


<b>Product Name</b>	Procell Lithium HPL Cells and Batteries (Primary Metal Cells and Batteries)
<b>Chemical System</b>	Lithium Manganese Dioxide
<b>Description</b>	Procell Branded Consumer & OEM Lithium Battery
<b>Product Category</b>	Electro-Technical Device
<b>Use</b>	Portable power source for electronic devices.
<b>Global sub-brands (Retail)</b>	Procell
<b>Global sub-brands (B2B)</b>	Bulk
<b>Model Numbers/IEC Designations (Physical Descriptions)</b>	PC CR2, PC123
<b>Principles of Operation</b>	A battery powers a device by converting stored chemical energy into electrical energy.
<b>Representative Product Images</b>	
<b>Document ID</b>	PSDS -Procell Li HPL
<b>Information Contact</b>	<a href="mailto:SDS@duracell.com">SDS@duracell.com</a>
<b>Date Updated</b>	1/12/2022
<b>Preparer</b>	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

<b>Manufacturer's Name and Address</b>	<p><b>Duracell Industrial Operations, Inc</b> 14 Research Drive Bethel, CT USA 06801</p> <p><b>Duracell Batteries BV,</b> Nijverheidslaan 7, 3200 Aarschot, Belgium.</p> <p><b>Duracell International Operations Sàrl,</b> Rue du Pré-de-la-Bichette 1, CH-1202, Geneva, Switzerland.</p> <p><b>Duracell (China) Ltd.</b> Hongtu High &amp; New Technology Development Zone,</p>
--	--

# PSDS – Product Safety Data Sheet

## Lithium HPL – Primary Metal Cells and Batteries

	<p>Nan Cheng District, Dongguan, 523080 Guangdong, China</p> <p><b>Duracell (Jiangxi) Technologies Co., Ltd.</b> No. 819 Factory, Huangtang East Street, Linkong Economic Zone, Nanchang City, Jiangxi Province, China</p> <p><b>Duracell Australia Pty. Ltd.</b> 49 Industrial Road, Unaderra, NSW 2525 Australia +61 2 4271 6111</p> <p><b>Duracell Mexico</b> Av. Santa Fe 440 Of. 100 Col. Santa Fe Cruz Manca Del. Cuajimalpa de Morelos, CDMX, 05348, Mexico</p>
<b>Telephone</b>	(203) 796-4000
<b>Global Website</b>	<a href="http://www.procell.com">www.procell.com</a>

<b>Consumer Relations</b>	<p><b>North America</b> 1-800-551-2355 (9:00 AM - 5:00 PM EST)</p>
	<p><b>Latin America</b> (Brazil) 0800-727-1165, (Mexico) 1800-283-2901, (Chile) 188-800-224 488, (Rest of Latin America) <a href="http://duracell.mx.help">duracell.mx.help</a>.</p>
	<p><b>Europe &amp; Asia</b> (UK) 0800 716434, (FR) 0800 346 790 Service &amp; appel gratuits, (IRL) 1 800 509 176, (DE) 800 101 2112, (AT) 0800 1025 1956, (CH) 0800 000 885, (BE) 0800 509 95, (NL) 0800 265 8616, (IT) 800 125 662, (ES) 900 800 522, (PT) 800 781 012, (GR) 210 66 75 000, (CY) 22-210900, (DK-FI-NO-SE) 4687991926, (SE) 0852503857, (ZA) +27211403500, (RO) 021 3361915, (IS) 3545222700 (MD) 022472402, (BG) 02 40 24 500, (BIH) 033756000, (MNE) 020261920, (PL) 22 692 42 77, (LT) (8) 37 401 111, (LV) 67798667, (EE) +3726505555, (CZ) +420233332010, (SK) +42153419601, (HU) 0620 770 7099, (HR) 0800 0009, (SI) 01/588 6800, (AZ) 812 3100949, (UA) +380444909771 (ДП «CAB 92») &amp; +380442476704 (ТОВ «ІНБЕКТКОМ»), (KZ) +7 727 250 05 50, (TM) 00865 530070, (KG) 0312 41 77 04 (Apple City International), (TR) 0 850 502 61 40</p>

### Section 2: HAZARD IDENTIFICATION

Product is a sealed article, not a mixture or substance. Exposure to contents inside the sealed battery will not occur unless the battery leaks, is exposed to high temperatures, or is mechanically abused.

### Section 3: COMPOSITION

<b>Applicable Battery Industry Standards</b>	UN 38.3, ANSI C18.3M Part 1, ANSI C18.3M Part 2, ANSI C18.4, IEC 60086,1, IEC 60086-2, IEC 60086-4
<b>Description</b>	Branded Consumer Battery
<b>Battery Electro-Technical System</b>	Lithium Manganese Dioxide

COMPONENTS	INGREDIENTS	CAS NUMBER	
Electrode – Negative	Lithium Alloy	7439-93-2	1-6%

# PSDS – Product Safety Data Sheet

## Lithium HPL – Primary Metal Cells and Batteries

<b>Electrode – Positive</b>	Manganese Dioxide	1313-13-9	12-50%
<b>Electrolyte</b>	Propylene Carbonate Solvent	108-32-7	2-5%
	1,2-Dimethoxyethane Solvent	110-71-4	1-4%
	Lithium Trifluoromethanesulfonate salt	33454-82-9	0.1-1%
<b>Cathode</b>	Polytetrafluoroethylene (PTFE)	9002-84-0	0.1-1%
<b>Can</b>	Steel		8-15%
<b>COMPLIANCE</b>			
<b>Declarable substances (IEC 62474 Criteria 1)</b>	1,2-Dimethoxyethane Solvent	110-71-4	
<b>Mercury Free Battery (ANSI C18.4M &lt;5ppm)</b>	No Mercury added.		
<b>Small Cell or Battery (ANSI C18.1M Part 2; IEC 60086-5)</b>	Size: 123, CR2 fit inside a specially designed test cylinder 2.25 inches (57.1mm) long by 1.25 inches (31.70 mm) wide.		

### Section 4: FIRST AID MEASURES

(In case of electrolyte leakage from the battery.)

<b>Eye Contact</b>	Flush thoroughly with copious amounts of running water for at least 30 minutes. Hold eyelids open to assure thorough flushing. Seek immediate medical attention.
<b>Skin Contact</b>	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.
<b>Ingestion</b>	<b>Required for sizes CR2: Keep away from children.</b> If swallowed, consult a physician immediately.

# PSDS – Product Safety Data Sheet

## Lithium HPL – Primary Metal Cells and Batteries

<p><b>Note to Physician</b></p>	<p>For information on battery identification and treatment, call the <b>24- hour National Battery Ingestion Hotline (800-408-8666)</b>. Additional treatment information is available from the <b>National Capital Poison Control Center Button Battery Ingestion Triage and Treatment Guideline</b>: <a href="https://www.poison.org/battery/guideline">https://www.poison.org/battery/guideline</a>. If the patient is less than or equal to 12 years, immediately obtain an x-ray to locate the battery. If the patient is &gt; 12 years and the battery diameter is &gt; 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 &lt; 5 years and based on history, might have lodged in the esophagus for &gt; 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.</p>
<p><b>Poison Center World Directory</b></p>	<p><a href="http://globalcrisis.info/poisonemergency.html#AAA">http://globalcrisis.info/poisonemergency.html#AAA</a></p>
<p><b>If Swallowed</b></p>	<p><b>DO NOT GIVE IPECAC.</b> Do not induce vomiting. Seek medical attention immediately and call <b>24-hour NATIONAL BATTERY INGESTION HOTLINE (800-498-8666)</b> for assistance with battery identification and treatment. 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.</p>
<p><b>Inhalation</b></p>	<p>Contents of leaking battery may be irritating to respiratory passages. Move to fresh air. Seek medical attention if irritation persists.</p>

### Section 5: FIRE FIGHTING MEASURES

	<p>Batteries may rupture or leak if involved in a fire. Use any extinguishing media appropriate for the surrounding area. For incipient (beginning) fires, carbon dioxide extinguishers or copious amounts of water are effective in cooling burning lithium metal batteries. If fire progresses to where lithium metal is exposed (deep red flames), use a Class D extinguisher suitable for lithium metal.</p>
--	--

# PSDS – Product Safety Data Sheet

## Lithium HPL – Primary Metal Cells and Batteries

<b>Extinguishing Media</b>	<p><b>Large quantities of batteries involved in a fire will rupture and release irritating fumes from thermal degradation.</b> Use a Class “D” fire extinguisher or other smothering agents such as Lith-X, copper powder, or dry sand. If using water, use enough to smother the fire. Using an insufficient amount of water will make the fire worse. Cooling the exterior of batteries will help prevent rupturing. Burning batteries generate toxic and corrosive lithium hydroxide fumes.</p>
<b>Unusual Fire and Explosion Hazards</b>	<p>Not classified as an oxidizer based on test data, however, thermal decomposition of product may release oxygen that can accelerate rate of combustion of surrounding fire. Potassium hydroxide may react with metals such as aluminum or zinc to generate flammable hydrogen gas.</p>
<b>Combustion Products</b>	<p>Thermal decomposition may release oxygen and produce hazardous metal oxide fume, hydrogen gas, corrosive vapors, and oxides of carbon.</p>
<b>Advice for Fire-Fighters</b>	<p>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. Detailed information on fighting a lithium metal battery fire can be found in US DOT Emergency Response Guide 138 (Substances–Water–Reactive). Keep unprotected persons away.</p>

### Section 6: ACCIDENTAL RELEASE INFORMATION

(In case of electrolyte leakage from the battery.)

<b>Spills of Large Quantities of Loose Batteries (unpackaged)</b>	<p>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 the area and allow vapors to dissipate. Increase ventilation.</p>
<b>Personal Precautions, Protective Equipment and Emergency Procedures</b>	<p>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.</p>
<b>Environmental Precautions</b>	<p>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.</p>
<b>Methods and Material for Containment and Cleaning Up</b>	<p>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.</p>

### Section 7: HANDLING AND STORAGE

# PSDS – Product Safety Data Sheet

## Lithium HPL – Primary Metal Cells and Batteries

<p><b>Precautions for Safe Handling</b></p>	<p>Do not short circuit, charge, dispose into fire or install incorrectly.</p> <hr/> <p>Do not solder directly onto batteries.</p> <hr/> <p>Do not mix different type or brand of batteries.</p>
<p><b>Conditions for Safe Storage (Including any Incompatibilities)</b></p>	<p>Store in cool, dry place in original packaging. Do not store with acids. Store away from reducing agents.</p> <hr/> <p><b><u>Operating Temperature</u></b> Discharge: -20°C to 50°C</p> <p><b><u>Storage Temperature (for shipping state)</u></b>          1 month    -20°C to 50°C          3 months   -20°C to 45°C          1 year       -20°C to 45°C</p>

### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

<p><b>Consumer Product</b></p>	<p>Not Required/Not Applicable</p>
--------------------------------	------------------------------------

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<p><b>Physical Description</b></p>	<p>Article</p>
<p><b>Chemical Properties</b></p>	<p>Not Applicable</p>

### Section 10: STABILITY AND REACTIVITY

<p>Stable and Non-Reactive under 60°C.</p>
--

### Section 11: TOXICOLOGICAL INFORMATION

<p>The chemicals in this product are contained in a sealed can and exposure does not occur during normal handling and use.</p>
<p><b>Venting cells may have ether smell.</b> If strong smell persists, or cell leakage is observed, it should be disposed of per local regulations.          Mercury, Lead, and Cadmium are not used in the cell. (<b>Note:</b> If traces are found, they may be from impurity of raw materials, not added as part of the recipe.)</p>


### Section 12: ECOLOGICAL INFORMATION

The chemicals in this product are contained in a sealed can and exposure does not occur during normal handling and use.

**Venting cells may have ether smell.** If strong smell persists, or cell leakage is observed, it should be disposed of per local regulations.

Mercury, Lead and Cadmium are not used in the cell. (**Note:** If traces are found, they may be from impurity of raw materials, not added as part of recipe.)

## Section 13: DISPOSAL CONSIDERATIONS (GHS – Section 13)

<b>Collect and Proper Disposal</b>	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.	
<b>Requirements of Brazil</b>	After use, the cells and/or batteries must be delivered to the commercial establishment or authorized technical assistance network.	

## Section 14: TRANSPORT INFORMATION

<b>UN38.3 TEST Summary Documents</b>	UN38.3 Test Summary Documents that are required by the UN Model Regulations, can be requested by sending an email request to <a href="mailto:UN38.3_duracell@duracell.com">UN38.3_duracell@duracell.com</a> .			
<b>Regulatory Status</b>	Procell lithium metal batteries are produced and delivered in accordance with current IATA/ICAO regulations. Procell lithium metal batteries can be by air shipped in accordance with ICAO or IATA. Shipping packages for all PROCELL lithium cells/batteries are designed to prevent short circuits, movement within the package, damage to the cells/batteries, and release of the package contents. Persons who prepare or offer lithium batteries for transport are required by regulation to be trained to the extent of their responsibility. The information in this section is provided for informational purposes only. The transportation of lithium metal batteries is regulated by ICAO, IATA, IMO, ADR, and US DOT.			
<b>DEFECTIVE Lithium Batteries</b>	Defective Lithium batteries are <b>forbidden</b> on both Passenger and Cargo Aircraft. For all other modes of transportation, defective lithium batteries are fully regulated as <b><u>Dangerous Goods</u></b> .			
<b>Total Lithium Content (grams); See below for each catalog number.</b>				
	<b>Catalog No.</b>	<b>Total Lithium Content (grams)</b>	<b>Type</b>	<b>Total Cell/Battery Weight (grams)</b>
	123	0.55	Cell	17
	CR2	0.26	Cell	11
<b>UN Identification Number/Shipping Name</b>	UN 3090 Lithium Metal Batteries			
	UN 3091 Lithium Metal Batteries Packed within or Contained in Equipment			

# PSDS – Product Safety Data Sheet

## Lithium HPL – Primary Metal Cells and Batteries

<b>UN 38.3 Transportation Tests</b>	Duracell certifies that all its lithium batteries meet the requirements of the UN Manual of Tests and Criteria, Part III subsection 38.3. If you assemble these batteries into larger battery packs, it is recommended that you perform the UN Tests to ensure the requirements are met prior to shipment.
<b>Special Provisions (SP) Conformance</b>	Special regulatory provisions require batteries to be packaged in a manner that prevents the generation of a dangerous quantity of heat and short circuits.
<b>US DOT SP</b>	49 CFR 173.185 (c) SP A101 (Packed within Equipment by Air)
<b>US DOT Exemptions for Lithium Cells or Batteries Shipped for Disposal or Recycling</b>	49 CFR 173.185 (d)
<b>Air Transport IATA 63<sup>rd</sup> edition, ICAO Packing Instructions</b>	PI 968 – Lithium Metal Batteries (Shipped Alone)
	PI 969 – Lithium Metal Batteries (Packed with Equipment)
	PI 970 – Lithium Metal Batteries (Contained in Equipment)
<b>Marine/Water Transport (IMDG)Special</b>	188, 230, 310, 957
<b>ADR/RID Special Provisions</b>	188, 230, 310, 636, 656
<b>Passenger Air Travel</b>	Air travelers should consult the US Department of Transportation (DOT) Safety Travel website at <a href="http://safetravel.dot.gov">http://safetravel.dot.gov</a> for guidance regarding carry on of Lithium Batteries.
<b>ANTT (National Land Transportation Agency)</b>	Regulation 5232, 14 Dec 2016; SP 188, 230, 310, 376; Packaging Instructions P903 Complementary Instructions 5947/, 1 July 2021
<b>Emergency Transportation Hotline</b>	<b>CHEMTREC 24-Hour Emergency Response Hotline</b>
	Within the United States, call: 1-800-424-9300
	Outside of the United States, call: 1-703-527-3887 (Collect)

### Section 15: REGULATORY INFORMATION

<b>GHS Article Exception</b>	Section 1.3.2.1
------------------------------	-----------------

### 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 Alkaline 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 alkaline batteries in the workplace. According to standard NR-26 "Safety Signaling", manufacturers or, in the case of import, suppliers of chemical products in the domestic market must make available the PSDSs of chemical products classified as non-hazardous, but whose intended or recommended uses may give rise risks to the safety and health of workers.*

**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 Industrial 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 Industrial 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 \*\*\*\*\*