

# SAFETY DATA SHEET

Product Name: Lithium-ion Battery

Issue Date: 23/01/2024

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

**PRODUCT NAME:** Lithium-ion Battery 18650 7.4V, 4.4Ah, 32.56Wh

**APPLICATIONS:** For Stock No.  
90092 LED Rechargeable Spotlight

**SUPPLIER:** Draper Tools Ltd  
Hursley Road  
Chandlers Ford  
Eastleigh  
Hampshire  
SO53 1YF  
Draper Helpline +44 (0) 2380 494344  
Opening hours 8:30-17:00 Monday – Friday.  
[www.drapertools.com](http://www.drapertools.com)

## SECTION 2: Hazards identification

Emergency overview	N/A
Classification according to GHS	Not a dangerous substance according to GHS
Label elements:	
Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable
Hazard statement(s)	Not Applicable
Precautionary statement(s):	
Prevention	Not Applicable
Response	Not Applicable
Disposal	Not Applicable
Environmental hazards:	No relevant information
Important symptoms:	See section 11 for more information

## SECTION 3: Composition/information on ingredients

Chemical Composition	Chemical Formula	CAS No.	Weight (%)
Lithium cobaltate	LiCoO2	12190-79-3	15 - 40
Graphite	C24X12	7782-42-5	10 - 30
Phosphate (1-), hexafluoro-, lithium	LiPF6	21324-40-3	10 - 30
Copper	Cu	7440-50-8	7-13
Aluminium	Al	7429-90-5	5-10
Nickel	Ni	7440-02-0	1-5

#### SECTION 4: First aid measures

<b>Eye contact</b>	Flush eyes with plenty of water for least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
<b>Skin contact</b>	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.
<b>Inhalation</b>	Remove from exposure and move to fresh air immediately. Use oxygen if available.
<b>Ingestion</b>	Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

#### SECTION 5: Firefighting measures

<b>Flash Point</b>	N/A
<b>Auto-Ignition Temperature</b>	N/A
<b>Extinguishing Media</b>	H <sub>2</sub> O, CO <sub>2</sub>
<b>Special Fire-Fighting Procedures</b>	Self-contained breathing apparatus
<b>Unusual Fire and Explosion Hazards</b>	Cell may vent when subjected to excessive heat-exposing battery contents
<b>Hazardous Combustion Products</b>	Carbon monoxide, carbon dioxide, lithium oxide fumes.

#### SECTION 6: Accidental release measure

##### **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 incinerated. 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.

##### **Environment 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.

##### **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.

#### SECTION 7: Handling and storage

<b>Handling</b>	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.
<b>Storage</b>	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.

<b>Other Precautions</b>	The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.
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## SECTION 8: Exposure controls/personal protection

<b>Engineering Controls</b>	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.
<b>Personal Protective Equipment</b>	Respiratory Protection: Not necessary under normal conditions. Skin and body Protection: Not necessary under normal conditions, Wear suitable protective clothing and gloves if handling an open or leaking battery. Hand protection: Wear suitable 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.
<b>Other Protective Equipment</b>	Have a safety shower and eye wash fountain readily available in the immediate work area.
<b>Hygiene Measures</b>	Do not eat, drink, or smoke in work area. Maintain good housekeeping.

## SECTION 9: Physical and chemical properties

<b>Form</b>	Solid
<b>Color</b>	Blue
<b>Odour</b>	Not Applicable
<b>pH</b>	Not Applicable
<b>Melting point/freezing point</b>	Not Applicable
<b>Boiling Point and Boiling range</b>	Not Applicable
<b>Flash Point</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	Not Applicable
<b>Vapor Pressure</b>	Not Applicable
<b>Vapor Density</b>	Not Applicable
<b>Relative density</b>	Not Applicable
<b>Solubility in Water</b>	Not Applicable
<b>Auto-ignition temperature</b>	Not Applicable
<b>Decomposition temperature</b>	Not Applicable
<b>Evaporation rate</b>	Not Applicable
<b>Flammability (soil, gas)</b>	Not Applicable
<b>Viscosity</b>	Not Applicable

**SECTION 10: Stability and reactivity**

<b>Stability</b>	The product is stable under conditions described Section 7
<b>Conditions to Avoid</b>	Heat above 70°C or incinerate. Deform, Mutilate, Crush, Disassemble, Overcharge, Short circuit, Expose over a long period to humid conditions.
<b>Incompatible Materials</b>	Oxidizing agents, acid, base.
<b>Hazardous Decomposition Products</b>	Carbon monoxide, carbon dioxide, lithium oxide fumes.
<b>Possibility of Hazardous Reaction</b>	Not Applicable

**SECTION 11: Toxicological information**

<b>Irritation</b>	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.
<b>Sensitization</b>	Not Applicable
<b>Neurological Effects</b>	Not Applicable
<b>Teratogenicity</b>	Not Applicable
<b>Reproductive Toxicity</b>	Not Applicable
<b>Mutagenicity (Genetic Effects)</b>	Not Applicable
<b>Toxicologically Synergistic Materials</b>	Not Applicable

**SECTION 12: Ecological information**

<b>Ecological Toxicity</b>	Not Applicable
<b>Mobility in soil</b>	Not Applicable
<b>Persistence and Degradability</b>	Not Applicable
<b>Bioaccumulation potential</b>	Not Applicable
<b>Other Adverse Effects</b>	Not Applicable

**SECTION 13: Disposal considerations**

<b>Product disposal recommendation</b>	Observe local, state and federal laws and regulations.
<b>Packaging disposal recommendation</b>	Disposal must be made according to official regulations

**SECTION 14: Transport information**

<b>Label for conveyance</b>	Lithium Battery Label
<b>UN Number</b>	<del>UN 3480</del> or UN 3481
<b>Transport hazard class(es)</b>	9

<b>Packing group</b>	N/A
<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 equipment (Including lithium ion polymer batteries)
<b>ICAO/IATA</b>	The batteries are not restricted to IMDG Code 2022 Edition (Amdt 41-22) according to special provision 188.
<b>DOT</b>	Other requirements for the US Department of Transportation (DOT) Subchapter C, Hazardous Materials Regulations if shipped in compliance with 49 CFR 173.185.
<b>ADR/ ADN</b>	The batteries are not subject to the provisions of United Nations Economic Commission for Europe (UNECE) ADR/ADN if they meet the requirements of special provision 188 of Chapter 3.3. Applicable as from 1 January 2023.
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.	

## SECTION 15: Regulatory information

Law information

《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.

## SECTION 16: Other information

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, 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.

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