

Article Information Sheet (AIS)

This Article Information Sheet (AIS) provides relevant battery information to retailers, consumers, OEMs and others 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 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.

1. Document Information

Document Name Duracell Lithium HPL Cells and Batteries

Document ID AIS-Li HPL

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Preparer Product Safety & Regulatory

Information Contact SDS@duracell.com

2. Company Information

Name & Address **Duracell US Operations**, 1515 Redding Dr. LaGrange GA 30240
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Duracell International Operations Sàrl, Chemin de Blandonnet 8, 1214 Vernier, Geneva Switzerland.

Global Website www.duracell.com

Consumer Relations North America: 1-800-551-2355 (9:00 AM - 5:00 PM EST)

3. Article Information

Description Duracell branded consumer lithium battery

Product Category Electro-technical device

Use Portable power source for electronic devices

Model Numbers/IEC Designations (physical descriptions) CR2 (CR15H270), CR-V3, 1/3N (CR/DL 1/3N, CR11108), 123 (123A, CR123A, DL123A, CR17345), 2/3A (CR17335), 223 (CR223, CR-P2, DL223), 245 (CR245, 2CR5, DL245), 28L (PX28L, 2CR11108, 2CR13252), CR17450 (CR-A)

4. Article Construction

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			2 - 9.2%
Electrolyte	Propylene Carbonate Solvent	108-32-7	2.5 - 7%
Electrolyte	1,2-Dimethoxyethane Solvent	110-71-4	1.5 - 7.5%
Polytetrafluoroethylene (PTFE)	PTFE	9002-84-0	0.1 - 1%
Materials of Construction - Can	Steel	110-71-4	8 - 15%
Bitterant (Denatonium Benzoate; CAS# 3734-33-4)	Lithium coin sizes 2016, 2025 & 2032 have a transparent layer of bitterant (denatonium benzoate) applied to the coin cell.		
Other non-Reactive Materials			13.5%

5. Health & Safety

Ingestion/Small Parts Warning Required for 1/3N, 123, 28L, CR2 batteries: Keep out of reach of children. If swallowed, consult a physician immediately. ANSI or IEC requirements



OR



OR



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.

First Aid - If swallowed Required for sizes 1/3N, 123, 28L, CR2: Keep away from children. If swallowed, consult a physician immediately. Call National Ingestion Hotline (800-408-8666).

First Aid - Eye Contact Flush with running water for at least 30 minutes. Seek medical attention immediately.

First Aid - Skin Contact Remove contaminated clothing and flush skin with running water for at least 15 minutes. Seek medical attention if irritation persists.

First Aid - Inhalation Contents of leaking battery may be irritating to respiratory passages. Move to fresh air. Seek medical attention if irritation persists.

Poison Centers/World Directory [Chemical Safety and Health](http://www.duracell.com)

6. Fire Hazard & Firefighting

Fire Hazard Batteries may rupture or leak if involved in a fire.

Fires Involving Large Quantities of Batteries Large quantities of batteries involved in a fire will rupture and release irritating fumes from thermal degradation. Use a Class "D" fire extinguisher or other smothering agent 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 exterior of batteries will help prevent rupturing. Burning batteries generate toxic and corrosive lithium hydroxide fumes. Firefighters should wear self-contained breathing apparatus. Detailed information on fighting a lithium metal battery fire can be found in US DOT Emergency Response Guide 138 (Substances–Water–Reactive).

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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.

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 states & countries, 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. Do not dispose of batteries with household trash.
USA EPA RCRA (40 CFR 261)	"Charged" lithium metal batteries meet the criteria (D003 - Reactivity) of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CRT 261.23. If recycled, lithium metal batteries are classified as Universal Waste.

9. Transport Information (GHS Section 14)				
Regulatory Status	Duracell Lithium Coin Batteries are manufactured and distributed according to current global transportation regulations. 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. Persons preparing or distributing lithium batteries for transportation are required by regulations 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, IMDG, IMO, US DOT, ADR.			
Total Lithium Content (grams)	Catalog	Total Lithium Content (grams)	Type	Total Cell/Battery Weight (grams)
	1/3N	0.06	Cell	3
	123	0.56	Cell	17
	223	1.1	Battery	38
	28L	0.12	Battery	9.4
	CR-V3	1.4	Battery	39
	CR2	0.26	Cell	11
	2/3A	0.56	Cell	17
	CR17450	0.6	Cell	24
	245	1.1	Battery	38.6

UN Identification Number	UN3090 Lithium metal batteries
Shipping Name	UN3091 Lithium metal batteries packed with or contained in equipment
Hazard Classification Number	Hazard Classification 9
UN 38.3 Transportation Tests	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 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.
Air Transport IATA 67th Edition, ICAO	Packaging Instructions (PI) 968 – PI 970
US DOT - SP	29, A54, A100, A101
IMDG - SP	188, 230, 310, 957
ADR - SP	188, 230, 310, 636, 656
ANTT (National land Transportation Agency)	Regulation 5232, 14 Dec 2016; SP 188, 230, 310, 376; Packaging Instructions P903 Complementary Instructions 5947/, 1 July 2021
Emergency Transportation Hotline	<p style="text-align: center;">CHEMTREC 24-Hour Emergency Response Hotline Within the United States call +703-527-3887</p> <p style="text-align: center;">Outside the United States, call +1 703-527-3887 (Collect)</p>

10. Regulatory Information	
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
USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996	During the manufacturing process, no mercury is added.
Mercury Free Battery (ANSI C18.4M <5ppm)	Yes
CANADA Products Containing Mercury Regulations SOR/20140254	Mercury Free
Declarable Substance (IEC 62674 Criteria 1)	1,2-Dimethoxyethane (CAS-110-74-1)
Battery Regulation (EU)2023/1542	Compliant with marking and substance restrictions for mercury (<0.0005%); cadmium (<0.002%) and lead (<0.01%). Labels and/or packaging are marked with the special collection symbol in accordance with EU

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	Battery Regulation 2023/1542, Article 13, paragraph 4. Compliant with CE marking. Labels and/or packaging are marked with the CE mark in accordance with EU Battery Regulation 2023/1542, Article 38, paragraph 3, which applies from 18 August 2024, Article 96, paragraph 2b.
EU POP regulation (Regulation (EU) 2019/1021) and their attendant amendments	Duracell cells and batteries do not contain Persistent Organic Pollutants
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 California Prop 65	No warning required per 3rd party assessment.
Regulatory Definitions - Articles	An SDS is not required for 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 & UK REACH	Title 1 - Chapter 2 - Article 3(3)
GHS	Section 1.3.2.1
11. Other Information	
11a. Certification & 3rd Party Approvals	
UL Listing	Yes
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: <i>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.</i>
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.
DISCLAIMER: This AIS is intended to provide a brief summary of our knowledge and guidance regarding the use of this article. The information contained here has been compiled from sources considered by Duracell 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 assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.	

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