



**Safety Data Sheet**  
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS

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Revision: 01/03/2020

## 1. Identification

- **Product identifier**
- **Trade name: Rechargeable Candles: Lithium Ion Battery**
- **Other means of identification:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Lithium-based battery product.
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
Lamp Service Products  
222 East Meats Avenue  
Orange, CA 92865  
Phone: (714) 288-9140
- **Emergency telephone number:**  
ChemTel Inc.  
(800) 255-3924 (North America)  
(801) 1 (813)248-0585 (International)

## 2. Hazard(s) Identification

### Classification of the substance or mixture

Note: These lithium-ion rechargeable batteries are sealed units and are not harmful under conditions of normal use as recommended by the manufacturer. The information in this section relates to unusual conditions resulting from abuse in which the battery electrodes and electrolyte are exposed.

### GHS Classification:

Skin irritation (Category 2)  
Skin sensitization (Category 1)  
Eye irritation (Category 2)  
Single target organ toxicity, single exposure (Category 3)

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**Pictograms:****Signal Word:** Danger**Hazard Statements:**

H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause serious respiratory irritation

**Precautionary Statements:****Prevention:**

P264 Wash skin and clothing thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves, protective clothing, eye protection, face protection.  
P261 Avoid breathing dust, fume, gas, mist, vapors, spray.  
P271 Use only outdoors or in a well-ventilated area.

**Response:**

P301 + P312 IF SWALLOWED: Call a POISON CENTER if you feel unwell.  
P330 Rinse mouth.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P321 Specific treatment (See additional emergency instructions).  
P333 +P313 If skin irritation or rash occurs: Get medical advice.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 +P313 If eye irritation persists: Get medical advice.  
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER, if you feel unwell.

**Storage:**

P403 +P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Disposal:**

P501 Send contents to approved waste treatment plants.

**Other Hazards:**

**Physical and Chemical hazards:** See Section 10

**Human health hazards:** See Section 11

**Environmental hazards:** See Section 12

### 3. Composition/ Information on Ingredients

12190-79-3	Cobaltate, lithium	35%
7782-42-5	Graphite	30%
21324-40-3	Phosphate (1-), Hexafluoro-, Lithium	15%
7440-50-8	Copper	10%
7429-90-5	Aluminum	5%
24937-79-9	Polyvinylidene fluoride resin	5%

### 4. First-Aid Measures

#### Description of first aid measures

##### General information:

Information references exposures to battery contents, and not exposures to whole units. Exposures to whole units are unlikely to produce health hazards.

##### After inhalation:

Unlikely route of exposure.

Supply fresh air; consult doctor in case of complaints.

##### After skin contact:

Immediately remove any clothing soiled by the product.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate help for blistering or open wounds.

##### After eye contact:

Immediately remove contact lenses if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed:

Strong caustic effect on skin and mucous membranes.

Gastric or intestinal disorders when ingested.

##### Danger:

Danger of gastric perforation.

Harmful if swallowed.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

## 5. Fire Fighting Measures

### Extinguishing media

#### Suitable extinguishing agents:

Fire-extinguishing powder

Sand

Water in flooding quantities.

**For safety reasons unsuitable extinguishing agents:** None.

#### Special hazards arising from the substance or mixture:

During heating or in case of fire poisonous gases are produced.

#### Advice for firefighters

#### Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

#### Additional information:

Cool endangered receptacles with water in flooding quantities.

## 6. Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

If containers are leaking, use respiratory protective device against the effects of fumes/dust/aerosol.

Use personal protective equipment as required.

Ensure adequate ventilation.

### Environmental precautions

Avoid release to the environment.

### Methods and material for containment and cleaning up

Use inert material (clay, sawdust, kaolin) to absorb material and sweep up. Prevent spilled material from entering sewers, drains, bodies of water.

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7. Handling and Storage**

**Handling**

**Precautions for safe handling:**

Information is only applicable to product contents, and not to product as normally supplied. This information is applicable to damaged, leaking, or spilled product as contact with contents is possible under these conditions. Keep away from open flames or temperatures exceeding manufacturer ratings. DO NOT ATTEMPT TO OPEN SEALED CELLS OR BATTERIES – BATTERY CONTENTS MAY PRESENT SERIOUS SAFETY AND HEALTH HAZARDS. SHORT-CIRCUITING THE TERMINALS OF A DEVICE MAY RESULT IN DAMAGE TO DEVICE AND ANY NEARBY OBJECTS OR PERSONNEL.

**Information about protection against explosions and fires:**

Prevent impact and friction.

Substance/product is ignitable under certain conditions.

**Conditions for safe storage, including any incompatibilities**

**Requirements to be met by storerooms and receptacles:**

Store in a dry, well-ventilated place.

Do not use or store near open flame.

Avoid extreme temperatures; battery may rupture and release contents.

Do not store and transport with incompatible materials.

Store individual batteries or cells only in approved packaging in order to avoid inadvertent short circuits, as this may result in damage to device, nearby objects, personnel, or all of the above.

**Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from water.

Do not store together with acids.

**8. Exposure Controls/ Personal Protection**

**Control parameters**

**Components with limited values that require monitoring in the workplace:**

CAS No.	AGGIH	NIOSH	OSHA
12190-79-3	N/A	N/A	N/A
7429-90-5	TLV-TWA 1mg/m3	REL-TWA 2mg/m3 REL-TWA 5mg/m3 REL-TWA 10mg/m3	PEL-TWA 5mg/m3 PEL-TWA 15mg/m3
7440-50-8	TLV-TWA	REL-TWA 1mg/m3 REL-TWA .1mg/m3	PEL-TWA .1mg/m3 PEL-TWA 1mg/m3
21324-40-3	N/A	N/A	N/A
24937-79-9	N/A	N/A	N/A
7782-42-5	TLV-TWA 2mg/m3	REL-TWA 2.5mg/m3	PEL-TWA 15mppcf PE-TWA 20

**Exposure controls**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the eyes.  
 Do not inhale gases / fumes / aerosols.

**Engineering controls:**

No relevant information available.

**Breathing equipment:**

Not required under normal conditions of use.  
 For spills, respiratory protection may be advisable.

**Protection of hands:**

Not required under normal conditions of use.  
 Wear protective gloves to handle contents of damaged or leaking units.  
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**Eye protection:**

Follow relevant national guidelines concerning the use of protective eyewear.

**Body protection:**

Protective work clothing  
 Protection may be required for spills.

**Limitation and supervision of exposure into the environment:**

No relevant information available.

**Risk management measures:**

See Section 7 for additional information.

**9. Physical and Chemical Properties**

Information on basic physical and chemical properties

Appearance:

Form:	Solid metal container containing liquid and solid contents
Color:	According to product specifications.
Odor:	Odorless
Odor Threshold:	Not determined.
pH Value:	Not determined.
Melting Point/ Melting Range:	Not determined.
Boiling Point/ Boiling Range:	Not determined.
Flash Point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Auto Ignition Temperature:	Not determined.

Appearance:	
Danger of Explosion:	Product does not represent an explosion hazard during normal use. Leaking contents may react with water to produce explosive or flammable gas.
Exposure Limits:	
Lower:	Not determined.
Upper:	Not determined.
Oxidizing Properties:	Not determined.
Vapor Density:	Not determined.
Evaporation rate:	Not determined.
Solubility in/ Miscibility with Water:	Not miscible or difficult to mix.
Partition Coefficient (n-octanal/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Other information:	No relevant information available.

**10. Stability and Reactivity**

**Reactivity:** No relevant information available.

**Chemical stability:**

**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Possibility of hazardous reactions:**

Hazardous reactions generally occur with contents of leaking batteries only. Strong exothermic reaction with acids.

Toxic fumes may be released if heated above the decomposition point. Contact with water releases flammable gases.

**Conditions to avoid:**

Excessive heat.

**Incompatible materials:**

No relevant information available.

**Hazardous decomposition products:**

Carbon dioxide and Carbon monoxide

Contact with decomposition products does not normally occur; information is applicable only to damaged devices.

Flammable gases/vapors

Toxic metal oxide smoke

Chlorine

Chlorine compounds

## 11. Toxicological Information

### Information on toxicological effects

**Acute toxicity:**

LD/LC50 values that are relevant for classification:

7719-09-7 thionyl dichloride

Inhalative LC50 /4h 2.7 mg/l (rat)

**Primary irritant effect:**

On the skin: Strong caustic effect in case of contact with electrolyte only.

On the eye: Strong caustic effect in case of contact with electrolyte only.

Sensitization: No sensitizing effects known.

**IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

**NTP (National Toxicology Program):**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

Probable route(s) of exposure: None

**Acute effects (acute toxicity, irritation and corrosivity):** From product as supplied: None.

**Repeated dose toxicity:** From product as supplied: None.

**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

**Carcinogenicity:** Based on available data, the classification criteria are not met.

**Reproductive toxicity:** Based on available data, the classification criteria are not met.

**STOT-single exposure:** Based on available data, the classification criteria are not met.

**STOT-repeated exposure:** Based on available data, the classification criteria are not met.

**Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12. Ecological Information

**Toxicity:**

**Aquatic toxicity:** The product contains materials that are harmful to the environment.

**Persistence and degradability:** Not easily biodegradable

**Bioaccumulative potential:** No relevant information available.

**Mobility in soil:** No relevant information available.

**Additional ecological information:**

**General notes:** Avoid release to the environment.

**Other adverse effects:** No relevant information available.



### 13. Disposal Considerations

**Waste treatment methods**

**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Contact waste processors for recycling information.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

**Uncleaned packaging**

**Recommendation:** Disposal must be made according to official regulations.

### 14. Transport Information

UN-Number UN3481  
 DOT, ADR/RID/ADN, IMDG, IATA

UN proper shipping name Lithium ion batteries contained in equipment  
 DOT, IATA LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT  
 ADR/RID/ADN, IMDG

**Transport hazard class(es)**  
**DOT, IMDG, IATA**



Class: 9  
 Label: 9

**ADR/RID/AND**



Class: 9 (M4)  
 Label: 9

<b>Packing group</b>	This UN-number is not assigned a packing group.
<b>Environmental hazards</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user:</b>	Warning: Miscellaneous dangerous substances and articles
<b>Danger code (Kemler):</b>	-
<b>EMS Number:</b>	F-A,S-I
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</b>	Not applicable.
<b>Transport/Additional information:</b>	For small battery shipping exceptions, see the following: ADR - Special Provision 188 DOT - 49CFR173.185(c) IATA - PACKING INSTRUCTION 970, Section II IMDG – Special Provision 188

## 15. Regulatory Information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### United States (USA)

##### SARA

#### Section 302 (extremely hazardous substances):

None of the ingredients are listed.

#### Section 355 (extremely hazardous substances):

None of the ingredients are listed.

#### Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

#### TSCA (Toxic Substances Control Act):

All ingredients are listed or exempt.

#### Proposition 65 (California):

Exposure to contents is unlikely. Listings are present to ensure compliance with the Proposition 65 notification requirement.

#### Chemicals known to cause cancer:

None of the ingredients are listed.

#### Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**EPA (Environmental Protection Agency):**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

**Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

## 16. Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

**Sources:**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))

Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers