

深圳市天祥瑞实业有限公司

SHENZHEN TIANXIANGRUI INDUSTRIAL Co., Ltd

地址: 深圳市宝安82区新湖路华丰科技园

PC: 518000

ADD: HuaFengKeJIYuan, Xinhua Road, Bao'an District, Shenzhen, China

Tel:29563809 Fax:29657080 E-mail:txr4168@163.com Website:www.sztxr.com



Material Safety Data Sheet

Button Type CR Lithium cell

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IDENTITY (As Used on Label and List)			
Note : Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.			
Section I			
Manufacturer's Name			
SHENZHEN TIANXIANGRUI CO.,LTD			
Emergency Telephone Number 0755-29563809			
HuaFengKeJIYuan, Xinhua Road, Bao'an District, Shenzhen, China			
Emergency			
0755-29563809			
Signature of Preparer (optional)			
Section II - Hazardous Ingredients / Identity Information			
IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.			
MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
	3.5 mg/m ³ TWA	3.5 mg/m ³ TWA	0-1
1,2-Dimethoxyethane	None established	None established	0-6
1,3-Dioxolane	None established	None established	0-8
Graphite	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)	2 mg/m ³ TWA (respirable fraction)	0-3
Lithium or Lithium Alloy	None established	None established	1-6
Lithium Perchlorate	None established	None established	0-3
Lithium Trifluoromethanesulfonate	None established	None established	0-3
Lithium Trifluoromethanesulfonimide	None established	None established	0-3
Manganese Dioxide	5 mg/m ³ Ceiling (as Mn)	0.2 mg/m ³ TWA (as Mn)	12-42
Propylene Carbonate	None established	None established	0-8
Section III - Physical / Chemical Characteristics			
Boiling Point N.A.			
Specific Gravity (H ₂ O=1) N.A.			
Vapor Pressure (mm Hg) N.A.			
Melting Point N.A.			
Vapor Density (AIR=1) N.A.			
Evaporation Rate (Butyl Acetate) N.A.			

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Solubility in Water N.A.

Appearance and Odor Cylindrical Shape, odorless

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Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) N.A.

Flammable Limits N.A.

LEL N.A.

UEL N.A.

Extinguishing Media N.A.

Special Fire Fighting Procedures N.A.

Unusual Fire and Explosion Hazards

Do not dispose of battery in fire - may explode.

Do not short-circuit battery – may cause burns.

Section V – Reactivity Data

Stability Unstable

Conditions to Avoid Stable

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hazardous

Polymerization May Occur Conditions to Avoid

Will Not Occur

Section VI - Health Hazard Data

Route(s) of Entry

Inhalation N.A.

Skin N.A.

Ingestion N.A.

Health Hazard (Acute and Chronic) / Toxicological information

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

In contact with electrolyte can cause severe irritation and chemical burns.

Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.

Section VII – First Aid Measures

First Aid Procedures

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

If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician.

If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area.

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Section VIII - Fire and Explosion Hazard Data
Flash Point (Method Used) N.A.
Ignition Temp. N.A.
Flammable Limits N.A.
LEL N.A.
UEL N.A.
Extinguishing Media Carbon Dioxide, Dry Chemical or Foam extinguishers
Special Fire Fighting Procedures N.A.
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 leakage should be handled with rubber gloves.
Avoid direct contact with electrolyte.
Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).
Section X – Handling and Storage
Safe handling and storage advice
Batteries should be handled and stored carefully to avoid short circuits.
Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries.
Never disassemble a battery.
Do not breathe cell vapors or touch internal material with bare hands.
Keep batteries between -30°C and 35°C for prolong storage.
Section XI – Exposure Controls / Person Protection
Occupational Exposure Limits: LTEP
N.A.
STEP
N.A.
Respiratory Protection (Specify Type)
N.A.
Ventilation Local Exhausts
N.A.
Special
N.A.
Mechanical (General)
N.A.
Other
N.A.
Protective Gloves
N.A.

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Eye Protection
N.A.
Other Protective Clothing or Equipment
N.A.
Work / Hygienic Practices
N.A.
Section XII – Ecological Information
N.A.
Section XIII – Disposal Method
Dispose of batteries according to government regulations.
Section XIV – Transportation Information
XIV.1 Provisions for the international transportation (pursuant to ICAO-TI/IATA-DGR, IMDG Code, ADR , RID):
Lithium cells and batteries are subject to ICAO-TI/IATA-DGR(Air)/IMDG Code (Sea)/ADR(Road Europe) / RID (Rail Europe) UN3090, Lithium batteries, 9 , II
Basically they must meet Special Provision 230 of the UN Model Regulations.
However, if they meet the following requirements of Special Provision 188 of the UN Model Regulations, Special Provision A45 of the ICAO-TI/IATA-DGR(Air), Special Provision 310 of the IMDG Code, Special Provision 188 of the ADR and RID (Road and Rail Europe), they are not subject to other provisions of the above mentioned regulations:
I. For a lithium metal or lithium alloy cell, the lithium content is not more than 1g, and for a lithium-ion cell, the equivalent lithium content is not more than 1.5g;
II. For a lithium metal or lithium alloy battery the aggregate lithium content is not more than 2g , and for a lithium-ion battery, the aggregate equivalent lithium content is not more than 8g;
III. Each cell or battery is of the type proved to meet the requirements of each test in the Manual of Tests and Criteria, Part III , sub-section 38.3;
IV. Cells and batteries are separated so as to prevent short circuits and are packed in strong packagings, except when installed in equipment; and
V. Except when installed in equipment, each package containing more than 24 lithium cells or 12 lithium batteries shall in addition meet the following requirements:
(i) Each package shall be marked indicating that it contains lithium batteries and that special procedures should be followed in the event that the package is damaged.;
(ii) Each shipment shall be accompanied with a document indicating that packages contain lithium batteries and that special procedures should be followed in the event a package is damaged;
(iii) Each package is capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents; and
(iv) For lithium metal or lithium alloy cells and batteries, the cells and batteries shall be protected from short circuits by individual protective sleeves or other suitable means.

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not exceed 30KG gross mass.

As used above and elsewhere in these Regulations, “lithium content” means the mass the mass of lithium in the anode of a lithium metal or lithium alloy cell, except in the case of a lithium-ion cell the “equivalent lithium content” in grams is calculated to be 0.3 times the rated capacity in ampere-hours.

Tian Xiang Rui’s lithium cells and batteries do meet the above mentioned provisions. They can be described as “not restricted, as per Special Provision ...” in the transport documents.

Section XV – Regulatory Information

Special requirement be according to the local regulatoryies.

Section XVI – Other Information

The data in this Material Safety Data Sheet relates only to the specific material designated herein.

Section XVII – Measures for fire extinction

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.