

Beiblatt zum Sicherheitsdatenblatt / Supplement to the safety data sheet

Abschnitt 1 / Section 1

1.1 Produktidentifikation / Product identification

s. Original-Datenblatt / see original safety data sheet

1.2 Verwendungen des Stoffs / Uses of the substance

s. Original-Datenblatt / see original safety data sheet

1.3 Einzelheiten zum Lieferanten / Details of the supplier

Firmenname /	Supplier	Stürmer Maschinen GmbH,
Straße /	Street	Dr.-Robert-Pfleger-Str. 26,
Ort /	City	D-96103 Hallstadt
Tel. /	Phone	+49 (0)951 96555 - 0 (07:00 - 17:00 Uhr / 07:00 am - 05:00 pm)
E-Mail /	E-Mail	info@stuermer-maschinen.de

1.4 Notrufnummer / Emergency Telephone

Wählen Sie die passende Notrufnummer anhand des GHS-Symbols auf Ihrem Gefahrgut oder entsprechend Abschnitt 2.2 des orig. Sicherheitsdatenblattes *.
Call the appropriate emergency number using the GHS symbol on your dangerous goods or according to section 2.2 of the original safety data sheet *.

GHS Gefahren-piktogramm / GHS symbol	GHS-Kürzel/ GHS-no.	Mögliche Signalwörter/ Warning	Gefährdungsklassen / Description of hazards	Notrufnummer */ Emergency Phone *
	GHS01 bis GHS09			+49 (0)951 96555 - 590 Sammelnotrufnummer Gefahrstoffe
	GHS01	Gefahr oder Achtung / Danger or Attention	Explosive Stoffe/Gemische und Erzeugnisse mit Explosivstoff, selbstzersetzliche Stoffe/Gemische, organische Peroxide / Explosive substances / mixtures and products containing explosives, self-reactive substances / mixtures, organic peroxides	- 591
	GHS02	Gefahr oder Achtung / Danger or Attention	Selbstzersetzliche Stoffe/Gemische, organische Peroxide, entzündbare Gase, Aerosole Flüssigkeiten, Feststoffe, selbsterhitzungsfähige Gemische, pyrophore Flüssigkeiten und Feststoffe, Stoffe/Gemische, die bei Berührung mit Wasser entzündbare Gase bilden / Self-reactive substances / mixtures, organic peroxides, flammable gases, aerosols, liquids, solids, self-heating mixtures, pyrophoric liquids and solids, substances / mixtures which form flammable gases on contact with water	- 592
	GHS03	Gefahr oder Achtung / Danger or Attention	Oxidierende Gase, Flüssigkeiten, Feststoffe / Oxidizing gases, liquids, solids	- 593
	GHS04	Achtung / Attention	Verdichtete, verflüssigte, gelöste und tiefgekühlt verflüssigte Gase / Compressed, liquefied, dissolved and refrigerated liquefied gases	- 594
	GHS05	Gefahr oder Achtung / Danger or Attention	Verätzung der Haut, schwere Augenschäden, auch metallkorrosive Eigenschaften / Chemical burns to the skin, severe eye damage, also metal-corrosive properties	- 595
	GHS06	Gefahr / Danger	Äußerst schwere und schwere akute Gesundheitsschäden oder Tod / Extremely severe and severe acute damage to health or death	- 596
	GHS07	Achtung / Attention	Akute Gesundheitsschäden, Reizung der Haut, der Augen und der Atemwege, Sensibilisierung der Haut, narkotisierende Wirkungen / Acute damage to health, irritation of the skin, eyes and the respiratory tract, sensitization of the skin, narcotic effects	- 597
	GHS08	Gefahr oder Achtung / Danger or Attention	Chronische Gesundheitsschäden (Organschädigungen) bei einmaliger oder mehrmaliger Exposition, krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkungen, Lungenschäden durch Eindringen von Substanzen in die Lunge (Aspirationsgefahr), Sensibilisierung der Atemwege / Chronic damage to health (damage to organs) after single or multiple exposure, carcinogenic, mutagenic and reproductive effects, lung damage due to the penetration of substances into the lungs (risk of aspiration), sensitization of the respiratory tract	- 598
	GHS09	Achtung oder ohne Signalwort / Attention or without wording	Giftig für Wasserorganismen mit kurz- und langfristiger Wirkung / Toxic to aquatic organisms with short and long-term effects	- 599

* 07:00 - 17:00 Uhr, außerhalb dieses Zeitraums kann die Nummer auf dem Sicherheitsdatenblatt angerufen werden / 07:00 am - 05:00 pm, outside this time, the number on the safety data sheet can be called

Für alle anderen Informationen siehe Original-Sicherheitsdatenblatt / For all other information, see the original safety data sheet

Document Ref. No.:YF/MSDS2450

Changzhou Yufeng Battery Co., Ltd

Material Safety Data Sheet

Model No.: CR2450



- 1 -

Identity (As Used on Label and List) Lithium Metal Cell	Part Number CR2450
--	-----------------------

Section I: Information of Manufacturer

Manufacturer's Name Changzhou Yufeng Battery Co., Ltd	Emergency Telephone Number 0519-83885169
Address (Number, Street, City, State, and ZIP Code) No.115,Tianhe Road,Xinbei District, Changzhou, Jiangsu, PRC 213031	Telephone Number for information 0519-83885169
	Date of prepared and revision 2020-01-01
	Signature of Preparer (optional)

Section II: Hazardous Ingredients/Identity Information

Ingredient	CAS NO.	Weight of ingredient in one cell (mg)	Content(wt%)of total weight
Lithium	7439-93-2	143	2.2
Propylene Carbonate	108-32-7	390	6.0
Manganese dioxide	1313-13-9	1820	28
1,2-Dimethoxyethane	110-71-4	234	3.6
Lithium perchlorate	7791-03-9	71.5	1.1
Iron	7439-89-6	2925	45
Polypropylene	9003-07-0	916.5	14.1
Lead	7439-92-1	Not Detected	Not Detected
Cadmium	7440-43-9	Not Detected	Not Detected
Mercury	7439-997-6	Not Detected	Not Detected

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 (Butyl Acetate=1) NA
Vapor Density (AIR=1) NA	Ph NA
Solubility in Water NA	Appearance and Odor NA

Changzhou Yufeng Battery Co., Ltd

Material Safety Data Sheet

Model No.: CR2450



- 2 -

Section IV: Hazard classification

NA

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

Route(s) of Entry Yes=(X)	Inhalation? (NA)	Skin? (NA)	Ingestion? (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) NA	Ignition temp NA	Flammable Limits NA	LEL NA	UEL NA
----------------------------------	---------------------	------------------------	-----------	-----------

Extinguishing Media

NA

Special Fire Fighting Procedures



- 3 -

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: Handling and Storage**Safe handling 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, handling in such manner can cause the battery to explode, leak and injury.

Section XI: Exposure Controls / Personal Protection

Occupational Exposure Limits :	LTEP	STEP
NA		NA

Respiratory Protection (Specify Type)

NA

Ventilation	Local Exhausts	Special
	NA	NA
	Mechanical (general)	Other
	NA	NA

Protective Gloves	Eye Protection
NA	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°C. Dispose of in accordance with local regulations.

Section XIV: Transportation Information

Lithium battery model CR2450 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



- 5 -

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.61). 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 Register / Vol.65, No. 174 / Thursday, September 7, 2000 / Notices
(3) IATA Dangerous Goods Regulations 61th Edition (2020)

Section XVII: Measures for fire extinction

Suitable fire extinguishing agent: CO₂, 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.