SAFETY DATA SHEET

Product Name: Premium AAA 1000mAh Nickel Metal Hydride Rechargeable Battery

436 Kato Terrace, Fremont, CA 94539 U.S.A.
Tel: 510.687.0388 Fax: 510.687.0328
www.Tenergy.com

Nickel Metal Hydride Battery

Section 1 – Chemical Product and Company Identification

Chemical product identification

Product Name:	Premium AAA 1000mAh Nickel Metal Hydride Rechargeable Battery
Recommended Uses:	Used as DC power source for personal care, vacuum cleaner, lighting, electrical tool, digital products and so on.
Restrictions on use:	N/A

Company identification

Company:	Tenergy Corporation
Address:	436 Kato Terrace, Fremont, CA, United State
Post code:	94539
E-mail:	sales@Tenergy.com
Telephone :	510-687-0388
Fax:	510-687-0328

Section 2 – Hazards Identification

Emergency overview: N/A
Classification according to GHS
Not a dangerous substance according to GHS.

Label elements

Hazard pictogram(s):	Not available
Signal word:	Not available
Hazard statement(s):	Not available

Precautionary statement(s)

Prevention:	Not available
Response:	Not available
Disposal:	Not 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
Emergency overview: N/A

Chemical name	**CAS No.**	**Formula**	**Composition**(in % by weight)
Nickel-dihydroxide	12054-48-7	$Ni(OH)_2$	15 - 22
Iron	7439-89-6	Fe	16 - 20
Nickel	7440-02-0	Ni	30 - 40
Manganese	7439-96-5	Mn	0.3 - 1.5
Lanthanum	7439-91-0	La	1.7 - 4.5
Cobalt	7440-48-4	Co	1.5 - 2.5
Potassium-hydroxide	1310-58-3	KOH	1 - 2
Polyethylene	9002-88-4	PE	0 - 0.6
Cerium	7440-45-1	Ce	0.29 - 0.9
Neodymium	7440-00-8	Nd	0 - 1
Aluminium (metal)	7429-90-5	Al	0 - 1
Sodium-hydroxide	1310-73-2	NaOH	1 - 2
Lithium-hydroxide	1310-65-2	LiOH	0.1 - 0.5
Poly tetrafluoroethylene	9002-84-0	PTFE	0 - 0.1
Cellulose, carboxymethyl ether,sodium salt	9004-32-4	CMC	0 - 0.1
Polypropylene	9003-07-0	PP	1 - 3
Styrene polymer with 1,3-butadiene	9003-55-8	SBR	0.1 - 0.5
Cobalt hydroxide	21041-93-0	$Co(OH)_2$	0.5 - 2
Zinc-hydroxide	20427-58-1	$Zn(OH)_2$	0 - 0.1
Water	7732-18-5	H_2O	0.15 - 0.23

Section 4 – First Aid Measures

Description of first aid measures
General information: No special measures required.
If eye contact
Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.
If inhalation
Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.
If skin contact
Remove contaminated clothing and shoes. Wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

If swallowing
Do not induce vomiting. Get medical attention.

Notes to the doctor:
No further relevant information available.

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Personal protective equipment for first-aid responders:
No further relevant information available.
Indication of immediate medical attention and special treatment needed.
No further relevant information available.

Section 5 – Fire Fighting Measures

Flammability:
Not available.
Extinguishing agent:
Suitable extinguishing agent:
Use extinguishing agent suitable for local conditions and the surrounding environment. Such as dry powder, CO_2.
Unsuitable extinguishing agent:
No further relevant information available.
Special fire-fighting methods:
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. 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.
Fire-fighting measures and protection 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 8for information on personal protection equipment.
See Section 13 for disposal information.

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Section 7 – Handling and Storage

Precautions for safe handling:
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. Keep away from heat, Sparks, Open flames, hot surfaces, avoiding the sunlight.
Further information about storage conditions
No further relevant information available.
Specific and use
No further relevant information available.

Section 8 – Exposure Controls, Personal Protection

Control parameters

CAS No.	ACGIH	NIOSH	OSHA
12054-48-7	TLV-TWA 0.2mg/m^3	N/A	PEL-TWA 1mg/m^3
7439-89-6	N/A	N/A	PEL-TWA 5mg/m^3 PEL-TWA 15mg/m^3
7440-02-0	TLV-TWA 1.5mg/m^3	REL-TWA 0.015mg/m^3	PEL-TWA 1mg/m^3
7439-96-5	TLV-TWA 0.1mg/m^3; TLV-TWA 0.02mg/m^3	RELs-TWA 1mg/m^3 RELs-STEL 3mg/m^3	PELs-TWA 5mg/m^3 PELs-TWA 15mg/m^3 PELs-Peak 5mg/m^3
7439-91-0	N/A	N/A	N/A
7440-48-4	TLV-TWA 0.02mg/m^3	RELs-TWA 0.05mg/m^3	PELs-TWA 0.1mg/m^3
1310-58-3	TLV-Peak 2mg/m^3	REL-Peak 2mg/m^3	N/A
9002-88-4	N/A	N/A	N/A
7440-45-1	N/A	N/A	N/A
7440-00-8	N/A	N/A	N/A
7429-90-5	TLV-TWA 1mg/m^3	RELs-TWA 5mg/m^3	PELs-TWA 5mg/m^3 PELs-TWA 15mg/m^3
1310-73-2	TLV-Peak 2mg/m^3	REL-Peak 2mg/m^3	PEL-TWA 2mg/m^3
1310-65-2	N/A	N/A	N/A
9002-84-0	N/A	N/A	N/A
9004-32-4	N/A	N/A	N/A
9003-07-0	N/A	N/A	N/A
9003-55-8	N/A	N/A	N/A
21041-93-0	TLV-TWA 0.02mg/m^3	N/A	N/A
20427-58-1	N/A	N/A	N/A
7732-18-5	N/A	N/A	N/A

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Engineering control method:
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.
Eyes Protection: Wear safety goggles or eye protection combined with respiratory protection.
Skin and Body Protection: Wear working clothing and apron.
Hand Protection: Wear appropriate protective gloves to reduce skin contact.

Section 9 – Physical and Chemical Properties

Information on basic physical and chemical properties

General information	
Form:	Cylindrical
Odour:	Odorless
pH:	Not available
Change in condition	
Melting point:	Not available
Boiling point:	Not available
Freezing point:	Not available
Flash point:	Not available
Flammability:	Not available
Ignition temperature:	Not available
Decomposition temperature:	Not available
Self-igniting:	Not available
Danger of explosion:	Not available
Explosion limits	
Lower:	Not available
Upper:	Not available
Oxidizing properties:	Not available
Vapour pressure:	Not available
Density:	Not available
Relative density:	Not available
Vapour density:	Not available
Evaporation rate:	Not available
Solubility in/Miscibility with water:	Not available
n-octanol/water partition coefficient:	Not available
Viscosity:	Not available
Dynamic:	Not available
Kinematic:	Not available

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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, lithium oxide fumes.

Section 11 – Toxicological Information

Acute toxicity:

CAS No.	LC50/LD50
12054-48-7	Oral (rat) LD50: 1500mg/kg; Oral (Rat) LD50: 1515mg/kg; Inhalation (Rat) LC50: 1200mg/m^3/4h
7439-89-6	Oral (rat) LD50: 98600mg/kg
7440-02-0	Intravenous (dog) LD50: 40mg/kg
7439-96-5	Oral (rat) LD50: 9000mg/kg
7439-91-0	Not available.
7440-48-4	Oral (rat) LD50: 6170mg/kg
1310-58-3	Oral (rat) LD50: 273mg/kg
9002-88-4	Inhalation (mouse) LC50: 12000mg/m^3/30m Oral (rat) LD50: >3000mg/kg
7440-45-1	Not available.
7440-00-8	Not available.
7429-90-5	Not available.
1310-73-2	Not available.
1310-65-2	Not available.
9002-84-0	Oral (mouse) LD50: 5000mg/kg
9004-32-4	Not available.
9003-07-0	Oral (mouse) LD50: 3200mg/kg
9003-55-8	Not available.
21041-93-0	Not available.
20427-58-1	Not available.
7732-18-5	Not available.

Skin irritation or corrosion: No further relevant information available.
Eye damage or irritation: No further relevant information available.
Respiratory or skin sensitization: No further relevant information available.
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.

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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.
Bio-accumulative 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. Avoid polluting environment during the disposal process.

Section 14 – Transport Information

UN Number	
DOT, IMDG:	3496
IATA:	N/A
UN Proper shipping name	
DOT:	Batteries, nickel-metal hydride
IMDG:	Batteries, nickel-metal hydride, MARINE PULLUTANT
IATA:	N/A
Transport hazard class(es)	
DOT, IMDG	9 (Miscellaneous dangerous substances & articles)
IATA:	N/A
Packing group	
DOT, IATA, IMDG	N/A
Environmental hazards	
Marine pollutant:	Yes (DOT) Symbol (fish and tree)
Special precautions for user:	Warning: Miscellaneous dangerous substances & articles
EMS Number:	F-A, S-I

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Transport information: Ni-MH Battery is exempt from dangerous goods. It is considered non-dangerous goods by the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) 2019 IATA DGR 60th Edition, IATA Special Provisions A199, International Martine Dangerous Goods Regulations (IMDG) (2014 Edition)

S.P.A199. The UN number UN3496 is only applicable in sea transport. Nickel-metal hydride batteries or nickel-metal hydride battery-powered devices, equipment or vehicles having the potential of a dangerous evolution of heat are not subject to these Regulations provided they are prepared for transport so as to prevent:

(a) A short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminal; 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.

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

Note: Products weighing less than 100kg in the Container (by sea).

Transport Fashion: By air, by sea.

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
12054-48-7	**Listed**	**Listed**	**Listed DSL**	**Listed**
7439-89-6	**Listed**	**Listed**	**Listed DSL**	**Listed**
7440-02-0	**Listed**	**Listed**	**Listed DSL**	**Listed**
7439-96-5	**Listed**	**Listed**	**Listed DSL**	**Listed**
7439-91-0	**Listed**	**Listed**	**Listed DSL**	**Listed**
7440-48-4	**Listed**	**Listed**	**Listed DSL**	**Listed**
1310-58-3	**Listed**	**Listed**	**Listed DSL**	**Listed**
9002-88-4	**Listed**	**Listed**	**Listed DSL**	**Listed**
7440-45-1	**Listed**	**Listed**	**Listed DSL**	**Listed**
7440-00-8	**Listed**	**Listed**	**Listed DSL**	**Listed**
7429-90-5	**Listed**	**Listed**	**Listed DSL**	**Listed**
1310-73-2	**Listed**	**Listed**	**Listed DSL**	**Listed**
1310-65-2	**Listed**	**Listed**	**Listed DSL**	**Listed**
9002-84-0	**Listed**	**Listed**	**Listed DSL**	**Listed**
9004-32-4	**Listed**	**Listed**	**Listed DSL**	**Listed**
9003-07-0	**Listed**	**Listed**	**Listed DSL**	**Listed**
9003-55-8	**Listed**	**Listed**	**Listed DSL**	**Listed**
21041-93-0	**Listed**	**Listed**	**Listed DSL**	**Listed**
20427-58-1	**Listed**	**Listed**	**Listed DSL**	**Listed**
7732-18-5	**Listed**	**Listed**	**Listed DSL**	**Listed**

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Section 16 – Additional Information

Revision Information:
Date of this revision: 2019.1.29
Training advice:
Provide adequate information, instruction and training for operators.
Data source:
Can be provided upon request.
Abbreviations and acronyms:

GHS:	Globally Harmonized System of Classification Labeling of Chemicals.
CAS:	Chemical Abstracts Service registration number.
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
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-Short Time Exposure Limit
PC-TWA:	Permissible Concentration- Time Weighted Average
LC50:	Lethal Concentration, 50 percent kill
LD50:	Lethal Dose, 50 percent kill
IARC:	International Agency for Research on Cancer
EC50:	Median Effective Concentration
BCF:	Bio-concentration Factor
BOD:	Bio-chemical Oxygen Demand
NOEC:	No Observed Effect Concentration
NTP:	US National Toxicology Program
RTECS:	Registry of Toxic Effects of Chemical Substances
ITAT	International Air Transport Association
IMDG:	International Maritime Dangerous Goods
TSCA:	Toxic Substances Control Act,
IECSC:	Inventory of existing chemical substances in China
DSL:	Domestic Substances List, The American chemical inventory.
NDSL:	The Non-domestic Substances List of Canada
EINECS:	European Inventory of Existing Commercial Chemical Substances.

Disclaimer to reader:

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage

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