

B001 Alkaline Battery Pack

PRODUCT NAME : Pulsarlube Alkaline Battery Pack	Type No.: B001	Volts : DC 4.5V
TRADE NAMES : Alkaline Battery Pack	Approximate Weight : 84.5g	
CHEMICAL SYSTEM : Alkaline-Manganese Dioxide	Designed for Recharge : <u>No</u>	

This Article Information Sheet (AIS) provides relevant battery information to retailers, consumers, OEMs and other users requesting a GHS-compliant SDS. Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria is not designed or intended to be used to classify the physical, health and environmental hazards of an article. Branded consumer batteries are defined as electro-technical devices. The design, safety, manufacture, and qualification of Energizer and Rayovac branded consumer batteries follow ANSI and IEC battery standards

1. MANUFACTURER INFORMATION

Pulsarlube USA, Inc. 1480 Howard Street, Elk Grove Village, IL 60007, USA	Telephone Number for Information: Tel.: +1 (847) 593-5300 Fax : +1 (847) 593-5303
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Emergency telephone number +1 (847) 593-5300

2. HAZARDS IDENTIFICATION

GHS classification: N/A

Signal Word: N/A

Hazard Classification: N/A

Not applicable to Batteries which are classified as Articles

Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria are not designed or intended to be used to classify the physical, health and environmental hazards of an article.

Ingestion: Contents of an open battery can cause respiratory irritation.

Inhalation: Contents of an open battery can cause respiratory irritation.

Skin Contact: Contents of an open battery can cause severe irritation

3. Composition / Information

The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

(Based on the battery)

Alkaline Manganese Dioxide-Zinc have zero added mercury

MATERIAL OR INGREDIENT	CAS #	%/wt.
Graphite	7782-42-5	2-6

PSDS (Product Safety Data Sheet)

Rev 4

Manganese Dioxide	1313-13-9	30-45
Potassium Hydroxide	1310-58-3	4-8
Zinc	7440-66-6	12-25
Non-Hazardous Components Steel	65997-19-5	18-22
Water, Paper, Plastic and Other		Balance

4. FIRST AID MEASURES

Ingestion : Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (800-498-8666) day or night.

Skin Contact : In the even that a battery ruptures, flush exposed skin with flowing lukewarm water for a minimum of 15 minutes. Get immediate medical attention for eyes. Wash skin with soap and water.

5. FIRE FIGHTING MEASURES

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

6. ACCIDENTAL RELEASE MEASURES

Not applicable to Batteries which are classified as Articles

TO CONTAIN AND CLEAN UP LEAKS OR SPILLS : In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container.

REPORTING PROCEDURE : Report all spills in accordance with Federal, State and Local reporting requirement.

7. HANDLING AND STORAGE

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

Mechanical Containment: Designers of any water or air-tight device should be aware of the normal evolution of hydrogen gas from alkaline batteries. This gas must be either absorbed or allowed to escape to avoid a potential safety issue.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy through heating, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

Soldering directly to a battery is not recommended. If welding to the battery is required, consult your Energizer sales representative for proper precautions to prevent seal damage or short circuit.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Labeling: The label acts as an electrical insulation for the battery can. Damage to the label can increase the potential for a short circuit.

WARNING: Do not install backwards, charge, put in fire, or mix with other battery types as it may explode or leak causing injury. Replace all batteries at the same time.

PSDS (Product Safety Data Sheet)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Not applicable to Batteries which are classified as Articles

In case of rupture or leakage use hand protection. Avoid contact with skin and eyes

9. PHYSICAL AND CHEMICAL PROPERTIES

Not applicable to Batteries which are classified as Articles

10. STABILITY AND REACTIVITY

STABLE OR UNSTABLE: Stable

INCOMPATIBILITY (MATERIALS TO AVOID): Not Applicable to articles.

HAZARDOUS DECOMPOSITION PRODUCTS: Not Applicable to articles.

DECOMPOSITION TEMPERATURE (0°F): Not Applicable to articles.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Avoid electrical shorting, puncturing or deform

11. TOXICOLOGICAL INFORMATION

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)	2 mg/m ³ TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m ³ Ceiling (as Mn)	0.2 mg/m ³ TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m ³ Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m ³ TWA PNOR* (total dust) 5 mg/m ³ TWA PNOR* (respirable fraction)	10 mg/m ³ TWA PNOC** (inhalable particulate) 3 mg/m ³ TWA PNOC** (respirable particulate)	12-25
Non-Hazardous Components Steel iron CAS# 65997-19-5	None established	None established	18-22
Water, Paper, Plastic and Other	None established	None established	Balance

12. ECOLOGICAL INFORMATION

Dispose of properly when discharged. Use a recycling outlet if available. Those collecting batteries should follow state and federal regulations.

Partially discharged damaged batteries can overheat and cause fires in the presence of other combustible materials.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.

14. TRANSPORT INFORMATION

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for Energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

For emergency information call ChemTel 1-800-526-4727 (North America) or 1-314-985-1511 (International)

15. REGULATORY INFORMATION

Applicable Battery Industry Standards

North America Standards	ANSI C18.1 Part 1	ANSI C18.1 Part 2	ANSI C18.4
International Standards	IEC 60086-1	IEC 60086-2	IEC 60086-5

15.1 battery

1. SARA/TITLE III: As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.
2. USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996: No mercury added
3. European Battery Regulation: Energizer batteries are compliant with all aspects of the Directive that are in effect today

15.2 General

1. CPSIA 2008: Exempt
2. US CPSC FHSA (16 CFR 1500): Not applicable since batteries are defined as articles
3. USA EPA TSCA (40 CFR 707.20): Not applicable since batteries are defined as articles
4. USA EPA RCRA (40 CFR 261): Classified as non-hazardous waste per ignitable, corrosive, reactive or toxicity testing
5. California Prop 65: No warning required
6. DTSC Perchlorate labeling: No warning required
7. EU REACH SVHC: No REACH listed substances of very high concern are present above 0.1% w/w.

15.3 Article Definitions

1. OSHA Hazard Communication Standard, Section 1910.1200(c)

16. OTHER INFORMATION

1) Source of the data

(1) Battery manufacturer's information : PSDS(PRODUCT SAFETY DATA SHEET) Data

2) The first creation date : 2015.01.07

3) The number of times, and the final revision date : Revision times 4

The final revision date: 2024.04.03

Pulsarlube has prepared copyrighted Product Safety Datasheets to provide information on the different Pulsarlube battery systems. As defined in OSHA Hazard Communication Standard, Section 1910.1200 (c), Pulsarlube Alkaline battery Packs are manufactured articles, which do not result in exposure to a hazardous chemical under normal conditions of use. The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, Pulsarlube, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

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1. Document information

Document Name	B001 Alkaline Battery Pack
Document ID	PABP – B001
Issue Date	16-Apr-2010
Version	4
Last Revision	30-4-2024

2. Company information

Pulsarlube USA, Inc. 1480 Howard Street, Elk Grove Village, IL 60007, USA	Telephone Number for Information: Tel.: +1 (847) 593-5300 Fax : +1 (847) 593-5303
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Emergency telephone number +1 (847) 593-5300

3. Article information

Description	Pulsarlube Alkaline Battery Pack (Use Duracell Battery)
USE	Single Point Lubricator
Principles of Operation	A battery powers a device by converting stored chemical energy into electrical energy

4. Article Construction

Applicable Battery Industry Standards	ANSI C18.1M Part 1, ANSI C18.1M Part 2, ANSI C18.4M, IEC 60086-1, IEC 60086-2, IEC 60086-5
Electro-technical System	Alkaline Manganese Dioxide
Electrode - Negative	Zinc (CAS # 7440-66-6); 10-25%
Electrode - Positive	Manganese Dioxide (CAS # 1313-13-9); 35-40%; Nickel Compounds, Proprietary; 0-6%
Electrolyte	Alkali Metal Hydroxide (aqueous potassium hydroxide - CAS # 1310-58-3); 5-10%
CAN - NA/Europe/China	Nickel Cobalt Plated Steel or Nickel Plated Steel (CAS # 7440-02-0); 8-15%
Other Non-Active Materials	10-15%
Declarable Substances (IEC 62474 Criteria 1)	None

PSDS (Product Safety Data Sheet)

Mercury Free Battery
(ANSI C18.4M <5ppm) Yes

6. . Health & Safety

Ingestion/Small Parts Warning	Required for Small Cell or Battery (Sizes: AAA and Specialty Cells): Keep away from children. If swallowed, consult a physician immediately.
Normal Conditions of Use	Exposure to contents inside the sealed battery will not occur unless the battery leaks, is exposed to high temperatures, or is mechanically abused.
Note to Physician	A damaged battery will release concentrated and caustic potassium hydroxide.
First Aid - If swallowed	Do not induce vomiting. Seek medical attention immediately. For information on treatment, call the National Battery Ingestion Hotline (telephone numbers for the USA and Canada are provided below).
Poison Center/North America	USA/Canada Calls Only: 1-800-498-8666 (Toll Free) [24-Hour National Battery Ingestion Hotline]
First Aid - Eye Contact	Flush with water for at least 15 minutes. Seek medical care if irritation persists.
First Aid - Skin Contact	Remove contaminated clothing. Wash skin with soap and water. Seek medical care if irritation persists
First Aid - Inhalation	Remove to fresh air
Battery Safety Standards & Testing	Alkaline batteries meet the requirements of ANSI C18. 1M Part 2 and IEC 60086-5. These standards specify tests and requirements for alkaline batteries to ensure safe operation under normal use and reasonably foreseeable misuse. The test regimes assess three conditions of safety. These are: 1-Intended use simulation: Partial use, vibration, thermal shock, and mechanical shock 2-Reasonably foreseeable misuse: Incorrect installation, external short-circuit, free fall (userdrop), over-discharge, and crush 3-Design consideration: Thermal abuse, mold stress
Precautionary Statements	CAUTION: Batteries may explode or leak, and cause burn injury, if recharged, disposed of in fire, mixed with a different battery type, inserted backwards or disassembled. Replace all used batteries at the same time. Do not carry batteries loose in your pocket or purse. Do not remove the battery label. Keep small batteries (i.e., AAA) away from children. If swallowed, consult a physician at once.

6. Fire Hazard & Firefighting

Fire Hazard	Batteries may rupture or leak if involved in a fire
Extinguishing Media	Use any extinguishing media appropriate for the surrounding area
Fires Involving Large Quantities of Batteries	Large quantities of batteries involved in a fire will rupture and release caustic potassium hydroxide. Firefighters should wear self-contained breathing apparatus and protective clothing

7. Handling & Storage

Handling Precautions	Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly. Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions.
Storage Precautions	Store batteries in a dry place at normal room temperature. Refrigeration does not make them last longer.
Spills of Large Quantities of Loose Batteries (unpackaged)	Notify spill personnel of large spills. Irritating and flammable vapors may be released from leaking or ruptured batteries. Spread batteries apart to stop shorting. Eliminate all ignition sources. Evacuate area and allow vapors to dissipate. Clean-up personnel should wear appropriate PPE to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in appropriate container for disposal. Remove any spilled liquid with absorbent material and contain for disposal.

PSDS (Product Safety Data Sheet)

8. Disposal Considerations (GHS Section 13)


Collection & Proper Disposal	Dispose of used (or excess) batteries in compliance with federal, state/provincial and local regulations. Do not accumulate large quantities of used batteries for disposal as accumulations could cause batteries to short-circuit. Do not incinerate. In countries, such as Canada and the EU, where there are regulations for the collection and recycling of batteries, consumers should dispose of their used batteries into the collection network at municipal depots and retailers.
USA EPA RCRA (40 CFR 261)	Classified as non-hazardous waste (not ignitable, corrosive, reactive or toxic). Federal Universal Waste Regulations (40 CFR 273) do not apply. State requirements may be more stringent than Federal.
California Universal Waste Rule (Cal. Code Regs. Title 22, Div. 4.5, Ch. 23)	California prohibits disposal of batteries as trash (including household trash).
Vermont Primary Battery Stewardship Law (ACT 139)	In Vermont, consumers must recycle alkaline batteries. For information, contact http://www.call2recycle.org .

9. Transport Information (GHS Section 14)

Regulatory Status	Not regulated by IMO IMDG/Not classified by IMO IMDG/the substance is not subject to IMO IMDG. Alkaline batteries (sometimes referred to as "Dry Cell" or "household" batteries) are not listed or regulated as dangerous goods under IATA Dangerous Goods Regulations, ICAO Technical Instructions, IMDG Code, UN Model Regulations, U.S. Hazardous Materials Regulations (49 CFR), and UNECE ADR.
UN Identification Number/ Shipping Name Special Provision (SP) Conformance	None - Not Required Special regulatory provisions require batteries to be packaged in a manner that prevents the generation of a dangerous quantity of heat and short circuits. Shippers can prepare batteries by taping the terminals, individually packaging batteries, or otherwise segregating the batteries to prevent risk of creating a short circuit. Batteries shipped in original unopened Duracell packaging is compliant
US DOT SP Air Transport IATA 64th Edition, ICAO	49 CFR 172.102 Special Provision 130 Special Provision A123 NOTE: The words "NOT RESTRICTED" and "SPECIAL PROVISION A123" must be included on the description of the substance on the Air Waybill, when air way-bill is issued.
Passenger Air Travel Vessel Travel (IMDG/IMO)	No restrictions Not regulated by IMO IMDG/Not classified by IMO IMDG/the substance is not subject to IMO IMDG.
Emergency Transportation Hotline	CHEMTREC 24-Hour Emergency Response Hotline Within the United States call +1 (847) 593-5300

10. Regulatory Information (GHS Section 15)

10a. Battery Requirements

USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996	During the manufacturing process, no mercury is added.
EU Battery Directive 2006/66/EC & amendment 2013/56/EU	Compliant with marking and substance restrictions for mercury (<0.0005%); cadmium (<0.0020%) and lead (<0.0040%). Global labels are marked with the special collection symbol and the EU qualifier in accordance with EU Battery Directive 2006/66/EC, Article 11, Paragraph 1 on batteries and accumulators and waste batteries and accumulators (Annex II).
P.R.C. Provision on Mercury Content Limitation for Batteries (GB 8897.5- 2013, MOD, Section 9.1(e))	

PSDS (Product Safety Data Sheet)

P.R.C. Mercury Free Battery
(GB 24427-2021) < 1ppm Yes

10b. General Requirements

USA CPSIA 2008 (PL. 11900314)	Exempt
USA CPSC FHSA (16 CFR 1500)	Consumer batteries are not listed as a hazardous product
USA EPA TSCA Section 13 (40 CFR 707.20)	For customs clearance purpose, batteries are defined as an "Article"
USA EPA RCRA (40 CFR 261)	Classified as non-hazardous waste (not ignitable, corrosive, reactive or toxic). Federal Universal Waste Regulations (40 CFR 273) do not apply. State requirements may be more stringent than Federal.
California Prop 65	No warning required per 3rd party assessment.
CANADA Products Containing Mercury Regulations SOR/20140254	Mercury free
EU REACH REGULATION (EC) NO. 1907/2006 and REACH SVHC	Regulated as an "article." No listed SVHC substances are present (>0.1% w/w) in accordance with ECJ article definition of 10 September 2015. This SVHC communication is based on the best available information to us. Duracell is managing compliance with EU REACH as part of our daily quality, safety, and regulatory activities. The Candidate List of SVHC's is updated approximately bi-annually and Duracell will update this declaration accordingly if the updated SHVC list affects the assessment herein.
EU REACH Article 31	SDS is not required for consumer alkaline batteries.

10c. Regulatory Definitions - Articles

USA OSHA	29 CFR 1910.1200(b)(6)(v)
USA TSCA	40 CFR 704.3; 710.2(3)(c); and [19 CFR 12.1209a]
EU REACH	Title 1 - Chapter 2 - Article 3(3)
GHS	Section 1.3.2.1

11. Other Information

11a. Certification & 3rd Party Approvals

Note:	UL Listing applies to all 9V and only AA manufactured in LaGrange USA and China
UL (UTGT2.S50939 Single Multiple Station Smoke Alarms - Component)	AA, 9V Certification Standard: ANSI/UL 217 Single & Multiple Station Smoke Alarms

11b. AIS Hazard Communication Approaches (consulted in developing this document):

Globally Harmonized System (GHS)	GHS SDS requirements and classification criteria do not apply to articles or products (such as batteries) that have a fixed shape, which are not intended to release a chemical. The article exemption is found in Section 1.3.2.1.1 of the GHS and reads: The GHS applies to pure substances and their dilute solutions and to mixtures. "Articles" as defined by the Hazard Communication Standard (29 CFR 1900.1200) of the OSHA of the USA, or by similar definition, are outside the scope of the system."
Joint Article Management Promotion Consortium JAMP	JAMP is a Japanese Industry Association who developed the concept of an Article Information Sheet as a supply chain tool to share and communicate chemical information in articles. The AIS authoring process is based on "declarable" substances to meet global regulatory requirements as well as substances to be reported by GADSL, JIG, etc.
IEC 62474 Ed. 1.0 B:2012 Material Declaration for Products of and for the Electro-technical Industry	An international standard that came into effect in March 2012 concerning declaration for electrical and electronic products. IEC 6274 replaces the defunct Joint Industry Guide – Material Declaration for Electro-technical Products (JIG-101-Ed 4.1 (May 21, 2012)

PSDS (Product Safety Data Sheet)

IEC 62474 Database – Publically available online (maintained by TC11: Environmental Standardization for electrical and electronic products and systems. ANSI C18.4M-2017 Portable Cells and Batteries - Environmental ANSI Z 400.1/Z19.1 (2010)

The general principle for a substance to be included in the database as a declarable substance is: 1) existing national laws or regulations in an IEC member country that are relevant to Electro-technical products and that prohibit or restrict substances, or that have a labeling, communication, reporting or notification requirement, and 2) applying IEC 62474 criteria results in identification of declarable substance.

This standard provides regulatory guidance and a template to author an article information sheet for a portable consumer battery. See Annex (informative) C.2 Safety Data Sheets and Annex E (Informative) E. 2 General.

2.1 Scope: Applies to preparation of SDSs for hazardous chemicals used under occupational conditions. Does not address how the standard may be applied to articles. It presents basic information on how to develop and write a SDS. Additional information is provided to help comply with state and federal environmental and safety laws and regulations. Elements of the standard may be acceptable for International use

16. OTHER INFORMATION

1) Source of the data

(1) Battery manufacturer's information : PSDS(PRODUCT SAFETY DATA SHEET) Data

2) The first creation date : 2010.04.16

3) The number of times, and the final revision date : Revision times 4
The final revision date: 2024.04.03

Pulsarlube has prepared copyrighted Product Safety Datasheets to provide information on the different Pulsarlube battery systems. As defined in OSHA Hazard Communication Standard, Section 1910.1200 (c), Pulsarlube Lithium battery Packs are manufactured articles, which do not result in exposure to a hazardous chemical under normal conditions of use. The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, Pulsarlube USA, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.