



CENTRE TESTING INTERNATIONAL

M S D S

**COMPANY NAME : Changzhou Anyida Power Source
Technology Co.,Ltd**

**ADDRESS : NO.60 Tianshan road, Xinbei District,
Changzhou city, Jiangsu**

**SAMPLE NAME : button lithium manganese dioxide battery
of CR 2032**



Material Safety Data Sheet

***According to Regulation (EU) No. 1907/2006 (REACH), Annex II
(COMMISSION REGULATION (EU) No 453/2010)***

Version: 1.0/EN

Revision date: 01/03/2017

Product name: Button Lithium Manganese Dioxide Battery of CR2032

Printing date: 01/03/2017

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Button Lithium Manganese Dioxide Battery of CR 2032

REACH Reg. No.: No registration number is given.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Used as power supply in the remote control, electronic toy, instruments, etc.

Uses advised against: No information available.

1.3 Details of the supplier of the SDS

Manufacturer: Changzhou Anyida Power Source Technology CO., LTD.

Address: No.60, Tianshan Road,Xinbei District, Changzhou city, Jiangsu Prov., China

Postal code: 213016

E-mail: twb@daily-max.net

Telephone: +86-519-83270474

Fax: +86-519-83270425

Importer:

Address:

Postcode:

E-mail:

Telephone:

Fax:

1.4 Emergency telephone number

+86-519-83270441

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[CLP]

This product is not classified as hazardous.

Classification according to Directive 67/548/EEC[DSD] or Directive 1999/45/EC[DPD]

This product is not classified as hazardous.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictogram(s): No pictogram is used.

Signal word: No signal word is used.

Hazard statements: No hazard statement.

Precautionary statements: No precautionary statement.

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Supplemental Hazard information (EUH):

No information available.

Special rules for supplemental label elements for certain mixtures:

No information available.

2.3 Other hazards

No information available.

Section 3: Composition/information on ingredients

3.1 Substance/Preparation information

Ingredients information:

Ingredient name	CAS No.	Classification under DSD	Classification under CLP	% (w/w)
iron	7439-89-6	Not classified.	Not classified.	52%
manganese dioxide	1313-13-9	Xn; R20/22	Acute Tox. 4; H332 Acute Tox. 4; H302	30%
graphite	7782-42-5	Not classified.	Not classified.	4.6%
polypropylene	9003-07-0	Not classified.	Not classified.	4.4%
propylene carbonate	108-32-7	Xi; R36	Eye Irrit. 2; H319	3%
lithium	7439-93-2	F; R15 R14 C; R34	Water-react. 1; H260 Skin Corr. 1B; H314	2%
1,2-dimethoxyethane	110-71-4	F; R11 R19 Repr. Cat. 2; R60 Repr. Cat. 2; R61 Xn; R20	Flam. Liq. 2; H225 Repr. 1B; H360FD Acute Tox. 4; H332	2%
1,3-dioxolane	646-06-0	F; R11	Flam. Liq. 2; H225	1.3%
lithium perchlorate	7791-03-9	Not classified.	Not classified.	0.7%

Remark: The battery is neither substance nor mixture but a finished product. It has no risk to life and health under normal use or transportation because ingredients of battery are not leaked out by virtue of hermetical sealing with metal case. The electrolyte is corrosive. Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system, and skin.

Full text of R-phrases and H-statements: see section 16.

Section 4: First aid measures

4.1 Description of first aid measures

General notes: In all cases of doubt, or when symptoms persist, seek medical attention.

Following inhalation:

If inhaled electrolyte, remove victim to fresh air and keep at rest in a position comfortable for breathing. If

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experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.

Following skin contact:

If contacted electrolyte, wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Following eye contact:

If contacted electrolyte, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Following ingestion:

If swallowed electrolyte, give large amounts of water. Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death.

Notes for the doctor:

Treat symptomatically and supportively.

Treatment may vary with condition of victim and specifics of incident.

4.2 Most important symptoms and effects, both acute and delayed

Direct contact of internal electrolyte gel with eyes may cause severe burns or blindness.

Direct contact of internal electrolyte gel with the skin may cause skin irritation or damaging burns.

4.3 Indication of the immediate medical attention and special treatment needed

No information available.

Section 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Dry chemical, alcohol-resistant foam, powder, carbon dioxide.

Unsuitable extinguishing media:

For this substance no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Risk of explosion by fire is anticipated if batteries are disposed of in fire. Firefighting water runoff and dilution water may be toxic and corrosive and may cause adverse environmental impacts.

5.3 Advice for fire-fighters

Do not stay in dangerous zone without self-contained breathing apparatus.

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Prevent fire-fighting water from entering surface water or groundwater.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Refer to SECTION 8 for personal protective equipment. Prevention of skin and eye contact. Ensure

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adequate ventilation. Remove all sources of ignition.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Add neutralizer/absorbent to spill area. Sweep or shovel spilled material and absorbent and place in approved container. Dispose of any non-recyclable materials in accordance with local, state, provincial or federal regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Section 7: Handling and storage

7.1 Precautions for safe handling

Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components. Do not handle near heat, sparks, or open flames. Protect containers from physical damage to avoid leaks and spills. Place cardboard between layers of stacked batteries to avoid damage and short circuits. Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water.

7.3 Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

Section 8 : Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No. 1313-13-9	PEL (USA): Short-term value: C 5 mg/m ³ as Mn REL (USA): Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn TLV (USA): 0,2 mg/m ³
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	as Mn
CAS No. 7782-42-5	PEL (USA): 15 mppcf mg/m ³ REL (USA): 2.5* mg/m ³ *respirable dust TLV (USA): 2* mg/m ³ all forms except graphite fibers;*resp. fraction
CAS No. 646-06-0	TLV (USA): 61 mg/m ³ , 20 ml/m ³

DNEL (Derived No Effect Level) for workers and the general population:

Not available.

PNEC(Predicted No Effect Concentration) values:

Not available.

8.2 Exposure controls

Appropriate engineering controls:

There is no need of personal protective equipment on regular handling and storage. In the event, however, a large amount of electrolyte should be released by mechanical or electrical abuse, use the protections as shown below.

Personal protective equipment:

Eye and face protection: Wear appropriate protective eyeglasses or chemical safety goggles.

Skin protection: Wear appropriate protective clothing and gloves to prevent skin exposure.

Respiratory protection: In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Solid
Colour:	No data available.
Odour:	Odourless
pH:	No data available.
Melting point:	No data available.
Boiling point:	No data available.
Density:	No data available.
Vapour pressure:	No data available.
Partition coefficient (n -octanol/water):	No data available.
Solubility in water:	Insoluble in water
Flash point:	Not applicable.
Auto-ignition temperature:	No data available.

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Flammability:	No data available.
Decomposition temperature:	No data available.
Explosive properties:	Not predicted to be explosive.
Oxidising properties:	Not predicted to have oxidising properties.

9.2 Other information

No data available.

Section 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

When a battery is heated strongly by the surrounding fire, acrid or harmful fume may be emitted.

10.4 Conditions to avoid

External short circuit of battery, deformation by crush, direct sunlight, high humidity, heating, sources of ignition.

10.5 Incompatible materials

Strong bases, combustible organic materials, reducing agents, strong oxidizers, and water.

10.6 Hazardous decomposition products

Irritating or toxic fumes and gases, metallic oxide.

Section 11: Toxicological information

11.1 Toxicokinetics, metabolism and distribution

No relevant information available.

11.2 Information on toxicological effects

Acute toxicity:

No data available.

Skin corrosion/irritation:

No data available.

Serious eye damage/irritation:

No data available.

Respiratory or skin sensitization:

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No data available.

CMR effects (Carcinogenicity, Mutagenicity and Toxicity for Reproduction):

No data available.

STOT-single exposure and repeated exposure:

No data available.

Additional information:

No data available.

Section 12: Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available on biodegradation.

12.3 Bioaccumulative potential

Based on best current information, there is no data known associated with this product.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment information is not available as chemical safety assessment not conducted.

12.6 Other adverse effects

No information available.

Section 13: Disposal considerations

13.1 Waste treatment methods

Do not throw out a used battery cell. Recycle through the recycling company if possible. Following local, State/Provincial, and Federal/National regulations applicable to end-of-life characteristics will be the responsibility of the end-user.

Section 14: Transport information

14.1 UN Number

3090

14.2 UN proper shipping name

LITHIUM METAL BATTERIES (including lithium alloy batteries)

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14.3 Transport hazard class(es)

9

14.4 Packing group

II

14.5 Environmental hazards

Not marine pollutant.

14.6 Special precautions for user

No information available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information available.

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulation:

Authorisations: No information available.

Restrictions on use: No information available.

EINECS: CAS# 7439-89-6 & 1313-13-9 & 7782-42-5 & 7439-93-2 & 7791-03-9 & 108-32-7 & 110-71-4 & 646-06-0 are listed in the inventory.

DSD (67/548/EEC): CAS# 1313-13-9 & 7439-93-2 & 108-32-7 & 110-71-4 & 646-06-0 are listed in the Annex I.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

Section 16: Other information

16.1 Revision Information:

Date of the previous revision: Not applicable.

Date of this revision: 01/03/2017.

Revision summary: The first new MSDS

16.2 Abbreviations and acronyms

CLP: EU regulation (EC) No 1272/2008 on classification, labelling and packaging of chemical substances and mixtures.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

EINECS: European Inventory of Existing Commercial Chemical Substances.

RID: European Rail Transport.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

OSHA: The United States Occupational Safety and Health Administration.

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TSCA: Toxic Substances Control Act, The American chemical inventory.

DSD: Dangerous Substance Directive (67/548/EEC).

16.3 Key literature references and sources for data

ESIS: European chemical Substances Information System.

HSDB: Hazardous Substances Data Bank.

ICSC: International Chemical Safety Cards.

16.4 Relevant R-phrases and H-statements

R-phrases(code and full text):

R11: Highly flammable.

R14: Reacts violently with water.

R15: Contact with water liberates extremely flammable gases.

R19: May form explosive peroxides.

R20/22: Harmful by inhalation and if swallowed.

R22: Harmful if swallowed.

R34: Causes burns.

R36: Irritating to eyes.

R60: May impair fertility.

R61: May cause harm to the unborn child.

H-statements (code and full text):

H225: Highly flammable liquid and vapour.

H260: In contact with water releases flammable gases which may ignite spontaneously.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H360: May damage fertility or the unborn child.

16.5 Training advice

Provide adequate information, instruction and training for operators.

16.6 Declare to reader

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage. According to REACH Article 31(5), the SDS shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market, unless the recipient Member State(s) concerned provide otherwise. It should also be noted that this SDS is applicable to the countries with English as an official language.



TRANSPORTATION CERTIFICATE

Ref. TC – LS14250- 01/2014- 10

This is to certify that the following Saft cell **LS14250** has met the requirements of the UN Recommendations on the transport of dangerous goods, Part III, sub-section 38.3, Manual of Tests and Criteria.

Products covered by this certificate	
Tested product P/N	04225Y
Products P/N by assimilation	All the following LS14250 cell versions that just vary by their termination mode and labeling.

Product description	
Technology	Primary (non-rechargeable Lithium-Thionyl chloride (Li-SOCl ₂) cell
Description	Primary ½ AA-sized single cell
Nominal Voltage	3.6V
Nominal Capacity	1.2 Ah
Lithium metal content	0.32 g

	Results	Report number
38.3.4.1 Test 1: Altitude Simulation	Passed	P0134-02
38.3.4.2 Test 2: Thermal test	Passed	P0134-02
38.3.4.3 Test 3: Vibration	Passed	P0134-02
38.3.4.4 Test 4: Shock	Passed	P0134-02
38.3.4.5 Test 5: External short circuit	Passed	P0134-02
38.3.4.6 Test 6: Impact/crush (cell test)	Passed	T0405-13
38.3.4.7 Test 7: Overcharge	Not applicable for primary battery	
38.3.4.8 Test 8: Force-discharge (cell test)	passed	P0134-02

Product Classification

This lithium battery and/or cell meets the criteria and requirements of the relevant sections of the **UN Manual of Tests and Criteria** and is assigned for transportation to **UN 3090** in accordance with the current **UN Recommendations on the Transport of Dangerous Goods Model Regulations**.

Signed on Behalf of Saft, Specialty Battery Group

Catherine Gautier Lithium Division Quality Customer

dated 09.01.2014

Pascal Foucoin Lithium Division Quality Mgr

dated 9.01.2014