



SAFETY DATA SHEET

Product Name: Nickel-Cadmium (NiCd)
Rechargeable Battery

436 Kato Terrace, Fremont, CA 94539 U.S.A.

Tel: 510.687.0388 Fax: 510.687.0328

www.Tenergy.com



IDENTITY

(As Used on Label and List)

NICD Rechargeable Battery

Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

Section I – Chemical Product and Company Identification

Chemical product identification

Product identification : Nickel-Cadmium Battery

Recommended Uses : Used as DC Power of Personal care, Vacuum cleaner, Lighting, Electrical tool , Digital products and so on.

Company identification

Manufacturers : Tenergy Corporation

Address : 436 Kato Terrace, Fremont, CA 94539, United States

Revision : 1.0

The period of validity : Jan 1 2017 – Dec 31 2017

Post code : 94539

Tel: 510-687-0388

Fax: 510-687-0328

Section II - Hazards identification

Emergency overview : N/A

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

Containing heavy metal cadmium nickel cadmium battery, has harm to the environment and the people, the battery itself is not environmental protection.

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

Important symptoms: See Section 11 for more information.

Section III - Composition/in-formation on ingredients



Material	CAS Number	%
NI	14332-32-2	23.80%
Cd	7440-43-9	26.09%
Fe	7439-89-6	20.50%
Na	7440-23-5	2.60%
Li	7439-93-2	1.23%
H2O	7732-18-5	18.09%
Co	7440-48-4	1.50%
Other	NA	6.20%

Section IV – First Aid Measures

General information: No special measures required.

First Aid Procedures

If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.

If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician.

If electrolytes vapors are inhaled, provide fresh air and seek the attention if respiratory irritation develops. Ventilate the contaminated area.

Notes to the doctor: No further relevant information available.

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 V – Fire fighting measures

Flammability:	Not available
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Extinguishing agent:	Suitable
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In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

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

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

Section VI – Accidental release measures

Steps to be Taken in case Material is Released or Spilled



Emergency procedures: Remove ignition sources, evacuate area. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container.

Batteries that are leakage should be handled with rubber gloves.

Avoid direct contact with electrolyte.

Personal precautions: Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).

Environmental precautions: Without government permission are not allowed to substances released into the environment.

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.

Section VII – Handling and Storage

Conditions for safe storage: Requirements to be met by storerooms and receptacles.

Batteries should be handled and stored carefully to avoid short circuits.

Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries.

Never disassemble a battery.

Do not breathe call vapors or touch internal material with bare hands.

Keep batteries between -30 C and 45 C for prolong storage.

Store in a cool, dry, well-ventilated place. Keep away from heat, Sparks, Open flames, hot surfaces, avoiding the sunlight.

If disassembled, crushed or exposed to fire or high temperatures, Batteries may explode or cause burns.

Section VIII – Exposure Controls / Person Protection

Occupational Limits: LTEP	Exposure	N.A.	STEP	N.A.
Respiratory Protection (Specify Type)	Protection	N.A.	Eye Protection	N.A.
Ventilation	Local Exhausts	N.A.	Special	N.A.
	Mechanical (General)	N.A.	Other	N.A.
Protective Gloves		N.A.	Work/Hygienic Practices	N.A.

Do not dispose of battery in fire – may explode.

Do not short circuit battery – may cause burns.

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 IX – Physical/Chemical Characteristics

Information on basic physical and chemical properties

Boiling Point	N.A.	Specific Gravity (H2O=1)	N.A.
Vapor Pressure (mm Hg)	N.A.	Melting Point	N.A.
Vapor Density (AIR=1)	N.A.	Evaporation Rate (Butyl Acetate=1)	N.A.
Solubility in Water	N.A.	pH	N.A.
Decomposition temperature	N.A.	Danger of explosion	N.A.
Self-igniting	N.A.	Freezing point	N.A.
Flash point	N.A.	Density	N.A.

Appearance and Odor: Cylindrical Shape. odorless

Section X – Stability and reactivity

Stability	Unstable		Reactivity: Data not available.
	Stable	√	

Incompatibility (Materials to Avoid) :

Hazardous Polymerization	May Occur		Possibility of hazardous reactions: Data not available.
	Will Not Occur	√	

Hazardous decomposition products: cadmium.

Section XI – Toxicological information

Route(s) of Entry	Inhalation	Skin	Ingestion
	N.A.	N.A.	N.A.

Health Hazard (Acute and Chronic)/ Toxicological information

In ease of electrolyte leakage, skin will be itchy when contaminated with electrolyte.

In contact with electrolyte can cause severe irritation and chemical urns.

Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.

Section XII – Ecological Information

N.A.



Section XIII - Disposal Method

Dispose of batteries according to government regulations

packaging: Disposal must be made according to official regulations. Avoid polluting environment during the disposal process.

Section XIV - Transportation Information

Tenergy's sealed Nickel cadmium batteries are not subject to dangerous goods regulation for the purpose of transportation by the U.S. Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) or the International Maritime Dangerous Goods regulations (IMDG).

U.S. Department of Transportation (DOT), Special Provision 130, i.e. "Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals)."

International Civil Aviation Administration (ICAO) and International Air Transport Association (IATA), (the 58th Edition IATA DGR (2017) with effect from 1st January 2017) . Methods to protect against short circuit include, but are not limited to, the following methods:

- a. Packing each battery or each battery-powered device when practicable, in fully enclosed inner packages made of non-conductive material (such as a plastic bag);
- b. Separating or packing batteries in a manner to prevent contact with other batteries, devices or conductive materials (e.g., metal) in the packages; and
- c. Ensuring exposed terminals or connectors are protected with non-conductive caps, non-conductive tape, or by other appropriate means.

If not impact resistant, the outer packaging should not be used as the sole means of protecting the battery terminals from damage or short-circuiting. Batteries should be securely cushioned and packed to prevent shifting which could loosen terminal caps or reorient the terminals to produce short circuits.

Terminal protection methods include but are not limited to the following:

- a. Securely attaching covers of sufficient strength to protect the terminals;
- b. Packaging the battery in a rigid plastic packaging; and
- c. Constructing the battery with terminals that are recessed or otherwise protected so that the terminals will not be subjected to damage if the package is dropped.

International Maritime Dangerous Goods Regulations (IMDG), Special Provision 304, i.e. "Batteries, dry, containing corrosive electrolyte which will not flow out of the battery case if cracked are not subject to the provisions of this Code provided the batteries are securely packed and protected against short-circuits."

Tenergy NiCd batteries are not subject to these regulations and are exempted from UN2800 because:

- They are non-spillable as they are capable of passing a vibration test and a pressure differential.
- At a temperature of 55 °C, the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow.



- When packaged for transport, their terminals are protected from short-circuits.

"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, nickel-metal hydride 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, and
- (b) accidental activation. The words "Not Restricted" and the Special Provision number must be included in the description if the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is used."

Section XV - Regulatory Information

Special requirement be according to the local regulations.

Section XVI - Other Information

Revision Date : 1.1.2017

Disclaimer :

The information above is believed to be accurate and represents the best information currently available to us. However, Tenergy makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration. This material safety data sheet provides guidelines for the safe handling and use of this product, it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.
