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Identity (As Used on Label and List) Lithium / Manganese Dioxide Cell	Part Number CR2032
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Section I: Information of Manufacturer

Manufacturer's Name SHUN WO NEW POWER ELECTRONICS(SHENZHEN) CO.,LTD.	Emergency Telephone Number
Address (Number, Street, City, State, and ZIP Code) No.7 1st Zone, Xiakeng, Tongle Village, Longgang Town, Shenzhen China	Telephone Number for information 0755-84294768
	Date of prepared and revision 2008-12-27
	Signature of Preparer (optional)

Section II: Hazardous Ingredients/Identity Information

Hazardous Description:	Components:	Approximate weight of content in one piece of the cell (mg)	Approximate % of total weight
	lithium	65	2.17 Wt%
	Manganese dioxide	832	27.73 Wt%
	Electrolyte	221	7.37 Wt%
	Lead		0 ppm
	Cadmium		0 ppm
	Mercury		0 ppm
	Cr+6		4 ppm
	PBB		0 ppm
	PBDE		0 ppm
	Others		62.73 Wt%

Section III: Physical/Chemical Characteristics

Form NA	Specific Gravity (H ₂ O =1) NA
Boiling Point NA	Melting Point NA
Vapor Pressure (mm Hg) NA	Evaporation Rate (Butyl Acetate=1) NA
Vapor Density (AIR=1) NA	Ph NA

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Solubility in Water

NA

Appearance and Odor

NA

Section IV: Hazard classification

NA

Section V: Reactivity Data

Stability

Unstable

Conditions to Avoid

Yes= (X)

()

Stable

(X)

Incompatibility (Materials to Avoid)

Hazardous Decomposition or By products

NA

Hazardous

May Occur

Conditions to Avoid

Reactions

()

Yes = (X)

Will Not Occur

(X)

Section VI: Health Hazard Data

Route(s) of Entry Yes=(X)

Inhalation?

Skin?

Ingestion?

(NA)

(NA)

(NA)

Health Hazard (Acute and Chronic) / Toxicological information

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

Section VII – First Aid Measures

First aid Procedures

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

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

Section VIII: Fire and Explosion Hazard Data

Flash Point (Method Used)

Ignition temp

Flammable Limits

LEL

UEL

NA

NA

NA

NA

NA

Extinguishing Media

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NA

Special Fire Fighting Procedures

NA

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: Leave from contaminated area. In case of contact with electrolyte, wash out electrolyte with plenty of water at least 15 minutes. If irritation persists, consult a physician immediately.

After cooling, remove spilled electrolyte and batteries with absorbent not to contact with electrolyte.

Section X: Handling and Storage

Safe handling and storage advice

The battery is extremely sensitive to adverse effects of humidity. Be sure to store them in a place that is dry and subject to little temperature change. Do not place near the boiler or radiator, nor expose to direct sun light. Do not dispose of the battery in fire. Do not charge the battery. Do not short-circuit the battery. Do not put in backward position. Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries. Do not disassemble the battery, handling in such manner can cause the battery to explode, leak and injury.

Section XI: Exposure Controls / Personal Protection

Occupational Exposure Limits :

LTEP

STEP

NA

NA

Respiratory Protection (Specify Type)

NA

Ventilation

Local Exhausts

Special

NA

NA

Mechanical (general)

Other

NA

NA

Protective Gloves

NA

Eye Protection

NA

Other Protective Clothing or Equipment

NA

Work / Hygienic Practices

NA

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None unless internal material are exposed.

In case of internal gas released or electrolyte spilled then may cause irritation of skin or eyes. Released gas may also cause irritation of skin or eyes.

Section XII: Ecological Information

NA

Section XIII: Disposal Method

Discard the method of handling: After the used battery is put for 2 days In common water (no pure water) , can press general garbage disposal.

Section XIV: Transportation Information

Lithium battery international transportation must comply with part 1 of PI970, and based on a United Nations recommendation, the regulation for lithium cells and batteries has been revised in the international Air Transport Association (IATA) dangerous goods regulations (DGR Rev.50).Each cell or battery pack meets the requirements of each test in the UN Manual of Tests and Criteria III, sub section 38.3. (Guangzhou Vkan Certification and Testing Institute No.UN08-0440)

During the transportation of a large amount of batteries by ship, trailer or railway , do not leave them in the places of high temperature and do not allow them to be exposed to condensation.

During the transportation do not allow the package damaged, May be flammable if package is damaged. In the event packaging is damaged, special procedures must be used including inspection and repackaging if necessary and handle with care.

Section XV: Regulatory Information

IATA Dangerous Goods Regulations 50th Edition (2009)

ICAO Technical Instructions for the safe transport of dangerous goods by air

Section XVI: Other Information

This MSDS is described on the basis of present materials, information and data, so, please notice that it will be revised by new information. Also this sheet is supplied to entrepreneurs as reference information in order to handle batteries safely. Please notice that entrepreneur have to deal with batteries as they think fit.

References (1) UN Recommendations on the Transportation of Dangerous Goods Model Regulations (ST/SG/AC.10/1/REV.12)

(2) Federal Resister / Vol.65, No. 174 / Thursday, September 7, 2000 / Notices

Section XVII: Measures for fire extinction

Suitable fire extinguishing agent: CO₂, fire extinguisher, ABC dry powder extinguisher, sand, etc. Can't quench, a small amount of can cover with the sand first, burn and need to use the fire extinguisher in a large amount. Much water can put out a fire was aroused a few battery. The fire fighter's special shelter is equipped: Wearing the air respirator, protects the helmet, glasses, etc.

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