THREOD
SYSTEMS

Material Safety Data Sheet

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

1.1 Product identifier

PRODUCT NAME: Rechargeable Li-ion Battery 30000 mAh
Type/Mode: Lithium-ion Battery Universal

1.2 Relevant identified uses of the product

RECOMMENDED USE: Powering EOS C UAV

1.3 Details of the Supplier of the Safety Data Sheet

SUPPLIER OF CELLS: ShenZhen Grepow Battery Co.,Ltd, Shenzhen City, China
MFG OF BATTERY PACK: Threod Systems
ADDRESS: Kaare tee 3, 74010, Lubja, Estonia

1.4 Emergency telephone number

PHONE: +372 56269319
EMERGENCY PHONE: 0755-29045795

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

Other risk: This article is Lithium-ion Cell Watt hour rate is≥100Wh
The rechargeable lithium-ion batteries described in this Product Safety Data Sheet are sealed units which are not hazardous when used according to the recommendations of the manufacturer and as long as their integrity is maintained.
Do not short circuit, puncture, incinerate, crush, immerse in water, force discharge or expose to temperatures above the declared operating temperature range of the product. Risk of fire or explosion. Under normal conditions of use, the active materials and liquid electrolyte contained in the cells and batteries are not exposed to the outside, provided the battery integrity is maintained and seals remain intact. Risk of exposure only in case of abuse (mechanical, thermal, electrical) which leads to the activation of safety valves and/or the rupture of the battery container. Electrolyte leakage, electrode materials reaction with moisture/water or battery vent/explosion/fire may follow, depending upon the circumstances.

Label elements No information available.

Other hazards No information available.

Section 3. Composition,Information on Ingredients

Composition	CAS NO	EC#	Weight (%)
Lithium Cobalt Oxide	12190-79-3	235-362-0	27.5-42.5%
PVDF	24937-79-9	200-867-7	0.5-1.5%
Graphite	7782-42-5	231-955-3	14-22%

Ethylene carbonate	96-49-1	202-510-0	3.712%
Carbonic acid, ethyl methyl ester	623-53-0	433-480-9	2.784%
Dimethyl carbonate	616-38-6	210-478-4	7.425%
Propylene carbonate	108-32-7	203-572-1	1.670%
Vinylene carbonate	872-36-6	212-825-5	0.185%
Lithium hexafluorophosphate(1-)	21324-40-3	244-334-7	2.785%
Carboxymethylcellulose	9004-32-4	---	0.25-0.35%
Polypropylene	9002-88-4	---	2.0-4.2%
copper	7440-50-8	231-159-6	10-20%
Aluminum	7429-90-5	231-072-3	5-10%
Nickel	7440-02-0	231-853-9	0.2%
SBR	9003-55-8	---	0.6-1.0%
Carbon Black	1333-86-4	231-153-3	1.0-1.8%

Section 4. First Aid Measures

4.1 Description of first aid measures

4.1.1. General information No special measures required.

4.1.2 Following inhalation Remove from exposure and move to fresh air immediately. Use oxygen if available

4.1.3 Following skin contact Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid

4.1.4 Following eye contact Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

4.1.5 Following ingestion: Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician

4.1.6 Self-protection of the first aider Pay attention to self-protection!

4.2 Most important symptoms and effect, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

Section 5. Fire Fighting Measure

5.1 Extinguishing media

Suitable extinguishing media Water, CO2.

5.2 Special hazards arising from the substance or mixture

Cell may vent when subjected to excessive heat-exposing battery contents

5.3 Advice for firefighters

Protective equipment Self-contained breathing apparatus.

5.4 Additional information

Cell may vent when subjected to excessive heat-exposing battery contents.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate

6.2 Environmental precautions

Do not allow material to be released to the environment without proper governmental permits.

6.3 Methods and material for containment and cleaning up

All waste must refer to the United Nations, the national and local regulations for disposal. It is recommended to discharge the battery to the end, to use up the metal lithium inside the battery, transfer it to the professional processing company for recycling.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information

Section 7. Handling and storage

7.1 Precautions for safe handling

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.

7.2 Conditions for safe storage, including and incompatibilities

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.

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.

Keep away from heat, avoiding the long-time of sunlight. Keep container tightly sealed.

7.3 Specific and use

No further relevant information available.

Section 8. Exposure Controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

No information available

8.2 Exposure controls

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores.

Respiratory Protection

Not necessary under conditions of normal use.

Ventilation

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

9.1 Information on basic physical and chemical properties

General information

Appearance	Quadrate shape
Odour:	If leaking, smells of medical ether
Odourthrshold:	Odorless
PH:	Not available
Melting point/freezing point:	Not applicable unless individual components exposed.
Initial boiling point and boiling range:	Not applicable unless individual components exposed.
Flash point:	Not applicable unless individual components exposed.
Evaporation point:	Not applicable unless individual components exposed.
Flammability:	Not applicable unless individual components exposed.
Upper/lower flammability or explosive limits:	Not available
Vapour pressure:	Not applicable unless individual components exposed.
Vapour density:	Not applicable unless individual components exposed.
Relative density:	Not applicable unless individual components exposed.
Solubility(ies):	Not applicable unless individual components exposed.
Partition coefficient: N-octonal/water	Not available
Auto-Ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not applicable unless individual components exposed.
Explosive properties:	Not available
Oxidising properties:	Not available

9.2 Other information:

No additional information relevant to safe use of the battery.

Section 10. Stability and Reactivity

10.1 Reactivity	Product is stable under conditions described in Section 7.
10.2 Chemical stability	Stable.
10.3 Possibility of hazardous Reactions	Data not available.
10.4 Conditions to Avoid	Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.
10.5 Incompatible materials	Oxidising agents, alkalis, water.
10.6 Hazardous Combustible Products	Toxic Fumes, and may form peroxides. If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

None, unless battery ruptures. Lung irritant

Skin corrosion

None, unless battery ruptures. Skin irritant.

Serous eye damage/irritation

None, unless battery ruptures. Eye irritant.

Sensitization to the respiratory tract

Poisoning if swallowed. Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to server irritation, burning and dryness of the skin may occur. Target organs, nerves, liver and kidneys.

No further relevant information available.

Section 12. Ecological Information

12.1 Toxcity

None known at present.

12.2 Persistence and degradibility

Slowly Bio-degradable

12.3 Bioaccumulative potential

Slowly Bio-degradable

12.4 Mobility in soil

No information given

Section 13. Disposal Considerations

13.1 Waste treatment methods:
Waste disposal must be in accordance with the applicable regulations. Disposal should be performed by permitted, professional disposal firms knowledgeable in federal, state or local requirements of hazardous waste transportation. Incineration should never be performed with batteries. The batteries contain recyclable materials. Recycling options available in your local area should be considered when disposing of this product through a licensed waste carrier. The batteries should have their terminal insulated in order to prevent short circuits during transportation to the disposal site. Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion.

Section 14. Transport Information

14.1 UN number
UN3480
14.2 UN proper shipping name
Lithium-ion Battery
14.3 Transport hazard class(es)
The goods shall be complied with the requirements of Section IA of Packing Instructions 965 of 60th DGR Manual of IATA (2019edition） or special provision 188 of IMDG CODE（Amdt. 38-16）2016 Edition, including the passing of the UN38.3 test.
14.4 Packing Group
NA
14.5 Enviromental hazards
NA
14.6 Special precautions for users
According to 14.3.
14.4 Transport in bulk
NA

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
As stated by manufacturer:
Dangerous Goods Regulations
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
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.

15.2 Chemical Safety Assessment

For this substabce a chemical safety assessment has not been carried out.

Section 16. Additional Information

Disclaimer

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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