



PSDS – Product Safety Data Sheet

Lithium Coin Batteries

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|---|--|---|---|--|
| Product Name | Duracell Lithium Coin | | | |
| Chemical System | Lithium Manganese Dioxide | | | |
| Description | Duracell Branded Consumer Lithium Battery | | | |
| Product Category | Electro-Technical Device | | | |
| Use | Portable power source for electronic devices. | | | |
| Physical Description (IEC Designation) | Sizes: 1220, 1616, 1632, 2016, 2025, 2032, 2430, 2450, 2477 | | | |
| | CR (1220, 1616, 1632, 2016, 2025, 2032, 2430, 2450, 2477) | | | |
| Principles of Operation | A battery powers a device by converting stored chemical energy into electrical energy. | | | |
| Representative Product Images |  |  |  | |
| | Retail | Bulk | | |
| Document ID | PSDS – Li Coin_Australia | | | |
| Date Prepared | 2/1/2022 | | | |
| Preparer | Product Safety & Regulatory | | | |

This Product Safety Data Sheet (PSDS) provides relevant battery information to retailers, consumers, OEMs, and other users requesting a GHS-compliant PSDS. Articles, such as batteries, are exempt from GHS PSDS 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 branded consumer batteries follow ANSI and IEC battery standards. This document is based on principles set forth in the following hazard communication approaches ANSI Z-400.1, GHS, JAMP AIS, and IEC 62474.

Section 1: MANUFACTURER'S INFORMATION

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|----------------------------------|--|
| Manufacturer's Name and Address | Duracell Australia Pty. Ltd. 49 Industrial Road, Unaderra, NSW 2525 Australia Duracell (China) Ltd. Hongtu High & New Technology Development Zone, Nan Cheng District, Dongguan, 523080 Guangdong, China Duracell (Jiangxi) Technologies Co., Ltd. No. 819 Factory, Huangtang East Street, Linkong Economic Zone, Nanchang City, Jiangxi Province, China Duracell US Operations, Inc. 14 Research Dr, Bethel, CT 06801, USA |
| | Australia Telephone +61 2 4271 6111 |
| Consumer Relations Phone numbers | Australia – 1800239901 New Zealand – 0800 44 6869 |



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| | China - 4008850883 |
| Global Website | www.duracell.com |

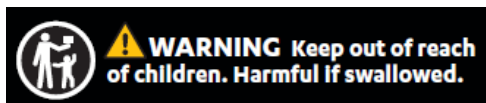
Section 2: HAZARD IDENTIFICATION

2.1 GHA Pictograms: NONE

2.2 GHS Signal Word: NONE

2.3 HAZARDS: Battery may explode or leak when heated, disassembled, short-circuited, recharged or exposed to fire or high temperature, or inserted incorrectly. Keep coin batteries out of reach of children.

Labeling: Required for Small Cell or Battery: Keep away from children. If swallowed, consult a physician immediately.




GHS classification: None required according to ranking criteria. PSDS requirements and GHS classification criteria do not apply to articles or products (such as batteries) that have a fixed shape and are not intended to release a chemical. Article exemption is found in 274 of the NSW Work Health and Safety Act 2011 Section 1.3 and states: The GHS applies to pure substances, their diluted solutions and mixtures.

Section 3: COMPOSITION

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| Applicable Battery Industry Standards | ANSI C18.3M Part 1, ANSI C18.3M Part 2, ANSI C18.4, IEC 60086-1, IEC 60086-2, IEC 60086-4 |
| Description | Branded Consumer Battery – Lithium Manganese Dioxide |

| COMPONENTS | INGREDIENTS | CAS NUMBER | Amount |
|------------------------------|--------------------------------|------------|----------|
| Electrode – Negative | Lithium Alloy | 7439-93-2 | 0.5-6% |
| Electrode – Positive | Manganese Dioxide | 1313-13-9 | 12-50% |
| Electrolyte | Organic Electrolyte | | 2.5-7% |
| | 1,2Dimethoxyethane solvent | 110-71-4 | 1.5-3.5% |
| | Lithium Perchlorate Salt | 7791-03-9 | 0.2-0.7% |
| Cathode | Polytetrafluoroethylene (PTFE) | 9002-84-0 | 0.1-1% |
| Bitterant | Denatonium benzoate | 3734-33-4 | 0.1-1% |
| Can | Nickel-plated Steel | | 8-15% |
| Other Non-Reactive Materials | | | 10% |

COMPLIANCE

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| Declarable substances (IEC 62474 Criteria 1) | 1,2-Dimethoxyethane (CAS#110-71-4) |
| Mercury Free Battery (ANSI C18.4M <5ppm) | No Mercury |
| P.R.C. Provision on Mercury Content Limitation for Batteries (GB 8897.5-2005, MOD, Section 9.1(e)) | No Mercury added.  |



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| | Yes |
| P.R.C. Mercury Free Battery (GB 24427-2009) < 1ppm | Yes, No Mercury Added  |
| Small Cell or Battery (ANSI C18.1M Part 2; IEC 60086-4) | Lithium coin batteries fit inside a specially designed test cylinder 2.25 inches (57.1 mm) long by 1.25 inches (31.70 mm) wide. |

Section 4: FIRST AID MEASURES

(In case of electrolyte leakage from the battery.)

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| Eye Contact | Flush thoroughly with copious amounts of running water for at least 15 minutes. Hold eyelids open to assure thorough flushing. Seek immediate medical attention. |
| Skin Contact | Immediately remove contaminated clothing and shoes while flushing with water. Continue to flush exposed skin with water for at least 15 minutes. Seek medical attention if irritation develops and persists. Launder contaminated clothing before reuse and discard shoes and other items that cannot be decontaminated. |
| Ingestion | Required for Small Cell or Battery: Keep away from children. If swallowed, consult a physician immediately. |
| Note to Physician | A damaged battery will release concentrated and caustic potassium hydroxide. For information on battery identification and treatment, call the 24- hour National Battery Ingestion Hotline (800-408-8666) . Additional treatment information is available from the National Capital Poison Control Center Button Battery Ingestion Triage and Treatment Guideline: https://www.poison.org/battery/guideline . If the patient is less than or equal to 12 years, immediately obtain an x-ray to locate the battery. If the patient is > 12 years and the battery diameter is > than 12 mm or unknown also obtain an x-ray. X-rays should include the entire neck, esophagus, and abdomen. Once the position of the battery in the esophagus is determined by x-ray and if less than 12 hours post-ingestion consider giving sucralfate suspension 10ml by mouth every 10 minutes, up to 3 doses while waiting for sedation for endoscopy. Do not delay battery removal because a patient has eaten recently or was given honey or sucralfate by mouth. Batteries lodged in the esophagus should be removed immediately since battery leakage, caustic burns, and perforation can occur as soon as two hours after ingestion. Endoscopic removal is preferred as it allows direct visualization of tissue injury. After the battery is removed from the esophagus if no perforation is evident irrigate the injured area with 50 mL to 150 mL of 0.25% sterile acetic acid and then observe for delayed complications. If a large battery (equal to or greater than 20 mm) is in the stomach or beyond of a child < 5 years and based on history, might have lodged in the esophagus for > 2 hours, consider diagnostic endoscopy to exclude the remote possibility of esophageal injury. Retrieve batteries, endoscopically if possible, from the stomach or beyond if: 1) A magnet was also ingested, 2) The patient develops signs or symptoms that are likely related to battery ingestion, or, 3) A large battery equal to or greater than 15 mm is ingested by a child younger than 6 years, remains in the stomach for 4 days or longer. Allow batteries to pass spontaneously if they have passed beyond the esophagus (stomach and beyond) and no clinical indication of any significant gastrointestinal injury is evident. Confirm battery passage by inspecting stools. Consider repeat radiographs to confirm passage if battery passage not observed in 10-14 days. |
| Poison Center/North America | USA/Canada Calls Only: 1-800-498-8666 (Toll Free) [24-Hour National Battery Ingestion Hotline] |



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| Poison Center World Directory | http://globalcrisis.info/poisonemergency.html#AAA |
| If Swallowed | DO NOT GIVE IPECAC. Do not induce vomiting. Seek medical attention immediately and call 24-hour NATIONAL BATTERY INGESTION HOTLINE (800-498-8666) for assistance with battery identification and treatment. Additional treatment information is available from the National Capital Poison Control Center Button Battery Ingestion Triage and Treatment Guideline : https://www.poison.org/battery/guideline . Attempt to determine battery imprint code (or diameter) of companion or replacement battery. If no imprint code is available, measure or estimates the battery diameter based on the size of the slot the battery fits or the size of the comparable battery. Provide this information to the treating health care provider. If the child is greater than 12 months of age and able to swallow, and the battery was swallowed within the prior 12 hours, if readily available administer honey immediately and while on route to the emergency room. Give 10 mL (2 teaspoons) of honey by mouth every 10 minutes for up to 6 doses. Do not delay going to the ER to obtain or give honey. Other than honey, do not give anything by mouth. |
| Inhalation | Contents of leaking battery may be irritating to respiratory passages. Move to fresh air. Seek medical attention if irritation persists. |

Section 5: FIRE FIGHTING MEASURES

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| Substance or Mixture Specific Hazards | Batteries may rupture or leak if involved in a fire. Use any extinguishing media appropriate for the surrounding area. |
| Fire Fighting Measures | Remove container from fire area if this can be done without risk. Avoid inhaling the material or combustion products. Keep downwind and away from low areas. |
| Advice for Fire-Fighters | Large quantities of batteries involved in a fire will rupture and release corrosive lithium hydroxide. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Fight fire from a distance or protected area. Cool fire-exposed containers to prevent rupture. Do not breathe smoke, gases or vapors generated |

Section 6: ACCIDENTAL RELEASE INFORMATION

(In case of electrolyte leakage from the battery.)

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| Spills of Large Quantities of Loose Batteries (unpackaged) | Notify spill personnel of large spills. Irritating vapors may be released from leaking or ruptured batteries. Spread batteries apart to stop shorting. Eliminate all ignition sources. 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. |
| Personal Precautions, Protective Equipment and Emergency Procedures | Clean-up personnel should wear appropriate protective clothing to prevent eye and skin contact and inhalation of dust. Ventilate area of spill. Avoid creating airborne dust. Eliminate all sources of ignition. Keep spilled material away from combustible materials. |
| Environmental Precautions | Avoid release to the environment without proper government permits. Prevent entry into storm sewers and waterways. Report spills as required by local and national regulations. |
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| Methods and Material for Containment and Cleaning Up | Do not use combustible absorbents or dust control products. Carefully collect material with a scoop. Do not generate airborne dust. Place in appropriate container for disposal. Rinse the spill area with water after clean-up is complete. Collect rinse water for appropriate treatment and disposal. Remove any spilled liquid with absorbent material and contain it for disposal. |
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Section 7: HANDLING AND STORAGE

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| Precautions for Safe Handling | Do not short circuit, charge, dispose into fire or install incorrectly. |
| | Do not solder directly onto batteries. |
| | Do not mix different type or brand of batteries. |
| Conditions for Safe Storage, Including any Incompatibilities | Store in cool, dry place in original packaging. Do not store with acids. Store away from reducing agents. |

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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| This product is considered an article that does not release or result in exposure to a hazardous chemical under normal conditions of use. |
| No engineering controls or personal protective equipment (PPE) is required. |

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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| Physical Description | Article |
| Chemical Properties | Not Applicable |

Section 10: STABILITY AND REACTIVITY

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| Reactivity | Stable and Non-Reactive under 60°C. |
| Chemical Stability | Cells/batteries may explode or leak and cause burn injuries when recharged, burnt/incinerated, mixed with different types of batteries, inserted backwards into appliances, or disassembled. |

Section 11: TOXICOLOGICAL INFORMATION

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| The chemicals in this product are contained in a sealed can and exposure does not occur during normal handling and use. |
| Mercury, Lead and Cadmium are not used in the cell. (Note: If traces are found, they may be from impurity of the raw materials, not added as part of the recipe.) |

Section 12: ECOLOGICAL INFORMATION

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| The chemicals in this product are contained in a sealed can and exposure does not occur during normal handling and use. |
| Mercury, Lead and Cadmium are not used in the cell. (Note: If traces are found, they may be from impurity of the raw materials, not added as part of the recipe.) |

Section 13: DISPOSAL CONSIDERATIONS (GHS – Section 13)



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| Collect and 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. |
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Section 14: TRANSPORT INFORMATION

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| Regulatory Status | <p>Duracell Lithium Coin Batteries are manufactured and distributed according to current IATA/ICAO regulations. Duracell Lithium Coin Batteries can be carried as per ICAO. The shipping cartons for all Duracell Lithium cells/batteries are designed to prevent short circuit, displacement within the package, damage to the batteries and release of the contents of the package.</p> <p>Persons preparing or distributing lithium batteries for transportation are required by regulation to be trained in their level of responsibility. The information in this section has been provided for clarification. The transportation of lithium metal batteries is regulated by ICAO, IATA, IMO, US DOT, ADR.</p> | | | |
| UN Identification Number/Shipping Name | <p>UN3090 Lithium Batteries only UN3090 Lithium Batteries in Equipment, or Lithium Batteries with Equipment</p> | | | |
| Total Lithium weight per cell/batteries | The metallic lithium content in each coin cell is less than 0.3 grams | | | |
| | Total Lithium Content (grams); See below for each catalog number. | | | |
| | Catalog No. | Total Lithium Content (grams) | Type | Total Cell/Battery Weight (grams) |
| | 1220 | <0.3 | Cell | 1 |
| | 1616 | <0.3 | Cell | 1.2 |
| | 1632 | <0.3 | Cell | 1.8 |
| | 2025 | <0.3 | Cell | 2.4 |
| | 2032 | <0.3 | Cell | 2.9 |
| | 2430 | <0.3 | Cell | 4.5 |
| | 2450 | <0.3 | Cell | 6.6 |
| | 2477 | <0.3 | Cell | 9.0 |
| UN38.3 Test Reports | UN38.3 Test Summary Documents that are required by the UN Model Regulations, can be requested by sending an email request to UN38.3_duracell@duracell.com | | | |
| Special Provisions (SP) Conformance | 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 | 49 CFR 173.185 © SP A101 (Packed within Equipment by Air) 49 CFR 173.185 (d) – US DOT Exemption for disposal or recycling | | | |
| Air Transport IATA 63rd edition, ICAO | PI 968 – Lithium Metal Batteries (Shipped Alone) PI 969 – Lithium Metal Batteries (Packed with Equipment) PI 970 – Lithium Metal Batteries (Contained in Equipment) | | | |



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| Marine/Water Transport (IMDG) Special provisions | 188, 230, 310, 957 |
| ADR/RID Special Provisions | 188, 230, 310, 636, 656. |
| Emergency Transportation Hotline | CHEMTREC 24-Hour Emergency Response Hotline |
| | Within the United States, call: 1-800-424-9300 |
| | Outside of the United States, call: 1-703-527-3887 (Collect) |

Section 15: REGULATORY INFORMATION

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| GHS Article Exception | Section 1.3.2.1 |
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Section 16: OTHER INFORMATION

A Lithium battery is a safe consumable product under recommended or normal usage conditions. It is not a dangerous substance or mixture. There are no PSDS supply requirements for Lithium batteries by the Globally Harmonized System (GHS). Duracell is providing this PSDS as a service to its customers and other users who may make use of lithium coin batteries in the workplace.

Disclaimer: *This PSDS is intended to provide a summary of our knowledge and guidance regarding the use of this product. The information contained here has been compiled from sources considered by Duracell US Operations, Inc. to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations. This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. Duracell US Operations, Inc. assumed no responsibility for injury to the recipient or third parties, or any damage to any property resulting from the misuse of the product.*

***** End of PSDS *****