

SECTION 1 - CHEMICAL AND COMPANY IDENTIFICATION

Product Name:	Intrinsically Safe Primary Lithium Battery Pack	Date Prepared:	February 2024
Type/Model:	Type/Model	Nominal voltage	Rated capacity
	CLB850FF	7.5V	3400mAh
Lithium content:	4.5g		
Parameter	7.5V, 3400mAh, 25.5Wh		
Usage	<input checked="" type="checkbox"/> Used in Portable Equipment	<input type="checkbox"/> Used in Electric Vehicle	
	<input type="checkbox"/> Used in Energy Storage System	<input type="checkbox"/> Others	
Manufacturer's Name:	Entel UK Limited		
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Document Number:	QAS-SDS-019		

SECTION 2 – HAZARD IDENTIFICATION

Classification:

This chemical is not considered hazardous by the Regulation (EC) No 1272/2008 (CLP). This product is an article that is a sealed battery and as such does not require an SDS per regulation (EC) No 1272/2008 (CLP) unless ruptured. The hazards indicated are for ruptured batteries.

Acute toxicity – Oral	Category 4
Acute toxicity – Dermal	Category 4
Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

Label elements:

Signal Word: **Danger**

Hazard Statements

H302	Harmful if swallowed.
H313	Harmful in contact with skin.
H332	Harmful if inhaled.
H318	Causes serious eye damage.
H317	May cause allergic skin reaction.
H350	May cause cancer.
H371	May cause damage to organs.
H355	May cause respiratory irritation.

Symbol



GHS08



GHS05



GHS07

This product is an article that contains a chemical substance. Safety information is given for exposure to the article as solid. The intended use of the product should not result in exposure to the chemical substance, this is a battery. In case of rupture: the above hazards exist.

Precautionary Statement – Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P281	Use personal protective equipment as required.
P264	Wash face, hands and any exposed skin thoroughly after handling.
P272	Contamination work clothing should not allowed out of the workplace.
P210	Keep away from heat/sparks/open flames/hot surfaces-no smoking.
P270	Do not eat, drink or smoke when using this product.

Precaution Statements – Response

P301 + P330 + P308

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label)

Skin: If on the skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye: If in eyes: Rinse cautiously with water for several minutes, and remove contact lenses, if present and easy to do, continue rinsing. Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation: If inhalation: if breathing is difficult, remove the victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: If swallowed: rinse mouth, do not induce vomiting, and call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements – Storage

P405	Store locked up
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Precautionary Statements – Disposal

P501	Dispose of contents/container to an approved waste disposal plant
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Hazards not otherwise classified (HNOC)

Not applicable.

Other information

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

Interactions with other chemicals

The use of alcoholic beverages may enhance the toxic effect.

SECTION 3 – COMPOSITION /INFORMATION ON INGREDIENT

Ingredient	Molecular Formula	CAS No.	Weigh
Carbon Black	C	1333-86-4	0-4%
1,2-Dimethoxyethane	C ₄ H ₁₀ O ₂	110-71-4	2-4%
1,3-Dioxolane	C ₃ H ₆ O ₂	646-06-0	5-9%
Graphite	C	7782-42-5	0-4%
Iron Disulfide	FeS ₂	1309-36-0	28-38%
Lithium	Li	7439-93-2	6.3-6.6%
Lithium Iodide	LiI	10377-51-2	0.3-3%
Non-Hazardous Components Steel Iron	FeCrC	65997-19-5	18-22%
Plastic and Others	--	--	Balance

SECTION 4 – FIRST AID MEASURES

Eye Exposure:

In case of contact with eyes, flush with copious 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:

If inhaled the internal battery vomiting. Seeking immediate medical attention.

Ingestion Exposure:

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

SECTION 5 – FIRE FIGHTING 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 a fire.

Fire-Fighting method:

The staff must be equipped with filter mask (full mask) or isolated breathing apparatus.
The staff must wear clothes which can defend the fire in the upwind direction.
Remove the container to the open space as soon as possible.
Spray water on the containers in the fire place to keep them cool until finished extinguishment.

Fire-fighting media:

Plenty of water, dry chemical powder or carbon dioxide.

SECTION 6 – ACCIDENTAL RELEASE MEASURES**Emergency treatment:**

If the battery material is released, remove personnel from the area until the batteries cool down and the fumes dissipate. Provide maximum ventilation to clear out hazardous gases and avoid skin and eye contact or inhalation of vapours. 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 fire or heat it. Do not solder the cell directly. Do not use or leave the cell or battery in a place near the 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. A short circuit will reduce the life of the battery and can lead to the ignition of surrounding materials. Physical contact with short-circuited battery can cause skin burns.
6. The batteries should not be opened, destroyed or incinerated, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed containers.
7. Place the cell beyond the child packing and 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's batteries or product.

Storage:

1. Batteries should be separated from other materials and stored in a non-combustible, well-ventilated, sprinkler-protected structure with sufficient clearance between walls and battery stacks.
2. Keep the sample in a cool, dry and well-ventilated place (temperature: -20~30°C, humidity: 45~85%). Do not exposure to direct sunlight for long periods. Keep away from fire and heating sources. Don't keep the samples with oxidizer and acid.
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 manufacturer, 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 a self-contained breathing filter mask if the density exceeds in the air. Wear a breathing apparatus under the condition of emergency rescue or evacuation.

Eyes Protection:

Not necessary under control 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 defence clothes in case of handling a leaking or ruptured battery.

Hands Protection:

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

Other Protections:

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

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Red
Physical state:	Solid
Form:	Nearly Prismatic
Odor:	Odorless
Solubility:	Insoluble in water

SECTION 10 - STABILITY AND REACTIVITY**Stability:**

Stable under normal temperature and pressure.

Distribution of Ban:

Explosives, inflammables, strong oxidations and corrosives.

Conditions to Avoid:

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

Hazardous Polymerization:

This will not occur.

Hazardous Decomposition Products:

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

SECTION 11 - TOXICOLOGICAL INFORMATION**Acute Toxicity:**

No information is available.

Sub-acute and Chronic Toxicity:

No information is available.

Irritation Data:

The internal battery materials may cause irritation to the eyes and skin.

Sensitization:

The liquid in the battery may cause sensitization in some people.

Mutagenicity:

No information is available.

Carcinogenicity:

No information is available.

Others:

Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

SECTION 12 - ECOLOGICAL INFORMATION

Eco-toxicity:

No information is available.

Biodegradable:

No information is available.

Mobility in soil:

No information is available.

Bio concentration or biological accumulation:

No information is available.

Other harmful effects:

Don't abandon the battery in environment, may cause water or soil pollution.

SECTION 13 – DISPOSAL CONSIDERATIONS

Appropriate Method of Substance:

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

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

Type/Model	Report No.
CLB850FF	Entel20230724U01

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 are contained in equipment, equipment must be secured against movement within the outer packaging and be packed so as to prevent accidental activation.

Air transportation, according to IATA-DGR 65th Edition

UN Number + PSN	UN 3090, Lithium Metal Batteries
Hazard Class	Class 9
Packaging requirement	Packing group II, packaging according to packing instruction 968, section IA
UN Number + PSN	UN 3091, Lithium Metal Batteries Packed with Equipment
Hazard Class	Class 9
Packaging requirement	Packing group II, packaging according to packing instruction 969, section I
UN Number + PSN	Un 3091, Lithium Metal Batteries Contained in Equipment
Hazard Class	Class 9
Packaging requirement	Strong package, packaging according to packing instruction 970, section I

Sea transportation, according to IMO IMDG Code (Amend 41-2022)

UN Number + PSN	UN 3090, Lithium Metal Batteries, or UN 3091, Lithium Metal Batteries Packed with Equipment
Hazard Class	Class 9
Packaging instruction	Packing group II, Packaging in accordance to corresponding requirements of P903
EmS No.	F-A, S-I
UN Number + PSN	UN 3091, Lithium Metal Batteries Contained in Equipment
Hazard Class	Class 9
Packaging instruction	Strong package, Packaging in accordance to corresponding requirements of P903
EmS No.	F-A, S-I

Road transportation, according to ADR-2023

UN Number + PSN	UN 3090, Lithium Metal Batteries, or UN 3091, Lithium Metal Batteries Packed with Equipment
Hazard Class	Class 9
Packaging instruction	Packing group II, Packaging in accordance to corresponding requirements of P903

UN Number + PSN	UN 3091, Lithium Metal Batteries Contained in Equipment
Hazard Class	Class 9
Packing instruction	Strong package, Packing in accordance to corresponding requirements of P903

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 Labelling of Chemicals (GHS)
In accordance with all Federal, State and local laws.

SECTION 16 – OTHER INFORMATION

Preparation Date:	February 27, 2024
Prepared by:	Entel Quality Assurance Department
Accordinging standard:	GB/T 16483-2008 SDS for chemical products Content and order of sections ISO 11014:2009(E) SDS for chemical products Content and order of sections
Reference:	Report No. Entel20230724MSDS01 Report No. Entel20230724U01 Guangzhou MCM Certification & Testing Co., Ltd.
Revision:	
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