

SAFETY DATA SHEET

Lithium-ion Battery

Issue Date: 17/10/2025 Version: 2

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

Product identifier

Product Name:

Lithium-ion Battery

Model: INR18650

Nominal Voltage: 3.7V

Rated Capacity: 4400mAh, 16.28Wh

Weight: 90.6g

Dimension: L x W x T (66.4 x 36.4 x 18.1) mm

Applications:

For: COB LED Rechargeable Work light (87737)

Details of the supplier of the safety data sheet

Draper Tools Ltd

Hursley Road, Chandlers Ford, Eastleigh

Hampshire SO53 1YF

United Kingdom

www.drapertools.com

Emergency telephone number

Draper Helpline +44 (0) 2380 494344

Opening hours 8:30-17:00 Monday – Friday.

SECTION 2: Hazards identification

Hazard Description

Not dangerous with normal use. Do not dismantle, open or shred the battery. Ingredients contained within or their ingredients products could be harmful.

Primary Route(s) of Exposure

Inhalation, Ingestion, Skin contact and Eye contact.

Potential Health Effects

Inhalation: Vapours or mists from a ruptured battery may cause respiratory irritation.

Ingestion: The battery ingredients contained within or their ingredients products can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

Skin: Skin contact with contents of an open battery can cause severe irritation or burns to the skin.

Eye: Eye contact with contents of an open battery can cause severe irritation or burns to the eye.

SECTION 3: Composition/information on ingredients

Chemical Name	Concentration or concentration ranges (%)	CAS Number
Lithium Cobalt Oxide	35-38	12190-79-3
Graphite	20-22	7782-42-5
Copper	9-10	7440-50-8
Aluminum	5-6	7429-90-5
Ethylene carbonate	14-16	96-49-1
Polypropylene	5-6	9003-07-0

Carbonate, methyl ethyl	4-5	623-53-0
Phosphate (1-), hexafluoro-, lithium	5-6	21324-40-3

Note: CAS number is Chemical Abstract Service Registry Number.

SECTION 4: First aid measures

Inhalation

Remove source of contamination or move victim to fresh air. Obtain medical advice.

Ingestion

Please rinse mouth thoroughly with water. Induce vomiting under the guidance of professional personage.

Please seek medical treatment in time.

Skin contact

Remove contaminated clothes and rinse skin with plenty of water or shower for at15 minutes. Get medical aid.

Eye contact

Irrigate with flowing water for 15 minutes. If irritation persists, consult a physician.

SECTION 5: Firefighting measures

Characteristics of Hazard

Toxic fumes, gases or vapours may evolve on burning.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, lithium oxide fumes and so on.

Fire-extinguishing Methods and Extinguishing Media

Please use water, dry sand and other proper fire extinguishing media.

Attention in Fire-extinguishing

The firemen should put on anti-gas masks and full fire-fighting suits.

SECTION 6: Accidental release measure

Personal Precautions, protective equipment, and emergency procedures

Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8.

Environmental Precautions

Prevent material from contaminating soil and from entering sewers or waterways.

Methods and materials for Containment

Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.

Methods and materials for cleaning up

Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.

SECTION 7: Handling and storage

Handling

Don't handling the batteries in manner that allows terminals to short circuit. Do not open, disassemble, crush or burn battery.

Storage

If the battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the battery periodically.

Long period storage: -10°C~35°C, 60±25%R.H.

Do not storage the battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

Keep out of reach of children.

Do not expose the battery to heat or fire. Avoid storage in direct sunlight.
Do not store together with oxidizing and acidic materials.

SECTION 8: Exposure controls/personal protection

Engineering Controls

No engineering controls are required for handling batteries that have not been damaged. Personal protective equipment for damaged batteries should include chemical resistant gloves and safety glasses.

Personal Protective Equipment

Respiratory Protection: In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use.

Protective Gloves: Not necessary under conditions of normal use.

Other Protective Clothing or Equipment: Not necessary under conditions of normal use.

Personal Protection is recommended for venting battery: Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

SECTION 9: Physical and chemical properties

Physical State:

Form	Solid
Colour	Blue
Odour	Odourless

Change in Condition:

pH, with indication of the concentration	No data is available.
Melting point/freezing point	No data is available.
Boiling Point, initial boiling point	No data is available.
Flash Point	No data is available.
Upper/lower flammability or explosive limits	No data is available.
Vapor Pressure	No data is available.
Vapor Density: (Air = 1)	No data is available.
Density/relative density	No data is available.
Solubility in Water	Insoluble
n-octanol/water partition coefficient	No data is available.
Auto-ignition temperature	No data is available.
Decomposition temperature	No data is available.
Odour threshold	No data is available.
Evaporation rate	No data is available.
Flammability (soil, gas)	No data is available.
Viscosity	No data is available.

SECTION 10: Stability and reactivity

Stability

Stable under normal temperatures and pressures.

Conditions to Avoid

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

Hazardous Decomposition Products

Toxic Fumes and may form peroxides.

Possibility of Hazardous Reaction

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

SECTION 11: Toxicological information

Irritation

In the event of exposure to internal contents, vapor fumes may be very irritating to eyes and skin.

Sensitization

No data is Available.

Reproductive Toxicity

No data is Available.

Toxicologically Synergistic Materials

No data is Available.

SECTION 12: Ecological information**General note**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Anticipated behaviour of a chemical product in environment / possible environmental impact / ecotoxicity

No data is Available.

Mobility in soil

No data is Available.

Persistence and Degradability

No data is Available.

SECTION 13: Disposal considerations**Waste Treatment**

Recycle or dispose of in accordance with government, state & local regulations.

Attention for Waste Treatment

Deserted batteries couldn't be treated as ordinary trash. Couldn't be thrown into fire or placed in high temperature. Couldn't be dissected, pierced, crushed or treated similarly. Best way is recycling.

SECTION 14: Transport information

This report applies to by air, by sea and by road.

The Lithium-ion Battery (model: INR18650) tested according to the requirements of the UNITED NATIONS "Manual of Tests and Criteria" Part III, subsection 38.3;

The Lithium-ion Battery was protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to short circuit.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking.

With regard to transport, the following regulations are cited and considered:

- *The International Civil Aviation Organization (ICAO) Technical Instructions*

- *The International Air Transport Association (IATA) Dangerous Goods Regulations*

The Lithium-ion Battery can be shipped by air in according to Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966~967 of the 2024 IATA *Dangerous Goods regulations 65th Edition*.

UN number: UN3481

UN Proper shipping name/Description (technical name):

Lithium-ion batteries packed with equipment or Lithium-ion batteries contained in equipment.

UN Classification (Transport hazard class): Class 9 (PI965 Section IB) or N/A (PI966~967 Section II).

PG Packing Group: N/A

- *International Maritime Dangerous Goods (IMDG) Code*

UN number: UN3481

UN Proper shipping name/Description (technical name):

Lithium-ion batteries packed with equipment or Lithium-ion batteries contained in equipment.

UN Classification (Transport hazard class): N/A

PG Packing Group: N/A

Marine pollutant(Y/N): N

The battery is not restricted according to *IMO IMDG Code (inc Amdt 41-22)*.

Need to meet the Special Provision: *International maritime dangerous goods code (IMDG)* 188, 230, 310, 348, 360, 376, 377.

EmS No.: F-A, S-I

- *JT/T 617-2018 Regulations concerning road transportation of dangerous goods*

UN number: UN3481

UN Proper shipping name/Description (technical name):

Lithium-ion batteries packed with equipment or Lithium-ion batteries contained in equipment.

UN Classification (Transport hazard class): N/A

PG Packing Group: N/A

The battery is not restricted according to *JT/T 617.2-2018 Regulations concerning road transportation of dangerous goods - Part 2: Classification*.

Need to meet the Special Provision: *Regulations concerning road transportation of dangerous goods* 188, 230, 310, 348, 360, 376, 377, 636.

SECTION 15: Regulatory information

Dangerous Goods Regulations

Recommendations on the Transport of Dangerous Goods Model Regulations

International Maritime Dangerous Goods Code

Regulations Concerning Road Transportation of Dangerous Goods

Technical Instructions for the Safe Transport of Dangerous Goods

Classification and Code of Dangerous Goods

Occupational Safety and Health Act (OSHA)

Toxic Substance Control Act (TSCA)

Consumer Product Safety Act (CPSA)

Federal Environmental Pollution Control Act (FEPCA)

The Oil Pollution Act (OPA)

Superfund Amendments and Reauthorization Act Title III (302/311/312/313) (SARA)

Resource Conservation and Recovery Act (RCRA)

Safety Drinking Water Act (CWA)

California Proposition 65

Code of Federal Regulations (CFR)

In accordance with all Federal, State and local laws.

SECTION 16: Other information

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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.

*** End of SDS ***