

# SAFETY DATA SHEET

Product Name: Battery Pack

Date: 12/10/2022

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

**PRODUCT NAME:** Battery Pack  
Nominal Voltage: 20/18V Capacity: 4000mAh Watt-hour: 80/72Wh

**APPLICATIONS:** For Stock No. 89433 20V Li-ion Battery, 4.0Ah

**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

**GHS Classification:** Not available  
(This products is outside the scope of GHS system since it's considered as an "article".)

For the battery cell, chemical materials are stored in a hermetically sealed metal or metal laminated plastic case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage. However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by miss-use, the gas release vent will be operated. The battery cell case will be breached at the extreme, hazardous materials may be released. Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted.

## SECTION 3: Composition/information on ingredients

COMPONENT	CAS #	% by wt.
Lithium Cobalt Oxide	12190-79-3	35.05
Graphite	7782-42-5	15.98
Carbon black	1333-86-4	0.79
Hexafluoropropylene-vinylidene fluoride copolyme	9011-17-0	9.87
Dimethyl carbonate	616-38-6	4.38
Ethyl methyl carbonate	623-53-0	2.29
Lithium hexafluorophosphate	21324-40-3	2.95
Ethylene carbonate(EC)	96-49-1	6.34
Diethyl carbonate(DEC)	105-58-8	2.76
Propylene carbonate(PC)	108-32-7	1.11
Copper	7440-50-8	8.39
Styrene-butadiene rubber(SBR)	61789-96-6	0.71
Aluminum	7429-90-5	9.38

## SECTION 4: First aid measures

**Eyes:** Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention.

**Skin:** Wash off skin thoroughly with water. Remove contaminated clothing and wash before reuse. In severe cases obtain medical attention.

**Inhalation:** Remove from exposure, rest and keep warm. In severe cases obtain medical attention.

**Ingestion:** Wash out mouth thoroughly with water and give plenty of water to drink. Obtain medical attention.

**Further treatment:** All cases of eye contamination, persistent skin irritation and casualties who have swallowed this substance or been affected by breathing its vapours should be seen by a Doctor.

## SECTION 5: Firefighting measures

**Hazardous Combustion Products:** When burned, hazardous products of combustion including fume of carbon monoxide and carbon dioxide can occur.

**Extinguishing Media:** Water, carbon dioxide, dry chemical or foam.

**Basic Fire Fighting Procedures:** Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

## SECTION 6: Accidental release measure

### Accidental

If the battery breakage and electrolyte leakage, evacuate personnel until the smoke cleared.  
Wipe with a cloth and placed in steel drums into the bag inside.  
If the battery is hot, away from the scene firstly, cool the battery, so that the steam dissipated. Adequate ventilation.  
Avoid skin or eye contact steam.

### Waste treatment

The battery Should discharge completely, the waste batteries will be turned over in the relevant sector, and all waste must refer to the United Nations, national, local regulations for disposal. Reference to national or federal Environmental Protection Agency EPA.

## SECTION 7: Handling and storage

Prohibit mechanical or electrical damage battery.  
Stored in a dry, cool and ventilated environment, to avoid temperature changes or high temperature.  
Keep away from heat, avoid prolonged sun exposure.  
Against short circuit, overcharge, forced discharge, or in a fire.  
Battery disassembly, crush, fire or high temperatures can cause fire or explosion, prohibit short-circuit or error operation.

## SECTION 8: Exposure controls/personal protection



**Respiratory protection:** If the battery leaks, the need for full ventilation.



**Hand Protection:** Under normal use, do not.

**Personal Protection:** Under normal use, do not.

**Other protection:** Under normal use, do not.

If the battery leaks, must wear the following protection products.

	<p><b>Respiratory protection</b></p>	<p>In all fire situations, use self-contained breathing apparatus.</p>
	<p><b>Hand protection</b></p>	<p>In the event of leakage wear gloves.</p>

	<b>Eye protection</b>	Safety glasses are recommended during handling.
	<b>Other</b>	In the event of leakage, wear chemical apron.

## SECTION 9: Physical and chemical properties

Nominal Voltage:	20/18V
Capacity:	4000mAh
Watt-hour:	80/72Wh
Appearance characters:	Black battery pack

## SECTION 10: Stability and reactivity

Product is stable under conditions described in Section 7.

Hazardous reactions may occur under some specific conditions.

**Conditions to avoid:** When a battery cell is exposed to an external short-circuit, crushes, modification, high temperature above 100 degree C, it will be the cause of heat generation and ignition. Avoid to be exposed to direct sunlight and high humidity.

**Materials to avoid:** Conductive materials, water, seawater, strong oxidizers and strong acids.

**Hazardous decomposition products:** Acrid or harmful gas is emitted during fire.

## SECTION 11: Toxicological information

**Primary irritant effect:** None, unless battery ruptures. In the event of exposure to internal contents, corrosive fumes will be very irritating to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

**Inhalation:** Lung irritant.

**Skin contact:** Skin irritant

**Eye contact:** Eye irritant.

**Ingestion:** Tissue damage to throat and gastro-respiratory tract if swallowed.

**Medical conditions generally aggravated by exposure:** In the event of exposure to internal contents, eczema, skin allergies, lung injuries, asthma and other respiratory disorders may occur.

## SECTION 12: Ecological information

### Environmental Impact

Proper use and disposal of the battery will not harm the environment.

Dispose of the battery, away from water, rain and snow.

## SECTION 13: Disposal considerations

Do not incinerate, or subject cells to temperatures in excess of 100°C. Such abuse can result in loss of seal, leakage, and/or cell explosion.

Waste disposal must be in accordance with the applicable regulations. Disposal of the lithium ion battery cells should be performed by permitted, professional disposal page: firms knowledgeable in state or local requirements of hazardous waste treatment and hazardous waste transportation. Incineration should never be performed by battery but users, eventually by trained professional in authorized facility with proper gas and fume treatment.

## SECTION 14: Transport information

UN3480 or UN3481

According to IATA DGR 60<sup>th</sup> Edition 2019 for transportation, or the special provision 188 of IMDG, or  
 « recommendations on the transport of dangerous goods model regulations » .

**Transportation Internationally (Reference IATA Dangerous Goods Regulations):**

Lithium Metal Batteries Contained in Equipment: UN3480, Packing Instruction 965 Section IA (Cells>20 Wh; Batteries >100 Wh). This regulation applies to “small” lithium batteries contained in equipment that when packed and labeled as described in Packing Instruction 965 and SP A201, A213, A334 are otherwise “excepted” from the requirements of the regulations.

Class 9 hazard label



Do not damage or mishandle this package. If package is damaged, batteries must be quarantined, inspected, and repacked. Cells and batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for

Transport .Waste lithium batteries and lithium batteries being shipped for recycling or disposal are prohibited from air transport unless approved by the appropriate national authority of the State of origin and the State of the operator. There is no hazards in accordance with the UN recommendations tests (Manual of Tests and Criteria, Part III, sub-section 38.3, 1.2m Drop)

No.	ITEMS	RESULT	REMARKS
1	Altitude Simulation	Pass	
2	Thermal Shock	Pass	
3	Vibration	Pass	
4	Shock	Pass	
5	External Short	Pass	
6	Impact/Crush	Pass	For cell only
7	Overcharge	Pass	
8	Forced Discharge	Pass	For cell only
9	1.2m Drop Test	Pass	

**Transport fashion:** By air, By Sea and by land

**SECTION 15: Regulatory information**

- « Dangerous Goods Regulation »
- « Recommendations 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 »
- OSHA Hazard Communication Standard Status
- Toxic Substances Control Act (TSCA) Status
- SARA Title III
- RCRA
- In accordance with all Federal, State and Local laws

**SECTION 16: Other information**

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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