



Lithium Battery (CR123A Non-rechargeable)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 08/19/2013

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures
Product name. : Lithium Battery (CR123A Non-rechargeable)
Product code : SFL11534

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Dry Cell Battery

1.3. Details of the supplier of the safety data sheet

SIRCHIE Finger Print Laboratories
100 Hunter Place
27596 Youngsville, NC - USA
T 919-554-2244; 800-356-7311 - F 919-554-2266; 800-899-8181
<http://www.sirchie.com>

1.4. Emergency telephone number

Emergency number : 1.800.424.9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Sol. 2	H228
Eye Irrit. 2A	H319
Carc. 2	H351

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H228 - Flammable solid
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from hot surfaces, open flames, sparks. - No smoking
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P264 - Wash all exposed skin thoroughly after handling
P280 - Wear eye protection, protective gloves
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P370+P378 - In case of fire: Use CO2, dry chemical, foam, water spray for extinction
P405 - Store locked up
P501 - Dispose of contents/container to local/regional/national/international regulations

2.3. Other hazards

Other hazards not contributing to the classification

: None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

Full text of H-phrases: see section 16

3.2. Mixtures

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Name	Product identifier	%	Classification (GHS-US)
manganese(IV)oxide	(CAS No)1313-13-9	12 - 42	Not classified
iron, powder	(CAS No)7439-89-6	20	Flam. Sol. 2, H228 Eye Irrit. 2A, H319
4-methyl-1,3-dioxolan-2-one	(CAS No)108-32-7	0 - 8	Not classified
1,3-dioxolane, stabilized	(CAS No)646-06-0	0 - 8	Flam. Liq. 2, H225
lithium	(CAS No)7439-93-2	1 - 6	Not classified
dimethoxymethane	(CAS No)110-714-4	0 - 6	Not classified
lithium bis(trifluoromethylsulfonyl)imide	(CAS No)90076-65-6	0 - 3	Not classified
lithiumtrifluoromethanesulfonate	(CAS No)33454-82-9	0 - 3	Not classified
graphite	(CAS No)7782-42-5	0 - 3	Not classified
carbon black	(CAS No)1333-86-4	0 - 1	Carc. 2, H351

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Reactivity : No data available.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

carbon black (1333-86-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	3.5 mg/m ³

manganese(IV)oxide (1313-13-9)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³

1,3-dioxolane, stabilized (646-06-0)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm

graphite (7782-42-5)		
USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³

8.2. Exposure controls

Personal protective equipment : Gloves. Safety glasses.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Not determined.
Color	: No data available on colour.
Odor	: No data available on odour.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

No reactivity hazard other than the effects described in sub-sections below.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

carbon black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg (Rat)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit)
iron, powder (7439-89-6)	
LD50 oral rat	30000 mg/kg (Rat)
manganese(IV)oxide (1313-13-9)	

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LD50 oral rat	3478 mg/kg (Rat)
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4-methyl-1,3-dioxolan-2-one (108-32-7)

LD50 oral rat	> 20000 mg/kg (Rat)
LD50 dermal rabbit	> 24000 mg/kg (Rabbit)

1,3-dioxolane, stabilized (646-06-0)

LD50 oral rat	> 3000 mg/kg (Rat)
LD50 dermal rabbit	8480 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 20 mg/l/4h (Rat)

graphite (7782-42-5)

LD50 oral rat	> 2000 mg/kg (Rat)
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classifiedBased on available data, the classification criteria are not met
Carcinogenicity	: Suspected of causing cancer.

carbon black (1333-86-4)

IARC group	2B
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Reproductive toxicity	: Not classifiedBased on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classifiedBased on available data, the classification criteria are not met
Aspiration hazard	: Not classifiedBased on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

carbon black (1333-86-4)

LC50 fish 1	> 1000 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 1	> 5600 mg/l (24 h; Daphnia magna)

lithium bis(trifluoromethylsulfonyl)imide (90076-65-6)

LC50 fish 1	202 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	20 mg/l (48 h; Daphnia magna)

lithium (7439-93-2)

Threshold limit algae 1	1.5 mg/l (Scenedesmus quadricauda)
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4-methyl-1,3-dioxolan-2-one (108-32-7)

LC50 fish 1	5300 mg/l (96 h; Leuciscus idus; Static system)
EC50 Daphnia 1	> 1000 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	900 mg/l (72 h; Scenedesmus subspicatus; BIOMASS)

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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carbon black (1333-86-4)

Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

iron, powder (7439-89-6)

Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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manganese(IV)oxide (1313-13-9)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

lithiumtrifluoromethanesulfonate (33454-82-9)	
Persistence and degradability	Biodegradability in soil: no data available.

lithium (7439-93-2)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

4-methyl-1,3-dioxolan-2-one (108-32-7)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.046 g O ₂ /g substance
Chemical oxygen demand (COD)	1.29 g O ₂ /g substance

1,3-dioxolane, stabilized (646-06-0)	
Persistence and degradability	Not readily biodegradable in water.

graphite (7782-42-5)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Lithium Battery (CR123A Non-rechargeable)	
Bioaccumulative potential	Not established.

carbon black (1333-86-4)	
Bioaccumulative potential	Not bioaccumulative.

iron, powder (7439-89-6)	
BCF other aquatic organisms 1	74000 (Chlorophyta)
BCF other aquatic organisms 2	58300 (Pectinidae)
Log Pow	-0.77

manganese(IV)oxide (1313-13-9)	
Bioaccumulative potential	Not bioaccumulative.

lithiumtrifluoromethanesulfonate (33454-82-9)	
Bioaccumulative potential	No bioaccumulation data available.

lithium (7439-93-2)	
Bioaccumulative potential	No bioaccumulation data available.

4-methyl-1,3-dioxolan-2-one (108-32-7)	
Log Pow	-0.48 - -0.41 (Experimental value)
Bioaccumulative potential	Bioaccumulation: not applicable.

1,3-dioxolane, stabilized (646-06-0)	
Log Pow	-0.37
Bioaccumulative potential	Bioaccumulation: not applicable.

graphite (7782-42-5)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

carbon black (1333-86-4)	
Ecology - soil	Not toxic to plants. Not toxic to animals.

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12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

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Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

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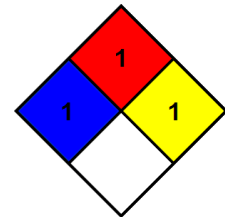
SECTION 16: Other information

- Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging. Keep in tightly closed container. Keep cool and dry. Avoid all ignition sources - heat, open flame, sparks. Avoid incompatible materials. Avoid dust creation and accumulation. Avoid inhalation and ingestion. Avoid contact with eyes. Wash thoroughly after handling. A primary (non-rechargeable) lithium battery or cell contained in equipment is forbidden for transport aboard a passenger carrying aircraft unless: a. The battery or cell complies with the requirements and limitations of 173.185(b)(1), (b)(2), (b)(3), (b)(4) and (b)(6) or 173.185(c)(1), (c)(2), (c)(3) and (c)(5) of this subchapter; b. The package contains no more than the number of lithium batteries or cells necessary to power the intended piece of equipment; c. The equipment containing the battery or cell is packed in strong packagings; and d. The net weight of the package does not exceed 5 kg. Packages complying with the requirements of this special provision are excepted from all other requirements of this subchapter.
- Other information : This Safety Data Sheet has been established in accordance with the applicable European Union legislation.

Full text of H-phrases: see section 16:

Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Sol. 2	Flammable solids Category 2
H228	Flammable solid
H319	Causes serious eye irritation
H351	Suspected of causing cancer

- NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
- NFPA fire hazard : 1 - Must be preheated before ignition can occur.
- NFPA reactivity : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



HMIS III Rating

- Health : 1 Slight Hazard - Irritation or minor reversible injury possible
- Flammability : 1 Slight Hazard
- Physical : 1 Slight Hazard
- Personal Protection : B

SDS US (GHS HazCom 2012)

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, expressed or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.