	ACGIH TLV	OSHA PEL	NIOSH IDLH
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 oxide 11104-61-3	TWA: 0.02 mg/m ³ Co		

*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-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

<p>Appropriate engineering controls</p>	<p>Engineering Measures: Showers Eyewash stations Ventilation systems.</p>
<p>Individual protection measures, such as personal protective equipment</p>	<p>Eye/Face Protection: No special protective equipment required. Skin and Body Protection: No special protective equipment required. 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.</p>

Section 9 - Physical and Chemical Properties

<p>Physical Properties</p>	<p>Physical state: Solid</p>	
	<p>Appearance: Black and prismatic</p>	
	<p>Color: Black</p>	
	<p>Odor: Odorless</p>	
	<p>Odor Threshold: No information available</p>	
<p>Chemical Properties:</p>		
<p>Property</p>	<p>Values</p>	<p>Remarks/ Method</p>
<p>pH</p>	<p>No data available</p>	<p>None known</p>
<p>Melting / freezing point</p>	<p>No data available</p>	<p>None known</p>
<p>Boiling point / boiling range</p>	<p>No data available</p>	<p>None known</p>
<p>Flash Point</p>	<p>No data available</p>	<p>None known</p>
<p>Evaporation Rate</p>	<p>No data available</p>	<p>None known</p>
<p>Flammability (solid, gas)</p>	<p>No data available</p>	<p>None known</p>
<p>Flammability Limit in Air Upper flammability limit Lower flammability limit</p>	<p>No data available No data available</p>	
<p>Vapor pressure</p>	<p>No data available</p>	<p>None known</p>
<p>Vapor density</p>	<p>No data available</p>	<p>None known</p>

Specific Gravity	No data available	None known
Water Solubility	Insoluble in water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	0.00001	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	0.00001	None known
Explosive properties	No data available	None known
Oxidizing Properties	No data available	None known

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	No data available

Section 10 - Stability and Reactivity

Reactivity	No data available.
Chemical stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat.
Incompatible materials	None known based on information supplied.
Hazardous Decomposition Products	Carbon oxides.

Section 11 - Toxicological Information

Information on likely routes of exposure

Product Information	
Inhalation	Specific test data for the substance or mixture is not available.
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

Component Information



Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nickel hydroxide 12054-48-7			= 1200 mg/m ³ (Rat) 4h

Information on toxicological effects	Symptoms: No information available.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	<p>Sensitization: May cause sensitization of susceptible persons.</p> <p>Mutagenic Effects: Contains a known or susceptible persons.</p> <p>Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen</p>

Chemical Name	ACGIH	IARC	NTP	OSHA
Nickel hydroxide 12054-48-7	A1	Group 1	Known	X
Cobalt Hydroxide 21041-93-0	A3	Group 2B		X
Nickel 7440-02-0	A5	Group 2B		
Cobalt oxide 11104-61-3	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)
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP (National Toxicology Program)
Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	Contains a known or suspected carcinogen.
Target Organ Effects	Skin.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on	ATEmix (oral)
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chapter 3.1 of the GHS document.	ATEmix (inhalation-gas) ATEmix (inhalation-dust/mist) ATEmix (inhalation-vapor)
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Section 12 - Ecological Information

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Persistence and Degradability	No information available.
Bioaccumulation	No information available
Other adverse effects	No information available.

Section 13 – Disposal Considerations

Waste treatment methods

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

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

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel hydroxide 12054-48-7	(hazardous constituent – no waste number)			

California Hazardous Waste Codes 181

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

Chemical Name	California Hazardous Waste
Cobalt Hydroxide 21041-93-0	Toxic
Cobalt oxide 11104-61-3	Toxic

Section 14 – Transport Information

**Air transport:**

The Ni-MH BATTERY according to Special Provision A67 of IATA DGR 57th edition for transportation. The requirement for shipping these batteries by ICAO and IATA is Special Provision A67 which states: "Non-spillable batteries meeting the requirements of Packing Instruction 872 are not subject to these Regulations when carried as cargo if, at a temperature of 55°C, the electrolyte will not flow from a ruptured or cracked case. The battery must not contain any free or unabsorbed liquid. Any electrical battery or battery powered device, equipment or vehicle having the potential of dangerous evolution of heat must be prepared for transport so as to prevent:

- (a) a short circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals); and
- (b) unintentional activation.

The words "Not Restricted" and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued."

Sea transport:

The Ni-MH BATTERY according to Special Provision 963 of IMDG Code 37-14 edition for sea transportation.

UN No.: UN3496

Proper Shipping Name (PSN): BATTERIES, NICKEL-METAL HYDRIDE

Class or division: 9

Special provisions: 117 and 963

The requirement for shipping these batteries by IMO is Special Provision 963 which states:

"Nickel-metal hydride button cells or nickel-metal hydride cells or batteries packed with or contained in equipment are not subject to the provisions of this Code.

All other nickel-metal hydride cells or batteries shall be securely packed and protected from short circuit. They are not subject to other provisions of this Code provided that they are loaded in a cargo transport unit in a total quantity of less than 100 kg gross mass. When loaded in a cargo transport unit in a total quantity of 100 kg gross mass or more, they are not subject to other provisions of this Code except those of 5.4.1, 5.4.3 and column 16 of the Dangerous Goods List in chapter 3.2."

With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions.
- The International Air transport Association (IATA) Dangerous Goods Regulations.
- The International Maritime Dangerous Goods (IMDG) Code.
- The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA
- The Office of Hazardous Materials Safety within the US Department of Transportations' (DOT)
- Research and Special Programs Administration (RSPA)

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

Section 15 - Regulatory Information

International Inventories

TSCA: Complies

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

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



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

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	Weight-%	SARA 313 - Threshold Values %
Nickel hydroxide	12054-48-7	<50	0.1
Cobalt Hydroxide	21041-93-0	<6	0.1
Cobalt oxide	11104-61-3	<6	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
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 Substances
Nickel hydroxide 12054-48-7		X		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 hydroxide 12054-48-7	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Nickel hydroxide - 12054-48-7	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
Cobalt oxide 11104-61-3			X	X	X

International Regulations**Mexico****National occupational exposure limits**

Component	Carcinogen Status	Exposure Limits
Nickel hydroxide 12054-48-7(<50%)		Mexico: TWA= 0.1 mg/m ³ Mexico: STEL= 0.3 mg/m ³

*Mexico - Occupational Exposure Limits - Carcinogens***Canada****WHMIS Hazard Class**

2A- Very toxic materials.

Section 16 - Other Information

NFPA	Health Hazards 1	Flammability 0	Instability 0	Physical and Chemical Hazards - Personal Protection X
MIS	Health Hazards 1*	Flammability 0	Physical Hazard 0	
Chronic Hazard Star Legend	*=Chronic Health Hazard			

Revision Date: 5-July-2016**Revision Note:** No information available**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--