

EXP-LED-51

Explosion Proof LED Flashlight - Rechargeable LED Flashlight - 3 Modes - Class 1 Division 1

Product ID: 48432



Image: EXP-LED-51

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EXP-LED-51 Explosion Proof Flashlight

Listing: United States & Canada

Dimensions: 6" X 2" X 2"

Rechargeable: YES

Battery: NiCd

Lamp: C4 LED

Max Lumens: 130- 15,000 candela

High Output Runtime: 4 Hrs- 130 lumens- 15,000 candela

Low Output Runtime: 12 Hrs- 50 lumens- 5,700 candela

Dim Output Runtime: 480 Hrs- 1 lumen- 120 candela

Recharge Time: 12 hours

Light Color: White

Mounting: Handheld Flashlight

Charging Hub: Wall- Flat Surface mount

Rating/Approvals

Class I, Division 1, Groups C & D

Class I, Division 2, Groups A,B,C,D

Class II, Division 1, Groups F & G

Class III

ANSI/UL 913

CAN/CSA No. 157-92

T3C Temperature Rated - +138°C

Intrinsically Safe / Non-Incendice C1D2

Special Orders - Special Requirements

Contact us for special requirements

Toll Free: 1-800-369-6671

Intl: 1-903-270-1187

Fax: 1-903-765-7664

E-mail: sales@larsonelectronics.com

The explosion proof LED rechargeable LED flashlight is a highly versatile and effective lighting solution for operators who require a dependable source of powerful handheld illumination suitable for use in a variety of hazardous locations.

This rechargeable and explosion proof LED flashlight delivers high LED light output combined with rugged construction and a variety of lighting modes. This flashlight is rated Class 1

Division 1 and Class 2 Division 1 and produces 130 lumens of illumination using a C4 LED rated at 50,000 hours of operational life. A dual switch design allows users to toggle through three different light modes, "High", "Low" and "Dim". This LED flashlight has one of the lowest operating costs in the industry and provides an exceptional value for operators who need a portable explosion proof flashlight that is ready for use any time the need arises.



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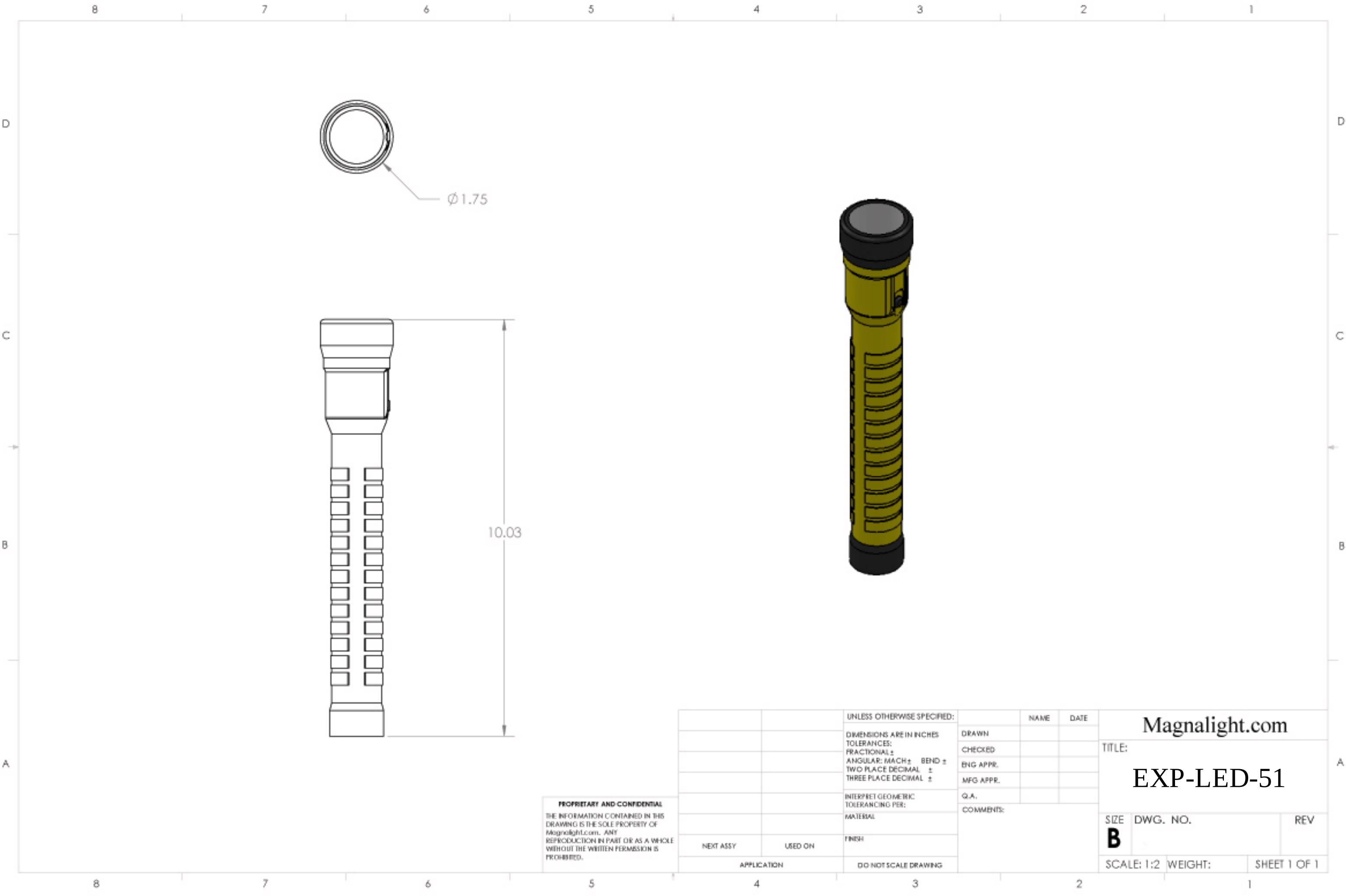


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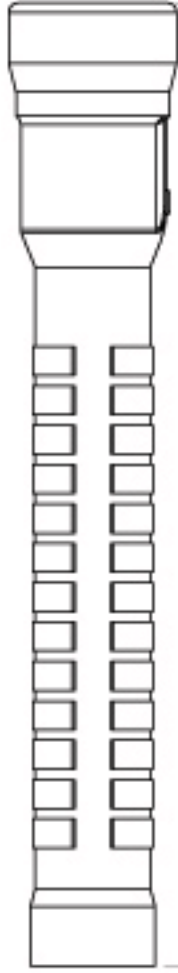
This explosion proof LED flashlight can be toggled between light modes by holding the switch down for a predetermined amount of time. Simply pressing the switch once activates the light in high mode producing a far reaching 130 lumen light beam. Holding the switch down activates the light in low mode and produces a moderate 50 lumens of useable light that will last for 12 hours. Extreme runtime is produced by holding the switch down for ten seconds to activate the light in dim mode, producing 1.3 lumens of light at 120 candela that will last for up to 480 hours.

The charging unit for this LED flashlight can be mounted to a wall or flat surface, allowing the operator to place the entire light and charging unit in the most convenient location. The charging unit acts as a holder and the user simply snaps the light in and out of its charging base as needed. This is highly convenient in areas where operators regularly enter and exit hazardous locations to check on operations or conditions and need a portable source of illumination. This light is impact resistant, requires no cords or external connections, and its rechargeable batteries and C4 LED offer long runtimes and extreme overall unit life.

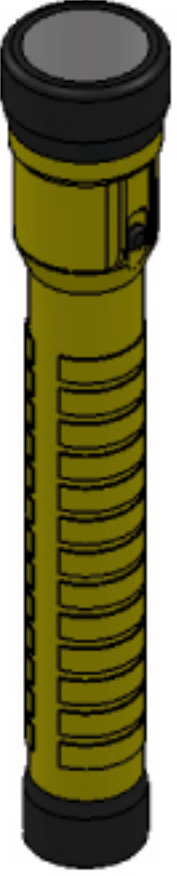
Included with this flashlight are 2 charging stands and two cords. Attach one of the charging cords to the stand to gain power, then snap the flashlight into the charging stand and the intrinsically safe flashlight will begin to charge. The 120V -240V wall plug cord (VAC) and 12V vehicle cigarette plug cord (VDC) are both included.



Ø1.75



10.03



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	Magnalight.com		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: EXP-LED-51		
		TOLERANCES:	CHECKED					
		FRACTIONAL ±	ENG APPR.					
		ANGULAR: MACH ± BEND ±	MFG APPR.					
		TWO PLACE DECIMAL ±				SIZE DWG. NO. REV B		

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Safety data sheet for chemical products (SDS)

1.PRODUCT AND COMPANY IDENTIFICATION

- Product name : Nickel Cadmium Battery
- Company name : Automotive & Industrial Systems Company of Panasonic Group
SANYO Electric Co., Ltd. Portable Rechargeable Battery Business Division
- Address : 222-1, kaminaizen, Sumoto City, Hyogo, Japan
- Telephone number : +81-799-24-4111
- Telefax number : +81-799-23-2995
- Emergency telephone number : [Weekday] +81-799-23-2881
[Night and holiday] +81-799-24-4131

2.HAZARDS IDENTIFICATION

For the battery cell, chemical materials are stored in a hermetically sealed metal case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage.

However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by misuse, the gas release vent will be operated. The battery cell case will be breached at the extreme. Hazardous materials may be released.

Moreover, if heated strongly by the surrounding fire, acrid or harmful fume may be emitted.

- Most important hazard and effects

Human health effects:

Inhalation: The electrolyte inhalation affects the respiratory tract membrane and the lungs. Cadmium fume may cause a cough, chest pain and dyspnea. Bronchitis and pneumonia will be occurred. Probably, it is carcinogen.

Skin contact: The electrolyte skin contact affects the skin seriously and may cause dermatitis.

Eye contact: The electrolyte leaked from the battery cell is strong alkali. When it goes into an eye, the cornea may be affected and it may lead to blindness.

Ingestion: The electrolyte ingestion irritates the mouth and the throat seriously results in vomiting, nausea, hematemesis, stomach pains and diarrhea.

Environmental effects:

Since a battery cell remains in the environment, do not throw out it into the environment.

- Specific hazards :

As previously described.

3.COMPOSITION / INFORMATION ON INGREDIENTS

- Substance or preparation : Preparation
- Information about the chemical nature of product :

Common chemical name / General name	CAS number	Concentration / Concentration range	Classification and hazard labelling
Nickel,Nickel Compounds	7440-02-0	15-40%	Specific hazard
Cadmium,Cadmium Compounds	7440-43-9	10-40%	Specific hazard
Cobalt Compounds	7440-48-4	0-3%	Specific hazard
Carbon Black	1333-86-4	0-1%	Specific hazard
Iron	7439-89-6	20-65%	-
Potassium Hydroxide	1310-58-3	0-5%	acute toxicity corrosivity irritant property
Sodium Hydroxide	1310-73-2		
Lithium Hydroxide	1310-65-2		

Cadmium corresponds to the Substance of Very High Concern (SVHC) of REACH regulation.

4.FIRST-AID MEASURES

Internal cell materials of an opened battery cell

- Inhalation :

Cover the victim in a blanket, move to the place of fresh air and keep quiet. Seek medical attention immediately. When dyspnea (breathing difficulty) or asphyxia (breath-hold), give artificial respiration immediately.

- Skin contact :

Remove contaminated clothes and shoes immediately. Wash the adherence or contact region with soap and plenty of water.

- Eye contact :

Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.

A battery cell and internal cell materials of an opened battery cell

- Ingestion :

Do not induce vomiting. Seek medical attention immediately.

5.FIRE-FIGHTING MEASURE

Although a battery cell is not flammability, in case of fire, move it to the safe place quickly.

The following measures are taken when it cannot be moved.

- Suitable extinguishing media: Dry sand, chemical powder fire extinguishing medium.
 - Specific hazards: Acrid or harmful fume is emitted during fire.
 - Special protective equipment for firefighters : Protective equipment written in Section 8.
-

6.ACCIDENTAL RELEASE MEASURES

Internal cell materials, such as electrolyte leaked from battery cell, are carefully dealt with according to the followings.

- Personal precautions :

Forbid unauthorized person to enter. Remove leaked materials with protective equipment written in Section 8.

- Environmental precautions: Do not throw out into the environment.

- Method of recovery and neutralization :

Dilute the leaked electrolyte with water and neutralize with diluted sulfuric acid. The leaked solid is moved to a container. The leaked place is fully flushed with water.

7.HANDLING AND STORAGE

- Handling

Technical measures

Prevention of user exposure: Not necessary under normal use.

Prevention of fire and explosion: Not necessary under normal use.

Precaution for safe handling: Do not damage or remove the external tube.

Specific safe handling advice: Never throw out cells in a fire or expose to high temperatures. Do not soak cells in water and seawater. Do not expose to strong oxidizers. Do not give a strong mechanical shock or throw down. Never disassemble, modify or deform. Do not connect the positive terminal to the negative terminal with electrically conductive material. In the case of charging, use only dedicated charger or charge according to the conditions specified by Sanyo.

- Storage

Technical measures

Storage conditions (suitable to be avoided): Avoid direct sunlight, high temperature, high humidity.

Store in cool place (temperature : -30 ~ 35 degree C, humidity : 45 ~ 85%).

Incompatible products: Conductive materials, water, seawater, strong oxidizers and strong acids

Packing material (recommended, not suitable): Insulative and tear-proof materials are recommended.

8.EXPOSURE CONTROLS / PERSONAL PROTECTION

• Engineering measures :

No engineering measure is necessary during normal use. In case of internal cell materials' leakage, the information below will be useful.

• Control parameters

Common chemical name / General name	ACGIH(2013)	
	TLV-TWA	BEI
Nickel,Nickel Compounds	(As Ni) Metal : 1.5mg/m ³ Soluble compounds : 0.1mg/m ³ Insoluble compounds : 0.2mg/m ³	-
Cadmium,Cadmium Compounds	(As Cd) Simple substance : 0.01mg/m ³ Compounds : 0.002mg/m ³	In urine : 5 micro g/g In blood : 5 micro g/l
Cobalt Compounds	(As Co) 0.02mg/m ³	In urine : 15 micro g/l In blood : 1 micro g/l
Carbon Black	3.5mg/m ³	-
Potassium Hydroxide	-	-
Sodium Hydroxide	-	-
Lithium Hydroxide	0.025mg/m ³	-

ACGIH: American Conference of Governmental Industrial Hygienists, Inc.

TLV-TWA: Threshold Limit Value-time weighted average concentration

BEI: Biological Exposure Indices

• Personal protective equipment

Respiratory protection: Protective mask

Hand protection: Protective gloves

Eye protection: Protective glasses designed to protect against liquid splashes

Skin and body protection: Working clothes with long sleeve and long trousers

- A battery cell is not applied to Toxic Substances Control Act (TSCA), because it is not a chemical substance but an article.

9.PHYSICAL AND CHEMICAL PROPERTIES

• Appearance

Physical state: Solid

Form: Cylindrical

Color: Metallic color (without tube)

Odor: No odor

• pH : NA

• Specific temperatures/temperature ranges at which changes in physical state occur :

There is no useful information for the product as a mixture.

• Flash point : NA

• Explosion properties : NA

• Density : about 2.4~4.0g/cm³

• Solubility ,with indication of the solvent(s) : Insoluble in water

10.STABILITY AND REACTIVITY

• Stability : Stable under normal use

• Hazardous reactions occurring under specific conditions

By misuse of a battery cell or the like, oxygen or hydrogen accumulates in the cell and the internal pressure rises. These gases may be emitted through the gas release vent. When fire is near, these gases may take fire.

When a battery cell is heated strongly by the surrounding fire, acrid or harmful fume may be emitted.

• Conditions to avoid : Direct sunlight, high temperature and high humidity

• Materials to avoid : Conductive materials, water, seawater, strong oxidizers and strong acids

• Hazardous decomposition products: Acrid or harmful fume is emitted during fire.

11. TOXICOLOGICAL INFORMATION

There is no data available on the product itself.
(in case of electrolyte leakage from the battery)

Cadmium, Cadmium Compounds

- Acute toxicity:
 - oral GHS: Category 4 (Swallowing is harmful.)
 - skin Unknown.
 - inhalation (dust) GHS: Category 1 (it is dangerous in the life when inhaling.)
- Skin corrosivity : Unknown.
- Serious damage and irritant property for eyes: Unknown.
- Respiratory or skin sensitization: Unknown.
- Germline mutagenicity:
 - GHS: Category 2
 - The hereditary disorder might be caused.
- Carcinogenicity:
 - GHS: Category 1A
 - ACGIH : A2 – Suspected human carcinogen
 - NIOSH : potential occupational carcinogen
 - NTP : Known to be a human carcinogen
 - IARC : Group 1 carcinogenic to human
- Reproduction Toxicity :
 - GHS: Category 2
 - Harmful effects on reproductive capacity or fetus might be exerted.
- Certain target organ/ Systemic toxicity (single exposure):
 - GHS: Category 1
 - Damage of lungs and the respiratory organ is caused.
 - Overexposure causes the pulmonary disorder.
- Certain target organ/ Systemic toxicity (repeated exposure):
 - GHS: Category 1
 - The disorder of the kidney, lungs, blood, bone, and respiratory organ is caused by long-term or repeated exposure.

Potassium Hydroxide

- Acute toxicity:
 - oral GHS: Category 3. Harmful if swallowed.
 - skin GHS: It is not possible to classify.
 - inhalation (steam) GHS: It is not possible to classify.
 - inhalation (dust) GHS: It is not possible to classify.
 - Skin corrosivity : GHS: Category 1B.
 - Serious chemical wound of the skin and damage of eyes is caused.
 - Serious damage and irritant property for eyes: GHS: Category 1.
 - Respiratory or skin sensitization:
 - Respiratory sensitization: GHS: It is not possible to classify.
 - Skin sensitization: GHS: out of Category.
 - Germline mutagenicity : GHS: out of Category.
 - Carcinogenicity : GHS: It is not possible to classify.
 - Reproduction Toxicity : GHS: It is not possible to classify.
 - Certain target organ/ Systemic toxicity (single exposure):
 - GHS: Category 1.
 - The disorder of the respiratory system is caused.
 - Certain target organ/ Systemic toxicity (repeated exposure)
 - GHS: It is not possible to classify.
-

12.ECOLOGICAL INFORMATION

- Persistence/degradability :
Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.
 - Bioaccumulation :
Cadmium bioaccumulation occurs in plants and marine food in human food chain.
-

13.DISPOSAL CONSIDERATIONS

- Recommended methods for safe and environmentally preferred disposal :
Product (waste from residues)
Do not throw out a used battery cell. Recycle it through the recycling company.
 - Contaminated packaging
Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates them, dispose them as industrial wastes subject to special control.
-

14.TRANSPORT INFORMATION

This battery doesn't correspond to dangerous article of the United Nations transportation regulations. Moreover, this article doesn't correspond to dangerous article to which transportation is restricted by the following decree and guideline.

- TECHNICAL INSTRUCTINS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR(ICAO)
- IATA Dangerous Goods Regulations(IATA)
- INTERNATIONAL MARITIME DANGEROUS GOODS CODE(IMO)
- code of federal regulations(U.S.DOT)

However, it is necessary to obey the IATA Dangerous Goods Regulations(A123).

In the case of transportation, confirm no leakage and no spillage from a container. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a cell. Take the protection measures not short-circuited.

Moreover, do not damage or remove the external tube. Never throw out cells in a fire or expose to high temperatures. Do not soak cells in water and seawater. Never disassemble, modify or deform. Avoid direct sunlight, high temperature, high humidity.

15.REGULATORY INFORMATION

- Regulations specifically applicable to the product :
Wastes Management and Public Cleaning Law (Japan)
Law for Promotion Effective Utilization of Resources (Japan)
Mercury-containing and Rechargeable Battery Management Act (USA)
Commission Directive 2006/66/EC (EU)
Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (EU)
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16.OTHER INFORMATION

- The information contained in this Safety data sheet is based on the present state of knowledge and current legislation.
 - This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.
-

• Reference

Chemical substances information: Japan Advanced Information center of Safety and Health
International Chemical Safety Cards (ICSCs):

International Occupational Safety and Health Information Center (CIS)

2013 TLVs and BEIs : American Conference of Governmental Industrial Hygienists (ACGIH)

NIOSH CARCINOGEN LIST: National Institute for Occupational Safety and Health (NIOSH)

The Ninth Report on Carcinogen: National Toxicology Program (NTP)

IARC Monographs Program on the Evaluation of Carcinogenic Risks to Humans:

International Agency for Research on Cancer (IARC)

Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

National Institute of Technology and Evaluation (NITE)

Dangerous Goods Regulations – 55th Edition Effective 1 January 2014: International Air Transport Association (IATA)

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Prepared and approved by

Automotive & Industrial Systems Company of Panasonic Group

SANYO Electric Co., Ltd.

Portable Rechargeable Battery Business Division

Cadnica Business Unit

Engineering Group



Frequently Asked Questions (FAQ)

There are no Faqs