ARTICLE INFORMATION SHEET/SAFETY DATA SHEET (AIS/SDS)
Lithium Iron Disulfide Battery

This Article Information Sheet/Safety Data Sheet (AIS/SDS) 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 branded consumer batteries follow ANSI and IEC battery standards.

SECTION 1 – Identification

Product Name: Energizer Battery	**Document Number:** 1223-Lith
Chemical System: Lithium Iron Disulfide Battery	**Date Prepared:** December 2024
Designed for Recharge: No	**Valid Until:** December 2027
Prepared by: Energizer Energizer Brands, LLC 8235 Forsyth Blvd St. Louis, MO 63105 customersupport@energizer.com 1-800-383-7323	

Description	Lithium Iron Disulfide Battery
Use	Portable power source
Brand	ENERGIZER
IEC Designations	FR14505
Sizes	AA Common: FR6
Image	

SECTION 2 – Hazards Identification

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.

Inhalation: Contents of an open battery can cause respiratory irritation.
Skin Contact: Contents of an open battery can cause skin irritation.
Eye Contact: Contents of an open battery can cause severe irritation.

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SECTION 3 – Composition / Information

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

All Energizer Lithium Iron Disulfide have zero added mercury.

MATERIAL OR INGREDIENT	CAS #	%/wt.
Carbon Black	1333-86-4	4
1,2 Dimethoxyethane	110-71-4	4
1,3 Dioxolane	646-06-0	9
Graphite	7782-42-5	4.5
Iron Disulfide	1309-36-0	44
Lithium or Lithium Alloy	7439-93-2	6
Lithium Iodide	10377-51-2	3.5
Non-Hazardous Components Steel	65997-19-5	25

SECTION 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 and Eyes: In the event 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.

SECTION 5 – FIRE HAZARD & FIREFIGHTING

In case of fire where lithium batteries are present, flood area with water or smother with a Class D fire extinguishant appropriate for lithium metal, such as Lith-X. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving lithium batteries can be controlled by flooding with water. However, the contents of the battery will react with water and form hydrogen gas. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended. A smothering agent will extinguish burning lithium batteries.

Emergency Responders should wear self-contained breathing apparatus. Burning lithium-iron disulfide batteries produce toxic and corrosive lithium hydroxide fumes and sulfur dioxide gas.

SECTION 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.

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SECTION 7 - HANDLING AND STORAGE

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life. In locations that handle large quantities of lithium batteries, such as warehouses, lithium batteries should be isolated from unnecessary combustibles.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Brands, LLC representative for precautionary suggestions. Do not obstruct safety release vents on batteries. Encapsulation of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, generate significant heat 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. Damaging a lithium battery may result in an internal short circuit.
The contents of an open battery, including a vented battery, when exposed to water, may result in a fire and/or explosion.
Crushed or damaged batteries may result in a fire.
If soldering or welding to the battery is required, consult your Energizer 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 short circuit.

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

SECTION 8 – Exposure Controls

Not applicable to Batteries which are classified as Articles

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

SECTION 9 – Physical and Chemical Properties

Not applicable to Batteries which are classified as Articles

SECTION 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 deforming

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SECTION 11 – Toxicological Information

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Carbon Black (CAS# 1333-86-4)	3.5 mg/m^3 TWA	3.5 mg/m^3 TWA	4
1,2-Dimethoxyethane (CAS# 110-71-4)	None established	None established	4
1,3-Dioxolane (CAS# 646-06-0)	None established	None established	9
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)	4.5
Lithium or Lithium Alloy (CAS# 7439-93-2)	None established	None established	6
Lithium Iodide (CAS# 10377-51-2)	None established	None established	3.5
Non-Hazardous Components: Steel (iron CAS# 65997-19-5)	None established	None established	25
Plastic and Other	None established	None established	Balance

SECTION 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.

SECTION 13 – Disposal Considerations

Lithium iron disulfide batteries are not hazardous waste per the United States Resource Conservation and Recovery Act (RCRA) - 40 CFR Part 261 Subpart C. Dispose of in accordance with all applicable federal, state and local regulations.

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SECTION 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 lithium batteries are compliant with these regulatory concerns.

Energizer lithium-iron disulfide batteries are not subject to additional provisions of dangerous goods regulations as they meet the requirements of the special provisions listed below. (Essentially, they are properly packaged and labeled, contain less than 1 gram of lithium and pass the tests defined in UN model regulation section 38.3).

Regulatory Body	Special Provisions
IMDG	188, 230, 310, 376, 377, 384, 387, 390
UN	UN 3090, UN 3091
US DOT	49 CFR 173.185
IATA, 66th Edition	PI 968 – PI 970
ICAO	PI 968 – PI 970

Energizer is registered with CHEMTEL. In the event of an incident during transport call 1-800-526-4727 (North America) or 1-314-985-1511 (International).

A global lithium label chart is provided below to summarize the current global labeling requirements.

Label Summary Chart

Shipping Mode	**Li content**	**Net quantity wt. of batteries per package**	**Battery Type**			
AIR	0.3g to <1g/cell 0.3g to <2g per battery	≤2.5 kg	L91, L92, L522, Photo	YES	YES	YES
	≤0.3g/cell	≤2.5kg	All Li Coin and 2L76	YES (if more than one package in consignment)	YES	YES
	≤0.3g/cell	>2.5kg	All Li Coin and 2L76	YES	YES	YES
Land/ Sea only	All	All	All	NO	YES	YES*

*Orange CAO label is only required on land/sea shipments when in the US. If the shipment is not intended for international air, it is allowable to us the "US DOT Prohibition Statement

SECTION 15 – REGULATORY INFORMATION

Applicable Battery Industry Standards

North America Standards	ANSI C18.3M Part 1	ANSI C18.3 M Part 2	ANSI C18.4
International Standards	IEC 60086-1	IEC 60086-2	IEC 60086-4

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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. **EU Battery Regulation 2023/1542:** Energizer batteries are compliant with all aspects of the Regulation 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:**1,2 dimethoxyethane (DME) is present above 0.1% w/w

15.3 Article Definitions

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

SECTION 16 - OTHER INFORMATION

Energizer has prepared copyrighted Article Information Sheets to provide information on the different Eveready/Energizer/Rayovac battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). 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, ENERGIZER BRANDS, LLC MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

16.1 ACRONYM GLOSSARY

1. ANSI: American National Standards Institute
2. CPSC: Consumer Product Safety Commission
3. CPSIA: Consumer Product Safety Improvement Act
4. DTSC: Department of Toxic Substances Control
5. EPA: Environmental Protection Agency
6. FHSA: Federal Hazardous Substances Act
7. GHS: Globally Harmonized System for Hazard Communication
8. IEC: International Electrotechnical Commission
9. OSHA: Occupational Safety and Health Administration
10. RCRA: Resource Conservation and Recovery Act
11. SDS: Safety Data Sheet
12. SVHC: Substances of Very high Concern
13. TSCA: Toxic Substances Control Act

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