Document Ref. No.:YF/MSDS2025

Changzhou Yufeng Electrical Co., Ltd

Material Safety Data Sheet Model No.: CR2025

Identity (As Used on Label and List)	Part Number
Lithium Metal Cell	CR2025

Section I: Information of Manufacturer

Manufacturer's Name Changzhou Yufeng Electrical Co., Ltd	Emergency Telephone Number 0519-83885169
Address (Number, Street, City, State, and ZIP Code) Industrial Zone Xilin, Zhonglou District.Changzhou ,Jiangsu 213024	Telephone Number for information 0519-83885169
	Date of prepared and revision 2017-01
	Signature of Preparer (optional)

Section II: Hazardous Ingredients/Identity Information

Ingredient	CAS NO.	Content(wt%)of total weight
Lithium	7439-93-2	2.2
Propylene Carbonate	108-32-7	6.0
Manganese dioxide	1313-13-9	28
1,2-Dimethoxyethane	110-71-4	3.6
Lithium perchlorate	7791-03-9	1.1

Section III: Physical/Chemical Characteristics

Form NA	Specific Gravity (H2O =1) NA
Boiling Point NA	Melting Point NA
Vapor Pressure (mm Hg) NA	Evaporation Rate (Buty1 Acetate=1) NA
Vapor Density (AIR=1) NA	Ph NA
Solubility in Water NA	Appearance and Odor NA

Section IV: Hazard classification

NA

Changzhou Yufeng Electrical Co., Ltd

Material Safety Data Sheet Model No.: CR2025

Section V: Reactivity Data

Stability Yes= (X)	Unstable ( )	Conditions to Avoid
	Stable (X)	

Incompatibility (Materials to Avoid)

Hazardous Decomposition or By products

NA

Hazardous Reactions Yes = (X)	May Occur ( )	Conditions to Avoid
	Will Not Occur (X)	

Section VI: Health Hazard Data

Section VI: Health Hazard Data Yes=(X) Inhalation? Skin? Ingestion?

(NA) (NA) (NA)

Health Hazard (Acute and Chronic) / Toxicological in formation

In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.

Section VII – First Aid Measures

Firs aid Procedures

If electrolyte leakage occurs and makes contact with skin, wash immediately.

If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen minutes, and contact a physician.

Section VIII: Fire and Explosion Hazard Data

Flash Point (Method Used)	Ignition temp	Flammable Limits	LEL	UEL
NA	NA	NA	NA	NA

Extinguishing Media

NA

Special Fire Fighting Procedures

NA

Unusual Fire and Explosion Hazards

Do not dispose of battery in fire – may explode.
Do not short – circuit battery – may cause burns.

Section IX: Accidental Release or Spillage

Steps to Be Taken in Case Material is Released or Spilled

Batteries that are leaking should be handled with rubber gloves.
Avoid direct contact with electrolyte.

Section X: Handing and Storage

Safe handing and storage advice

The battery is extremely sensitive to adverse effects of humidity. Be sure to store them in a place that is dry and subject to little temperature change. Do not place near the boiler or radiator, nor expose to direct sun light. Do not dispose of the battery in fire. Do not charge the battery. Do not short- circuit the battery. Do not put in backward position. Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries. Do not disassemble the battery, handing in such manner can cause the battery to explode, leak and injury.

Section XI: Exposure Controls / Personal Protection

Occupational Exposure Limits : LTEP NA		STEP NA
Respiratory Protection (Specify Type) NA		
Ventilation	Local Exhausts NA	Special NA
	Mechanical (general) NA	Other NA
Protective Gloves NA		Eye Protection NA
Other Protective Clothing or Equipment NA		
Work / Hygienic Practices NA		

Section XII: Ecological Information

NA

Section XIII: Disposal Method

Do not incinerate or subject cells to temperature in excess of 80℃.Dispose of in accordance with local regulations.

Section XIV: Transportation Information

Lithium battery model CR2025 is considered as "Not Restricted" cargo because they complied UN Recommendations.

Shipping Name Lithium Metal Batteries
UN Number UN3090

Organizations governing the transport of lithium batteries

Area	Method	Organization	Special Provision
International	Air	IATA,ICAO	Best Practice 008
International	Ocean	IMO / IMDG	188

The substance is not restricted to IMO IMDG Code according to special provision 188.
These regulations are based on the UN Recommendations. Each special provision provides specifications on exceptions for shipping lithium batteries. All Yufeng's batteries meet all special provisions.
If all of following 2 requirements are satisfied, lithium metal batteries can be transported as "Not Restricted" cargo.

1) Lithium weight or equivalent lithium content must be less than value in table.

	Lithium Cell/Battery (Lithium weight)
Cell	1g or less
Battery	2g or less

Equivalent lithium content (g) is calculated as 0.3 (g/Ah) times the rated capacity (Ah) .
2) Each cell or battery is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, section 38.3. T1 - T8 Test.
Because the consignor has to take the responsibility, the customer has to confirm the exception conditions when shipping.

Lithium battery international transportation rules. Based on a United Nations recommendation, the regulation for lithium metal cell and batteries has been revised in the international Air Transport Association (IATA) dangerous goods regulations (DGR Rev.58).Each cell or battery pack meets the requirements of each test in the UN Manual of Tests and Criteria III, sub section 38.3. The Cells / Batteries are "Not Restricted" Cargo

1. Must comply with Section II of PI968-PI970 accordingly.
2. For cells, the lithium content should not be more than 1 g; while for batteries, the aggregate lithium content should not be more than 2 g.
3. For those Lithium metal cells / batteries contained in equipment, the equipment must be equipped with an effective means of preventing accidental activation.

Section XV: Regulatory Information

IATA Dangerous Goods Regulations.
ICAO Technical Instructions for the safe transport of dangerous goods by air.

Section XVI: Other Information

This MSDS is described on the basis of present materials, information and data, so, please notice that it will be revised by new information. Also this sheet is supplied to entrepreneurs as reference information in order to handle batteries safely. Please notice that entrepreneur have to deal with batteries as they think fit.

References (1) UN Recommendations on the Transportation of Dangerous Goods Model Regulations (ST/SG/AC.10/1/rEV.12)
(2) Federal Resister / Vol.65, No. 174 / Thursday, September 7, 2000 / Notices
(3) IATA Dangerous Goods Regulations 58th Edition (2017)

Section XVII: Measures for fire extinction

Suitable fire extinguishing agent: CO_2, fire extinguisher, ABC dry powder extinguisher, sand, etc. Can't quench, a small amount of can cover with the sand first, burn and need to use the fire extinguisher in a large amount. Much water can put out a fire was aroused a few battery. The fire fighter's special shelter is equipped: Wearing the air respirator, protects the helmet, glasses, etc.