



Pony Testing International Group

Report No.: MD1KKDXN48322716

SDS Report

Sample Description

& Model

3V LITHIUM METAL BATTERY CR2032

Applicant

Multire warditd Lithium power Technology Ltd. (Dongguan)

Address

TINGSHAN INDUSTRIAL PARK , HOUJIE TOWN,
DONGGUAN CITY, CHINA.

No.: MD1KKDXN48322716

Code: y301a9



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Safety Data Sheet

According to ST/SG/AC.10/30/Rev.6 (GHS)

Section 1 - Chemical Product and Company Identification

Chemical product identification

Sample Description: 3V LITHIUM METAL BATTERY**Sample Model:** CR2032**Recommended Uses:** power for electronic products**Restrictions on use:** N/A**Supplier name:** Multire Warditd Lithium Power Technology Ltd.(Dongguan)**Address:** TINGSHAN INDUSTRIAL PARK, HOUJIE TOWN, DONGGUAN CITY, CHINA.**Phone number:** 0769-85880399**FAX:** 0769-85839503**E-mail:** 478247994@qq.com**Emergency phone number:**0769-85880399

Section 2 - Hazards Identification

Emergency overview: 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 below hazards exist.

CAS# 1313-13-9

Classification according to GHS

Specific target organ toxicity, repeated exposure (1) (respiratory system, nervous system, cardiovascular system)

Label elements

Hazard pictogram(s):

Signal word: Danger

Hazard statement(s):

H372 Causes damage to organs through prolonged or repeated exposure (respiratory system, nervous system, cardiovascular system)

Precautionary statement(s):



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Prevention:

P260 Do not breathe dust, fume, gas, mist, vapours and spray.

P264 Wash skin and clothing thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response:

P314 Get medical advice if you feel unwell.

Storage

None.

Disposal :

P501 Contents handling to approved waste treatment plants.

CAS# 7439-93-2
Classification according to GHS

Substances and mixtures, which in contact with water, emit flammable gases (1)

Skin corrosion/irritation (1A-1C)

Serious eye damage/eye irritation (1)

Specific target organ toxicity, single exposure (2) (respiratory system)

Label elements
Hazard pictogram(s):

Signal word:

Danger

Hazard statement(s):

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

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H371 May cause damage to organs(respiratory system)

Precautionary statement(s):
Prevention:

P223 Do not allow contact with water.

P231 + P232 Handle and store contents under inert gas, Protect from moisture.

P280 Wear protective gloves , protective clothing, eye protection, face protection.

P260 Do not breathe dusts or mists.

P264 Wash skin and clothing thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response:

P302 + P335 + P334 IF ON SKIN: Brush off loose particles from skin and immerse in cool water .



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- P370 + P378 In case of fire: Use the appropriate media put out the fire.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P363 Wash contaminated clothing before reuse.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P310 Immediately call a POISON CENTER.
- P321 Specific treatment (See additional emergency instructions).
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

- P402 + P404 Store in a dry place. Store in a closed container.
- P405 Store locked up.

Disposal:

- P501 Contents handling to approved waste treatment plants.

CAS# 108-32-7
Classification according to GHS

Serious eye damage/eye irritation (2A)

Label elements
Hazard pictogram(s):

Signal word: Warning

Hazard statement(s):

H319 Causes serious eye irritation

Precautionary statement(s):
Prevention:

- P264 Wash skin and clothing thoroughly after handling.
- P280 Wear eye protection and face protection.

Response:

- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical advice.

Storage

None

Disposal:

None



CAS# 646-06-0

Classification according to GHS

Flammable liquids (2)
 Acute toxicity, oral (5)
 Skin corrosion/irritation (3)
 Serious eye damage/eye irritation (2A)
 Germ cell mutagenicity (2)
 Reproductive toxicity (2)

Label elements

Hazard pictogram(s):



Signal word: Danger

Hazard statement(s): H225 Highly flammable liquid and vapour

H303 May be harmful if swallowed
 H316 Causes mild skin irritation
 H319 Causes serious eye irritation
 H341 Suspected of causing genetic defects
 H361 Suspected of damaging fertility or the unborn child

Precautionary statement(s):

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 Keep container tightly closed.
 P240 Ground and bond container and receiving equipment.
 P241 Use explosion-proof equipment.
 P242 Use non-sparking tools.
 P243 Take action to prevent static discharges.
 P280 Wear protective gloves, protective clothing, eye protection and face protection.
 P264 Wash skin and clothing thoroughly after handling.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
 P370 + P378 In case of fire : Use the appropriate media put out the fire.



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P312 Call a POISON CENTER, if you feel unwell.

P332 + P313 If skin irritation occurs: Get medical advice.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice.

P308 + P313 IF exposed or concerned: Get medical advice.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal:

P501 Contents handling to approved waste treatment plants.

Other hazards

Physical and chemical hazards: See Section 10

Human health hazards: See Section 11

Environmental hazards: See Section 12

Section 3 - Composition/Information on Ingredients

Chemical characterization: Mixture

Chemical Composition	CAS No.	EC#	Weight (%)
Manganese dioxide	1313-13-9	215-202-6	41.1
Lithium	7439-93-2	231-102-5	2.31
Iron	7439-89-6	231-096-4	45.23
1,2-Propanediolcyclic carbonate	108-32-7	203-572-1	5.77
1,3-Dioxolane	646-06-0	211-463-5	
Lithium Perchlorate	7791-03-9	232-237-2	

Section 4 - First Aid Measures

Description of first aid measures

General information No special measures required.

After eye contact

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Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After inhalation

Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallow ing

Do not induce vomiting. Get medical attention.

Personal protective equipment for first-aid responders: No data available.

Most important symptoms/effects, acute and delayed: No data available.

Indication of immediate medical attention and special treatment needed: No data available.

Section 5 - Fire Fighting Measures

Suitable extinguishing media:

Use extinguishing agent suitable for local conditions and the surrounding environment . Such as dry chemical, soda ash, lime or sand.

Unsuitable extinguishing media:

Water or foam.

Specific Hazards arising from the chemical:

Special hazards arising from the substance or mixture

Battery may burst and release hazardous decomposition products when exposed to a fire situation. Produce flammable gases on contact with water. May ignite on contact with water or moist air. Some react vigorously or explosively on contact with water. May be ignited by heat, sparks or flames. May re-ignite after fire is extinguished. Runoff may create fire or explosion hazard.

Specific protective actions for fire-fighters:

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

Section 6 - Accidental Release Measures

Personal precautions :

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Protective equipment:



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No data available.

Emergency procedures:

Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and materials for containment and cleaning up:

All waste must refer to the United Nations, the national and local regulations for disposal.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7 - Handling and Storage

Precautions for safe handling:

Consumption of food and beverage should be avoided in work areas.

Wash hands with soap and water before eating, drinking.

Ground containers when transferring liquid to prevent static accumulation and discharge.

Information about fire and explosion protection

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles

Store in a cool, dry, well-ventilated place.

Information about storage in one common storage facility

Keep away from heat, avoiding the long time of sunlight.

Further information about storage conditions

Keep container tightly sealed.

Specific and use

No data available.

Section 8 - Exposure Controls/Personal Protection

Control parameters



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CAS No.	ACGIH	NIOSH	OSHA
1313-13-9	TLV-TWA 0.2mg/m ³	N/A	N/A
7439-93-2	N/A	N/A	N/A
7439-89-6	N/A	N/A	N/A
108-32-7	N/A	N/A	N/A
646-06-0	N/A	N/A	N/A
7791-03-9	N/A	N/A	N/A

Appropriate engineering controls:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work .

Personal Protective Equipment

Respiratory protection: Wear suitable protective mask in order to reduce the respiratory system. A large number of leakage , wear chemical protective clothing, including self-contained breathing apparatus.

Eyes Protection: Wear safety goggles or eye protection combined with respiratory

Hand Protection: Wear appropriate protective gloves to reduce skin contact.

protection.

Skin and Body Protection: Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Colour:	Silver.
Physical State:	Button.
Odour:	Not available.
Odour threshold:	Not available.
pH:	Not available.
Melting point/freezing point:	Not available.
Initial boiling point and boiling range:	Not available.



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Flash Point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Explosion Limits (vol% in air):	Not available.
Vapour pressure, kPa at 20-C:	Not available.
Vapor density:	Not available.
Density/Relative density (water = 1):	Not available.
Solubility(ies):	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Other information:	
Voltage	3.0V
Electric capacity	210mAh
Lithium metal content	0.058g

Section 10 - Stability and Reactivity

Reactivity: No data available.

Chemical stability: Stable.

Possibility of hazardous reactions: No data available.

Conditions to Avoid: Flames, sparks, and other sources of ignition, incompatible materials.

Incompatibilities materials: Oxidizing agents, acid, base.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

Section 11 - Toxicological Information

Acute Toxicity:

CAS No.	LC50/LD50
1313-13-9	LD50 Rat (oral): 11710 mg/kg
7439-93-2	No data available.
7439-89-6	No data available.
108-32-7	LD50 Rat (oral): 29000mg/kg ; LD50 rabbits (Dermal): >20000mg/kg

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646-06-0	LD50 Rat (oral): 3000mg/kg, LD50 Rat (rabbit): 9074 mg/kg
7791-03-9	No data available.

Skin corrosion/irritation : No data available.

Serious eye damage/irritation: No data available.

Respiratory or Skin sensitization : No data available.

Germ Cell mutagenicity: No data available.

Carcinogenicity: No data available.

Reproductive toxicity: No data available.

Specific target organ toxicity-Single exposure: No data available.

Specific target organ toxicity-Repeated exposure : No data available.

Aspiration hazard: No data available.

Information on the likely routes of exposure: No data available.

Eye: No data available.

Skin: No data available.

Ingestion: No data available.

Inhalation: No data available.

Section 12 - Ecological Information

Ecological Toxicity:

CAS# 108-32-7

LC50: >1000 mg/L- Fish (Carp)-96h

EC50:>1000 mg/L- Crustaceans (Daphnia magna)-48h

EC50:>900 mg/L- A lgae (Scenedesmus subspicatus) -72h

CAS# 646-06-0

EC50: 6950000mg/L-Crustacea (Daphnia magna)-48h

Persistence and degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other adverse effects: No data available.

Section 13 - Disposal Considerations

Disposal methods:


Recommendation :

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

Section 14 - Transport Information

UN Number	
IATA	UN3090
IMDG	UN3090
UN Proper shipping name	
IATA	Lithium metal batteries
IMDG	LITHIUM METAL BATTERIES
Transport hazard class(es)	
IATA	9
IMDG	9
Model Regulation	9
Packing group	
IATA	NIA
IMDG	NIA
Model Regulation	NIA
Packaging Sign	
IATA	NIA
IMDG	NIA
Model Regulation	NIA
Environmental hazards	
Marine pollutant:	No
Special precautions for user	Not applicable.

Transport information: The 3V LITHIUM METAL BATTERY CR2032 has passed the test UN38.3, according to the report ID: H12203022921 D-1.

According to the Packing Instruction 968 section II of IATA DGR 5th Edition for transportation. Cargo aircraft only.

According to the special provision 188 of IMDG (37-14). The products are not subject to dangerous goods.



Separate batteries to prevent short-circuiting, and they should be packed in strong package during transport. Lithium cell or battery should incorporate a safety venting device or be designed to prevent a violent rupture under normal transport conditions. Keep away from high temperature and open flames.

Note: Batteries weight in the package<5kg(By air, Batteries installed in equipment).

Transport Fashion: By air, by sea.

Section 15 - Regulatory Information

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

CAS No.	TSCA	ECSC	DSL/ NDSL	EINECS/ ELINCS/ NLP
1313-13-9	Listed	Listed	Listed DSL	Listed
7439-93-2	Listed	Listed	Listed DSL	Listed
7439-89-6	Listed	Listed	Listed DSL	Listed
108-32-7	Listed	Listed	Listed DSL	Listed
646-06-0	Listed	Listed	Listed DSL	Listed
7791-03-9	Listed	Listed	Listed DSL	Listed

Section 16 - Other Information

Issue Time:2016-03-09

Issue Department: Technical department

Modification record:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other Information:

CAS: (Chemical Abstracts Service);

EC: (European Commission);



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ACGIH: (American Conference of Governmental Industrial Hygienists);
 NIOSH: (US National Institute for Occupational Safety and Health);
 OSHA : (US Occupational Safety and Health);
 TLV: (Threshold Limit Value)
 TWA: (Time Weighted Average);
 STEL: (Short Term Exposure Limit);
 PEL: (Permissible Exposure Level);
 REL:(Recommended Exposure Limit);
 PC-STEL:(Permissible concentration-time weighted average) ;
 PC-TWA : (Permissible concentration-short time exposure limit);
 LC50: (Lethal concentration, 50 percent kill);
 LD50: (Lethal dose, 50 percent kill);
 IARC : (International Agency for Research on Cancer);
 EC50: (Median effective concentration);
 BCF: (Bioconcentration Factor);
 BOD: (Biochemical oxygen demand);
 NOEC: (No observed effect concentration);
 NTP: (US National Toxicology Program);
 RTECS: (Registry of Toxic Effects of Chemical Substances);
 IATA: (International Air Transport Association);
 IMDG: (International Maritime Dangerous Goods);
 TOG: (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations);
 TOC: (Total Organic Carbon);
 TSCA: (Toxic Substances Control Act of USA);
 DSL:(the Domestic Substances List of Canada);
 NDSL: (the Non-domestic Substances List of Canada)

End of report