

# Safety data sheet

93384

Version 1.0

Effective date: 2023-06-13



This Safety Data Sheet adheres to Regulation No. 2020/878 - CLP No. 1272/2008 - REACH No. 1907/2006 - GB CLP

## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

Trade name: Lithium Ion Battery

Product no: 18650 1200mAh

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

Product use: Used in Product 93384

### 1.3 Details of the Supplier of the safety data sheet:

Learning Resources Inc.

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**Contact:** customerservice@learning-resources.co.uk

**1.4 Emergency telephone number:** Use your local emergency number

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture according to CLP no. 1272/2008.

<b>Physical Hazard</b>	Not classified.
<b>Health Hazard</b>	Not classified.
<b>Environment Hazards</b>	Not classified.

### 2.2 Label elements CLP no. 1272/2008:

<b>Hazard pictograms:</b>	N/A
<b>Signal word:</b>	N/A
<b>Hazard statements:</b>	N/A
<b>Precautionary statements:</b>	N/A
<b>Additional information:</b>	N/A

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical Composition</b>	<b>Chemical Formula</b>	<b>CASE No.</b>	<b>Weight (%)</b>
Lithium cobaltate	$\text{LiCoO}_2$	12190-79-3	15 - 40
Graphite	C	7782-42-5	11232
Lithium hexafluorophosphate	$\text{LiPF}_6$	21324-40-3	11232
Copper	Cu	7440-50-8	41456
Aluminum	Al	7429-90-5	45570
Nickel	Ni	7440-02-0	45413

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## SECTION 4. FIRST AID MEASURES

### 4.1 Description of first aid measures:

#### Inhalation:

Remove from exposure and move to fresh air immediately. Use oxygen if available.

#### Skin contact:

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

#### Eye contact:

Flush eyes with plenty of water for least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

#### Ingestion:

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

## SECTION 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media:

**Suitable extinguishing media:** H<sub>2</sub>O, CO<sub>2</sub>

**Unsuitable extinguishing media:** None Known

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

Cell may vent when subjected to excessive heat-exposing battery contents. Carbon monoxide, carbon dioxide, lithium oxide fumes may occur.

### 5.3 Advice for firefighters:

Not required for this material

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

If the battery is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the vapors to dissipate, avoid skin and eyes contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate. If leakage of the battery happens, liquid could be absorbed by using sand, earth or other inert substance and contaminated area should be ventilated meantime.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water source.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules, avoid leached substances to get into the earth, canalization or waters.

### 6.4 Reference to other sections:

N/A

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## SECTION 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling:

The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.

Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire.

Do not crush or puncture the battery or immerse in liquids

### 7.2 Conditions for safe storage, including any incompatibilities:

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided.

Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

### 7.3 Specific end use(s):

This product should only be used for applications described in Section 1.2.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

**8.1.1 Ingredient Comments** No exposure limits noted for ingredient(s)

### 8.2 Exposure Control

**Engineering measures** Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor.

Keep away from heat and open flame. Store in a cool, dry place.

**Respiratory protection** Not necessary under normal conditions.

**Skin protection:** Not necessary under normal conditions, wear suitable protective clothing and gloves if handling an open or leaking battery.

**Eye protection** Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.

**Other protection** Have a safety shower and eye wash fountain readily available in the immediate work area.

**Hygiene measures** Do not eat, drink, or smoke in work area. Maintain good housekeeping.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties:

<b>Appearance:</b> -	<b>Color:</b> Blue	<b>Odor:</b> -	<b>PH:</b> -	<b>Viscosity:</b> -
<b>Flashpoint:</b> -	<b>Boiling point:</b> -	<b>Vapor pressure:</b> -	<b>Density:</b> -	<b>Melting point:</b> -
<b>Thermal decomposition:</b> -	<b>Auto-ignition:</b> -	<b>Explosive limits</b> -	<b>Solubility in water:</b> -	

### 9.2 Other information:

n/a

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## SECTION 10. STABILITY AND REACTIVITY

### 10.1 Reactivity:

NA

### 10.2 Chemical stability:

The product is stable under conditions described Section 7

### 10.3 Possibility of hazardous reactions: NA

### 10.4 Conditions to avoid:

Heat above 70C or incinerate. Deform, Mutilate, Crush, Disassemble, Overcharge, Short circuit, Expose over a long period to humid conditions

### 10.5 Incompatible materials:

Oxidizing agents, acid, base.

### 10.6 Hazardous decomposition products:

Carbon monoxide, carbon dioxide, lithium oxide fumes.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological effects:

**Route of Exposure:** n/a

**Acute toxicity:**

NA

**Irritation:**

Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.

**Germ cell mutagenicity:**

N/A

**Carcinogenicity:**

N/A

**Reproductive toxicity:**

N/A

**Specific target organ toxicity - single exposure:**

N/A

**Specific target organ toxicity – repeated exposure:**

N/A

**Aspiration hazard:**

N/A

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## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity:

N/A

### 12.2 Persistence and degradability:

N/A

### 12.3 Bioaccumulative potential:

N/A

### 12.4 Mobility in soil:

N/A

### 12.5 Result of PBT and vPvB assesment:

N/A

### 12.6 Other adverse effects:

NA

## SECTION 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods:

Dispose of all waste materials in accordance with all applicable federal, state and local regulations

## SECTION 14. TRANSPORT INFORMATION

**General:** The dangerous goods regulations require that each battery design be subject to tests contained in Section 38.3 of the UN Manual of Tests and Criteria prior to being offered for transport.

<b>Label for conveyance</b>	Lithium Battery Label
<b>UN Number</b>	UN 3480 UN 3481 UN 3480 or UN 3481
<b>Transport hazard class(es)</b>	9
<b>Packing group</b>	---
<b>Marine pollutant</b>	No
<b>UN Proper shipping name</b>	Lithium ion Batteries (Including lithium ion polymer batteries) Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) Lithium ion Batteries contained in equipments (Including lithium ion polymer batteries)
<b>ICAO/IATA</b>	(ICAO), TI (IATA) DGR 64 965 IB 966967 II Can be shipped by air in accordance with international Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA) DGR 64 <sup>th</sup> Packing Instructions Section IB of 965 or Section II of 966967 appropriately.
<b>IMDG CODE</b>	188 IMDG CODE (Amdt 41-22) International Maritime Dangerous Goods Code under Special Provision 188 IMDG CODE (Amdt 41-22)
<b>ADR</b>	(ADR) 188 European Agreement concerning the International Carriage of Dangerous Goods by Road under Special Provision 188
<b>RID</b>	(RID) 188 Regulations concerning the International Carriage of Dangerous Goods by Rail under Special Provision 188

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## SECTION 15. REGULATORY INFORMATION

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

**Sources:** Dangerous Goods Regulations  
Recommendation on the Transport of Dangerous Goods Model Regulations  
International Maritime Dangerous Goods  
Technical Instructions for the Safe Transport of Dangerous Goods  
Classification and code of dangerous Goods  
Consumer Product Safety Act(CPSA)  
Federal Environmental Pollution Control Act(FEPCA)  
Resource Conservation and Recovery Act(RCRA)  
European Agreement concerning the International Carriage of Dangerous  
Regulations concerning the International Carriage of Dangerous  
In according with all Federal, State and local laws.

### 15.2 Chemical safety assessment:

Chemical safety assessments have not been performed for this product.

## SECTION 16. OTHER INFORMATION

### Information Sources:

EC Regulation 1907/2006 (REACH)

EC Regulation 1272/2008 (CLP)

### Abbreviations and acronyms

R22	Harmful if swallowed
NC	Not classified.
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail European
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG	International Maritime Code for Dangerous Goods
ICAO	International Civil Aviation Organization
IATA	International Air Transport Association
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
CAS	Chemical Abstracts Service (division of the American Chemical Society)
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals.
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative



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#### **Additional information:**

The information above is believed to be accurate and represents the best information currently available to us. However, Learning Resources makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

\*\*\*End\*\*\*

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