



SAFETY DATA SHEET

Version 3

Revision date: 4/5/23

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier

Lithium Ion Battery 3.7V INR18650E, 1300mAh, 4.81Wh

1.2 Relevant Identified Uses

Used with Draper product no. 83568 & 21447

1.3 Details of the Supplier of the Safety Data Sheet

Company name: Draper Tools Ltd
Address: Hursley Road, Chandler's Ford
Eastleigh, Hampshire, SO53 1YF
Telephone: +44 (0) 23 80266355
Email: sales@drapertools.com
Contact person: Customer Service
Website: www.drapertools.com

1.4 Emergency Telephone Number

+44 (0) 23 80266355 (not 24hrs)

2. Hazards Identification

Hazard classification:

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements:

Symbols/Pictograms	None
Signal word	None
Hazard Statements	Not Applicable
Precautionary Statements	Not Applicable

Health Hazards (Acute and Chronic)

These chemicals are contained in a sealed aluminium foil. Risk of exposure occurs only if the battery is mechanically or electrically abused. Contact of electrolyte with skin and eyes should be avoided.

Sign/Symptoms of Exposure:

A shorted battery can cause thermal and chemical burns upon contact with the skin. Maybe a reproductive hazard.

Explosive Danger:

Risk of explosion if batteries are exposed to temperature above 150oC or exposed to fire.

3. Composition Information on Ingredients

Chemical Name	CAS No.	Percent Content
Lithium Nickel Cobalt Manganese Oxide	182442-95-1	25.5-30.0%
Polyvinylidene Fluoride ((CH ₂ CF ₂) _n)	24937-79-9	0.45-0.80%
Graphite Powder (C)	7782-42-5	14.0-18.0%
Cellulose Sodium, Sodium Salt of Carboxy Methyl Cellulose (C ₈ H ₁₆ NaO ₈)	9008-32-4	0.2-0.35%
Lithium Hexafluorophosphate (LiPF ₆)	21324-40-3	14.4-18.5%
Ethylene Carbonate (C ₃ H ₄ O ₃)	96-49-1	
Dimethyl Carbonate (C ₃ H ₆ O ₃)	616-38-6	
Methyl Ethyl Carbonate (C ₄ H ₈ O ₃)	623-53-0	
Diethyl Carbonate (C ₅ H ₁₀ O ₃)	105-58-8	
Polypropylene	9003-07-0	2.8-4.0%
Copper Foil (Cu)	7440-50-8	8.5-12%
Nickel (Ni)	7440-02-0	0.9-1.3%
Aluminium Foil (Al)	7429-90-5	3.2-5.9%
Iron (Fe)	7439-89-6	17-21%
Polyethylene Terephthalate ((CO ₆ H ₄ COOCH ₂) _n)	25038-59-9	1.1-1.4%

4. First Aid Measures

Skin Contact:

Not anticipated. If the battery is leaking and the contained material is in contact with skin, flush with copious amounts of clean water for at least 15 minutes.

Eye Contact:

Not anticipated. If the battery is leaking and the contained material is in contact with skin, flush with copious amounts of clean water for at least 15 minutes. Seek medical advice immediately.

Inhalation:

Not anticipated. If the battery is leaking, move to a well-ventilated environment. If irritation persists, seek medical advice.

Ingestion:

Not anticipated. If the battery is leaking and the contained material is ingested, rinse the mouth and surrounding area with plenty of clean water and seek medical advice immediately.

5. Fire Fighting Measures

Unusual Fire and Explosion Hazard:

The battery may explode or leak potentially hazardous vapours if it is subjected to excessive heat, fire, over charging, short circuits, damage/punctures or crushing.

Hazardous Combustion Products:

Fire, excessive heat or over-voltage conditions may produce hazardous decomposition products. Damaged batteries can result in rapid heating and the release of flammable vapours.

Extinguishing Materials:

Dry chemical type extinguishers are the most effective means of extinguishing a battery fire. CO₂ extinguishers will also work effectively.

Fire Fighting Procedure:

Use positive pressure self-contained breathing apparatus if batteries are involved in a fire. Full protective clothing is necessary. During water application, caution is advised as burning pieces of flammable particles may be ejected from the fire.

6. Accidental Release Measures

The material contained in the battery will only be released in abused conditions. In the event of battery rupture and leakage, collect all the released materials that are not hot or burning in an appropriate container

whilst wearing proper protective equipment and ventilate the area. Dispose of these materials in accordance with local requirements.

7. Handling and storage

Handling:

1. Batteries are designed to be recharged. However, incorrect charging may cause the battery to catch fire. When charging, only use the dedicated charger.
2. Never disassemble or modify the battery.
3. Do not immerse in water.
4. Should a battery be ruptured, use nitrile gloves to handle components. Avoid inhalation of any vapour that is emitted.

5. Short circuiting causes heat to build up and can lead to ignition of surrounding material and burns.
6. In the event of skin or eye contact, refer to section 4.

Storage:

Store in a well-ventilated sprinkler-protected area. Do not place near heating equipment or expose to direct sunlight for extended periods.

8. Exposure Controls/Personal Protection

Engineering Controls:

Keep away from heat and open flames.

Ventilation:

Not necessary under normal use.

Respiratory Protection:

Not necessary under normal use.

Eye Protection:

Not necessary under normal use.

Protective gloves:

Not necessary under normal use.

9. Physical and Chemical Properties

State:	Solid	Boiling Point:	N/A
Odour:	N/A	Soluble in water:	Insoluble
pH:	N/A		

10. Stability and Reactivity

Chemical Stability:	Stable under normal conditions	Hazardous Polymerisation:	Will not occur
Incompatibility:	None during normal use	Hazardous Decomposition Products:	May be released if contents are exposed

11. Toxicological Information

The battery does not elicit any toxicological properties during normal use. If battery is ruptured, discard it immediately. Internal components may cause irritation and sensitisation.

Teratogenicity:	No information available
Carcinogenicity:	No information available
Mutagenicity:	No information available
Reproductive Toxicity:	No information available

12. Ecological Information

1. When properly used and disposed of, this item does not present an environmental hazard.
2. Do not allow contents to enter any water course.

13. Disposal Considerations

Disposal should be in accordance with local and national regulations.

14. Transport Information

Lithium-ion batteries containing no more than 1.5g/cell and 8g/battery pack of lithium, that are also no greater than 20Wh/cell and 100Wh/battery pack can be treated as “Non-Dangerous Goods” under the United Nations Recommendations on the Transport of Dangerous Goods, Special Provision 188, provided packaging is strong and prevents the products from short-circuiting.

Regarding air transport, the following Regulations are cited and considered:

- The International Civil Aviation Organisation (ICAO) Technical instructions (2021-2022 Edition)
- The International Air Transport Association (IATA) Dangerous Good Regulations (63rd Edition 2022)
- According to the packaging instruction of IATA DGR 63rd Edition for Transportation
- The International Maritime Dangerous Goods (IMDG) Code 2020 Edition (Amendment 40-20, Special Provision 188)

- The UN recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries, ST-SG-AC10-11-Rev7 Amed1 (UN3481)

UN proper shipping name: Lithium-ion batteries (including lithium-ion polymer batteries) or Lithium-ion Batteries contained in equipment or Lithium-ion Batteries packed with equipment (including lithium-ion polymer batteries)

Products are properly classified, described, packaged, marked and labelled and are in proper condition for transportation according to all the applicable International Regulations. They have been tested to the requirements in accordance with UN recommendations (T1-T8) on the Transport of Dangerous Goods Regulations and can be treated as “Non Dangerous Goods”

15. Regulatory Information

See section 14

16. Other Information

Details given in this document are believed to be correct at the time of completion. Whilst proper care has been

taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.