

SAFETY DATA SHEET

Product Name: Lithium-ion Rechargeable Cell

Issue Date: 09/05/2025 Version: 2

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

PRODUCT NAME: Lithium-ion Rechargeable Cell ICR18650 3.6V 2.0Ah 7.2Wh

APPLICATIONS: For: 12V Li-ion Battery, 2.0Ah (27370)
12V Li-ion Battery, 4.0Ah (70311)

SUPPLIER: **Draper Tools Ltd**
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SECTION 2: Hazards Identification

Classification:

According to Regulation (EC) No 1272/2008 (CLP), the goods are not considered dangerous goods and therefore no SDS is required.

The hazards mentioned in this document are in the case of a ruptured battery (Electrolyte leakage).

- Acute toxicity, Category 3, oral; H301
- Skin corrosion, Category 1A; H314
- Serious eye damage, Categories I; H318
- Specific target organ toxicity following repeated exposure, Categories I; H372

Label Elements:

- Hazard pictograms



Signal Word: Danger

Hazard Statements:

- H301 Toxic if swallowed
- H314 Causes severe skin burns and eye damage
- H372 Causes damage to organs through prolonged or repeated exposure

Precautionary Statements – Prevention

- P270 Do not eat, drink or smoke when using this product
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection

Precautionary Statements – Response

- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Precautionary Statements – Storage

- P405 Store locked up

Precautionary Statements – Disposal

- P501 Dispose of contents/container, in accordance with local/regional/national/international regulations.

Hazards Not Otherwise Classified (HNOC)

Not applicable

Other Information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effect.

SECTION 3: Composition/Information on Ingredients

| Ingredient | Molecular formula | CAS No. | Weigh % |
|-----------------------------|--|----------------|----------------|
| Lithium Cobalt Dioxide | LiCoO ₂ | 12190-79-3 | 35-38% |
| Graphite | C ₂₄ X ₁₂ | 7782-42-5 | 20-22% |
| Copper | Cu | 7440-50-8 | 9-10% |
| Aluminium | Al | 7429-90-5 | 5-6% |
| Ethylene carbonate | C ₃ H ₄ O ₃ | 96-49-1 | 14-16% |
| Polypropylene | C ₃ H ₆ | 9003-07-0 | 5-6% |
| Ethyl methyl carbonate | C ₄ H ₈ O ₃ | 623-53-0 | 4-5% |
| Lithium hexafluorophosphate | LiPF ₆ | 21324-40-3 | 5-6% |

SECTION 4: First Aid Measures

Eye Exposure

In case of contact with eyes, flush with copious of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Skin Exposure

If the internal battery materials of an opened battery cell come into contact with skin, immediately flush with plenty of water or soap.

Inhalation Exposure

In case of inhaling gas volatilized from inside of the battery, seek immediate medical attention.

Ingestion Exposure

If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

SECTION 5: Firefighting Measures

Danger Characteristic

Exposure to excessive heat can cause venting of the liquid electrolyte.

Battery may burst and release hazardous decomposition products when exposed to a fire situation.

Hazardous Combustion Products

Corrosive and toxic gas may be emitted during fire.

Fire-Fighting Method

The staff must equip with filter-mask (full mask) or isolated breathing apparatus.

The staff must wear the clothes which can resist the fire in the upwind direction.

Remove the container to the open space as soon as possible.

Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

Fire-Fighting Media

Plenty of water, dry chemical powder or carbon dioxide.

SECTION 6: Accidental Release Measure

Emergency Treatment

If the battery material is released, remove personnel from area until the batteries cool down and fumes dissipate.

Provide maximum ventilation to clear out hazardous gases and avoid skin and eye contact or inhalation of vapors.

Remove spilled liquid with absorbent and incinerate waste.

SECTION 7: Handling and Storage

Handling

1. Do not allow battery terminals to contact each other, or contact with other metals.
2. Do not put the cell or battery into a fire or heat it. Do not solder the cell directly. Do not use or leave the cell or battery in a place near fire or heaters.
3. Do not expose the battery to excessive physical shock or vibration.
4. Do not immerse, throw, and wet a battery in water.
5. Short-circuiting should be avoided. Short circuit will reduce the life of the battery and can lead to ignition of surrounding materials. Physical contact with to short-circuited battery can cause skin burn.
6. The batteries 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.
7. Place the cell beyond the children's reach and in a container.
8. Do not connect the battery directly to an electric outlet or cigarette socket in a car.
9. Be sure to use the specified charger for battery, and follow the charging instructions correctly.
10. Do not mix old and new batteries together, neither with Ni-Cd, dry batteries or another manufacturer batteries or product.

Storage

1. Batteries should be separated from other materials and stored in a noncombustible, well ventilated, sprinkler-protected structure with sufficient clearance between walls and battery stacks.
2. Keep the sample in the cool, dry and well-ventilated place (Recommended control temperature: -20~30 °C, humidity: 45~85%). Do not exposure to direct sunlight for long periods. Keep away from fire and heating sources. Keep away from prohibited compounds and store them in different storage rooms.
3. Equip with relevant types and quantities of the extinguishment instruments. The storage place should be equipped with suitable shelter materials for divulgence handling.
4. For rechargeable battery, charge the battery every 6 months to the amount specified by the manufacture, even if the battery is not used.

SECTION 8: Exposure Controls/Personal Protection

Engineering Control

Keep away from heat and open flame. Supply with sufficient partial air exhaust. Store in a cool, dry place.

Respiratory Protection

Not necessary under conditions of normal use. Wear self-contained breathing filter-mask if the density exceeds in the air. Wear breathing apparatus under the condition of emergency rescue or evacuation.

Eyes Protection

Not necessary under conditions of normal use. Wear protective glasses if handling a leaking or ruptured battery.

Skin and Body Protection

Not necessary under conditions of normal use. Wear fireproofing, gas protective clothes in case of handling a leaking or ruptured battery.

Hands Protection

Not necessary under conditions of normal use. Wear chemical resistant rubber glove.

Other Protections

No smoking, dining and drinking water in the workplace. Keep good habit of hygiene.

SECTION 9: Physical and Chemical Properties

| Appearance and properties | | Green cylinder solid | |
|---------------------------------|----------|--|----|
| Smell | Odorless | pH value (indicate concentration) | NA |
| Melting/freezing point | NA | (initial)boiling point & boiling range | NA |
| Relative vapor density (air =1) | ND | Saturated vapor pressure | NA |
| Odor threshold | ND | Evaporation rate | NA |
| Relative density (water =1) | ND | Flash point | NA |
| Viscosity | NA | Decomposition temperature | ND |

| | | | |
|---|--------------------|------------------------------|----|
| Partition coefficient: n-octanol/water | NA | Upper explosion limit | NA |
| Ignition temperature | ND | Lower explosion limit | NA |
| Solubility | Insoluble in water | Flammability | ND |

Remark NA= Not applicable; ND= No Data

SECTION 10: Stability and Reactivity

Stability

Stable under normal temperature and pressure.

Distribution of Ban

Explosives, inflammables, strong oxidants and corrosives.

Conditions to Avoid

Fire source, heating source, disassemble, external short circuit, crushes, deformation, high temperature above 100°C, direct sunlight and high humidity, immerse in water or overcharge.

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

Metal oxides, carboxyl compound such as CO, CO₂, etc.

SECTION 11: Toxicological Information

| | |
|--|---------|
| Acute Toxicity | No Data |
| Sub-acute and Chronic Toxicity | No Data |
| Skin irritation or corrosion | No Data |
| Eye irritation or corrosion | No Data |
| Skin sensitization | No Data |
| Respiratory sensitization | No Data |
| Germ cell mutation | No Data |
| Reproductive toxicity | No Data |
| Specific target organ system toxicity - one exposure | No Data |
| Specific target organ system toxicity - repeated exposure | No Data |
| Inhalation hazard | No Data |
| Other effects on the organism | No Data |

SECTION 12: Ecological Information

| | |
|---------------------------------------|---------|
| Acute aquatic toxicity | No Data |
| Chronic aquatic toxicity | No Data |
| Durability and degradability | No Data |
| Potential bioaccumulation | No Data |
| Migration in soils | No Data |
| Other effects on the ecosphere | No Data |

SECTION 13: Disposal Considerations

Appropriate Method

The battery should be completely discharged prior to disposal in order to prevent short circuit.

The battery contains recyclable materials, and it is suggested recycle.

Refer to National or Local regulations before handling.

Disposal of the battery should be performed by permitted, professional disposal firms knowledgeable in National or Local regulations of hazardous waste treatment and hazardous waste transportation.

SECTION 14: Transport Information

The battery has passed the test items of UN Manual of Test and Criteria Section 38.3.

General packaging requirement

1. The cells or batteries must be protected so as to prevent short circuits.
2. The cells or batteries or equipment must be packed in suitable strong outer packaging.
3. If batteries contained in equipment, equipment must be secured against movement within the outer packaging and be packed so as to prevent accidental activation.

UN numbers & Proper Shipping Name

UN 3481

LITHIUM-ION BATTERIES PACKED WITH EQUIPMENT or LITHIUM-ION BATTERIES CONTAINED IN EQUIPMENT

| Hazard Class | Packing Group | Packaging requirement |
|--|----------------|--|
| Air transportation, according to IATA-DGR 66th Edition (Effective 1 January-31 December 2025) | | |
| Not restricted | Strong package | Packing Instruction 966, section II Packing Instruction 967, section II |
| Maritime transportation, according to IMO IMDG Code (Edition 42-24) | | |
| Not restricted | Strong package | Packing as per sp188; EmS No.: F-A,S-I; Not Marine pollutant |
| Road transportation, according to ADR-2025 | | |
| Not restricted | Strong package | Packing as per sp188 |
| Railway transportation, according to RID-2025 | | |
| - | - | - |

SECTION 15: Regulatory Information

Dangerous Goods Regulation (DGR)

Recommendations on the Transport of Dangerous Goods Model Regulations

International Maritime Dangerous Goods (IMDG)

Occupational Safety and Health Act (OSHA)

Toxic Substances Control Act (TSCA)

Code of Federal Regulations (CFR)

Technical Instructions for the Safe Transport of Dangerous Goods

California Proposition 65

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

Globally Harmonized System of Classification and Labeling of Chemicals(GHS)

In accordance with all Federal, State and local laws.

SECTION 16: Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. 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 investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damage of any third party or for lost profits or any special, indirect, consequential or exemplary damages arising from using the above information.

*** End of SDS ***