

Safety Data Sheets (SDSs)

For
Changzhou Yufeng Battery Co.,Ltd
No.115 Tianhe Road, XinbeiDistrict, Changzhou, Jiangsu, P.R.China
and for their product

Report No: SA2004217S 05001
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1-2 Floor, Building A, No.11, Headquarters 2 Road,
Testing Address: Songshan Lake Hi-tech Industrial, Development Zone,
Dongguan City, Guangdong Pr. China
Applicant's name: Changzhou Yufeng Battery Co.,Ltd
Address: No.115 Tianhe Road, XinbeiDistrict, Changzhou,
Jiangsu, P.R.China
Product name: 3V Lithium Manganese Dioxide Button Cell
Model /Type reference: CR2032
Trademark /
Product Specification 3.0V 220mAh
Version Number V1.0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product name: 3V Lithium Manganese Dioxide Button Cell

Other means of identification

Product description	Model:	CR2032
	Trade mark:	/
	Product Specification	3.0V 220mAh
	Product Mass	2.72g
	Lithium Content	0.066g

Details of the supplier of the safety data sheet:

Applicant	Changzhou Yufeng Battery Co.,Ltd
Applicant Address	No.115 Tianhe Road,Xinbei District,Changzhou ,Jiangsu,P.R.China
Company Emergency Phone Number:	0519-83885169
E-mail address:	roy@czyufeng.com


2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements:

Signal word	Danger	
Hazard Statements		
Causes skin irritation		
Causes serious eye irritation		
May cause an allergic skin reaction		
Suspected of causing cancer		
Causes damage to organs through prolonged or repeated exposures		
		
<p>This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. 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.</p>		
Appearance Silver	Physical State Solid containing liquid	Odor None

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves
 Do not breathe dust/fume/gas/mist/vapors/spray
 Do not eat, drink or smoke when using this product
 Wear eye/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

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Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash before reuse

If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

37.3% of the mixture consists of ingredient(s) of unknown toxicity

Other information

Very toxic to aquatic life with long lasting effects

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures**Description:**

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number
Lithium	2.2	7439-93-2
Propylene Carbonate	6.0	108-32-7
Manganese dioxide	28	1313-13-9
1,2-Dimethoxyethane	3.6	110-71-4
Lithium perchlorate	11	7791-03-9
Iron	45	7439-89-6
Polypropylene	14.1	9003-07-0

Note: CAS number is Chemical Abstract Service Registry Number.

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4. FIRST-AID MEASURES

First aid measures

First aid is upon rupture of sealed battery.

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. May cause an allergic skin reaction.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.
Ingestion	Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Itching. Coughing and/ or wheezing. Burning sensation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rates, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

CO2, dry chemical powder, water spray.

Unsuitable Extinguishing Media: No information available.

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Specific Hazards Arising from the Chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation.

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide(CO)

Carbon dioxide

Other irritating and toxic gases.

Protective Equipment and Precautions for Firefighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Attention!Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information	Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for Containment	prevent further leakage or spillage if safe to do so.
Methods for Cleaning up	Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Wash thoroughly after handling. Use this material with adequate ventilation.
The product is not explosive.

Conditions for safe storage, including any incompatibilities

Do not storage Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

Keep out of reach of children.

Do not expose 3V Lithium Manganese Dioxide Button Cell to heat or fire. Avoid storage in direct sunlight.

Do not store together with oxidizing and acidic materials.

Keep ignition sources away- Do not smoke.

Store in cool, dry and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

(a) Engineering Controls

Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keepaway from heat and open flame. Store in a cool, dry place.

(b) Personal Protective Equipment

Respiratory Protection: Not necessary under normal conditions. **Skin and body Protection:** Not necessary under normal conditions, Wear neoprene or nitrile rubber gloves if handling an open or leaking battery.

Hand protection: Wear neoprene or natural rubber material gloves if handling an open or leaking battery.

Eye Protection: Not necessary under normal conditions, wear safety glasses if handling an open or leaking battery.

(c) Other Protective Equipment

Have a safety shower and eye wash fountain readily available in the immediate work area.

(d) Hygiene Measures

Do not eat, drink, or smoke in work area. Maintain good housekeeping.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Form: Button	
	Color: Silvery	
	Odour: Odourless	
	Odor Threshold: No information available	
Change in condition:		
pH, with indication of the concentration	Not determined.	
Melting point/freezing point	Not determined.	
Initial boiling point and Boiling range:	Not determined.	
Flash Point	Not determined.	
Evaporation rate	Not determined.	
Flammability (solid, gas)	Not determined.	
Upper/lower flammability or explosive limits	Not determined.	
Vapor Pressure:	Not determined.	
Vapor Density:	Not determined.	
relative density:	Not determined.	
Solubility in Water:	Not determined.	
Solubility in other solvents	Not determined.	
n-octanol/water partition coefficient	Not determined.	
Auto-ignition temperature	Not determined.	
Decomposition temperature	Not determined.	
Odour threshold	Not determined.	
Evaporation rate	Not determined.	
Viscosity	Not determined.	
Other Information	No further relevant information available.	

10. STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage and handling conditions (see section 7, Handling and storage).

Chemical stability: Stable under normal conditions of use, storage and transport.

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions: None under normal processing.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to avoid: Strong heating, fire, Incompatible materials.

Incompatible materials: Strong oxidizing agents. Strong acids. Base metals.

Hazardous Decomposition Products: Carbon oxides, Other irritating and toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: No data available.

LD/LC50 values relevant for classification:

Not available.

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Cause serious eye irritation.

Respiratory or skin sensitization: No sensitizing effects known.

Specific target organ system toxicity: No information available.

CMR effects(carcinogenity, mutagenicity and toxicity for reproduction): No information available.

12. Ecological Information

Toxicity:

Aquatic toxicity:

No further relevant information available.
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Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No information available.

13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation: Must not be disposed together with household garbage.

Do not allow product to reach sewage system

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Land transport

ADR/RID class: Not regulated.

UN-Number: UN3090 or UN3091.

Maritime transport

IMDG Class: Class 9.

UN Number: UN3090 or UN3091.

Marine pollutant: No

Air transport

ICAO/IATA Class: Class 9

UN/ID Number: UN3090 or UN3091

Environmental hazards: Not applicable.

Special precautions for user: Not applicable.

Transport/Additional information: Not restricted goods according to the above specifications.

The 3V Lithium Manganese Dioxide Button Cell had been tested according to the requirements of the UN manual of tests and Criteria, Part III, subsection 38.3;

The 3V Lithium Manganese Dioxide Button Cell according to Section II/Section IB of PACKING INSTRUCTION 968, or Section II of PACKING INSTRUCTION 968~970 of the Dangerous Goods regulations 61st Edition may be transported.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

Meets requirements of DOT Special Provision 188 to be transported as non-dangerous goods

Meets the requirements of 49CFR173.185 to be transported as non-dangerous goods for road, rail, air, and vessel (Effective August 6, 2014 per HM224F)

The package must be handled with care and that a flammability hazard exists if the package is damaged;

15. REGULATORY INFORMATION

EU Additional Classification:

S 36/37

Safety Statements: Wear suitable protective clothing and gloves.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Preparation and revision information		
Date of previous revision	Date of this revision	Revision summary
Not applicable	/	The first New SDS

*****End of SDS*****