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## MATERIAL SAFETY DATA SHEET

**Product Name:** Lithium manganese button one-off  
battery CR2032 3.0V 210mAh

**Revision Date:** 2013-04-19

**Compiler:** Liu Linlin

**Checker:** Dongxuesheng

**Approver:** Fanbin



Shanghai Research Institute of Chemical Industry Testing Centre  
Shanghai Classification and Testing Centre of Dangerous  
Chemicals for State Administration of Work Safety

# Tianjin Taihao Lithium Battery Co.,Ltd.

## SAFETY DATA SHEET

### Lithium manganese button one-off battery CR2032 3.0V 210mAh

#### SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Lithium manganese button one-off battery CR2032 3.0V 210mAh  
 Company: Tianjin Taihao Lithium Battery Co.,Ltd.  
 Address: No.16, North Caiyuan Road, Wuqing Development Zone, Tianjin City, 301700,  
 P. R. China  
 Email: longxiu200741@163.com  
 Fax: +86-22-82191858  
 Emergency Phone: +86-22-82161889  
 SDS Number: 2613040011  
 SDS Date: 2013-04-19

#### SECTION 2 HAZARDS IDENTIFICATION

##### Hazards Identification:

The battery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN 38.3. It is not restricted to IATA DGR and IMO IMDG CODE.

##### Emergency Overview:

Caution: Avoid contact and inhalation the electrolyte contained inside the battery.

#### SECTION 3 INFORMATION ON INGREDIENTS

Product name: Lithium manganese button one-off battery CR2032 3.0V 210mAh

Ingredient	Concentration	CAS No.	EC No.
Manganese dioxide	30%	1313-13-9	215-202-6
Graphite	3%	7782-42-5	231-955-3
Polytetrafluoroethylene	3%	9002-84-0	/
Lithium	2%	7439-93-2	231-102-5
Propylene carbonate	3%	108-32-7	203-572-1
1,2-dimethoxyethane	3%	110-71-4	203-794-9
Lithium perchlorate	0.5%	7791-03-9	232-237-2
Polypropylene	3.5%	9003-07-0	/
Stainless steel	52%	/	/

## SECTION 4 FIRST-AID MEASURES

### Skin Exposure:

If the internal battery materials of an opened battery cell come into contact with the skin, immediately flush with plenty of water.

### Eye Exposure:

In case of the internal battery materials come into contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

### Inhalation Exposure:

In case of inhale the internal battery materials, remove immediately to fresh air and seek medical attention.

### Oral Exposure:

If swallow the internal battery materials, do not induce vomiting. Seek immediate medical attention.

## SECTION 5 FIRE FIGHTING MEASURES

### Extinguishing Media:

Suitable: Dry chemical, Sandy soil, Carbon dioxide.

### Firefighting:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazards: Emit toxic fumes under fire conditions.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Procedure of Personal Precaution:

If batteries show signs of leaking, avoid skin or eye contact with the material leaking from the battery. Use chemical resistant rubber gloves and non-flammable absorbent materials for clean up. Mix with inert material (e.g. dry sand, vermiculite) and transfer to sealed container for disposal.

## SECTION 7 HANDLING AND STORAGE

### Handling:

Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Avoid mechanical or electrical abuse. More than a momentary short circuit will generally reduce the battery service life. Avoid reversing battery polarity within the battery assembly. In case of a battery unintentionally be crushed, rubber gloves must be used to handle all battery components. Avoid contact with eyes, skin. Avoid inhalation. No smoking at working site. Materials to Avoid: Strong oxidizing agents, Corrosives.

### Storage:

Store in a cool, well-ventilated area. Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Materials to Avoid: Strong oxidizing agents, Corrosives.

**SECTION 8 EXPOSURE CONTROL/PPE****Engineering Controls:**

Use ventilation equipment if available. Safety shower and eye bath.

**Personal Protective Equipment:**

Respiratory System: Not necessary under conditions of normal use.

Eyes: Not necessary under conditions of normal use.

Clothing: Wear appropriate protective clothing.

Hand: Safety gloves.

**Other Protect:**

No smoking, drinking and eating at working site. Wash thoroughly after handling.

**SECTION 9 PHYSICAL/CHEMICAL PROPERTIES**

Appearance: Silvery button metal shell

Odor: Odorless

Melting Point/°C: >300°C

Solubility: Partial soluble in water

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

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Avoid exposure to heat and open flame. Avoid mechanical or electrical abuse. Prevent short circuits.

Prevent movement which could lead to short circuits.

**Materials to Avoid:**

Strong oxidizing agents, Corrosives.

**Hazardous Polymerization:**

Will not occur.

**Hazardous Decomposition Products:**

Metal oxides, CO, CO<sub>2</sub>.

**SECTION 11 TOXICOLOGICAL INFORMATION****Toxicity Data:**

Not available.

**Irritation Data:**

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

**SECTION 12 ECOLOGICAL INFORMATION**

No data available.

**SECTION 13 DISPOSAL CONSIDERATION****Appropriate Method of Disposal of Substance:**

Lithium batteries are best disposed of as a non-hazardous waste when fully or mostly discharged. Contact a licensed professional waste disposal service to dispose of large quantities materials.

**SECTION 14 TRANSPORT INFORMATION**

Shipping Name: not relevant

Hazard Class: not relevant

UN Number: not relevant

Packing Group: not relevant.

The product is not restricted to IATA DGR according to the requirements in General requirements and section II of Packaging Instruction 968.

The product is not restricted to IMO IMDG Code according to special provision 188.

### SECTION 15 REGULATORY INFORMATION

No information.

### SECTION 16 OTHER INFORMATION

Date: 2013-04-19

Department: Shanghai Research Institute of Chemical Industry Testing Centre  
Shanghai Classification and Testing Centre of Dangerous Chemicals for State Administration  
of Work Safety

Revision: Tel (Fax) :8621-52815377/52800971/52807275/52811034/52569800

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