

SAFETY DATA SHEET

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

Product identifier

Product Name Omnergy CR Type Lithium Coin Cell

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Lithium Primary/Metal Batteries

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Power Glory Tech (Shenzhen) Co., Ltd.

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NA
NA
CN

Supplier Phone Number Phone:755-2754-3060
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Supplier Email jerry@omnergy.com.hk

Emergency telephone number

Company Emergency Phone Number +852 6093-2825

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 for a ruptured battery. This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).



Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive Toxicity	Category 1B

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger	
Hazard Statements	Harmful if swallowed Harmful if inhaled Causes skin irritation Causes serious eye irritation May damage fertility or the unborn child	
		
This is a battery. In case of rupture: the above hazards exist.		
Appearance	Physical state	Odor
Solid	Solid	No data available

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
- Do not eat, drink or smoke when using this product
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Wear eye/face protection

Precautionary Statements - Response

- IF EXPOSED OR CONCERNED: Get medical advice/attention
- 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
- If skin irritation occurs: Get medical advice/attention
- Take off contaminated clothing and wash before reuse

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing



Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

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

53.4 % of the mixture consists of ingredient(s) of unknown toxicity

Other information

No information available

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Manganese dioxide	1313-13-9	10 - 30	*
Supplier Trade Secret	Trade Secret	3 - 7	*
Supplier Trade Secret	Trade Secret	1 - 5	*
Graphite	7782-42-5	1 - 5	*
Lithium	7439-93-2	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures**General Advice**

Show this safety data sheet to the doctor in attendance.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin contact

Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Ingestion

Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.



Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

DO NOT USE WATER OR FOAM.

Specific hazards arising from the chemical

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. Some are transported in highly flammable liquid. Runoff may create fire or explosion hazard.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No. **Sensitivity**

to Static Discharge No.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes.

Other Information DO NOT GET WATER on spilled substance or inside containers.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8.

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 Pick up and transfer to properly labeled containers.



7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed.

Incompatible Products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese dioxide 1313-13-9	TWA: 0.02 mg/m ³ Mn respirable particulate matter TWA: 0.1 mg/m ³ Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Graphite 7782-42-5	TWA: 2 mg/m ³ respirable particulate matter all forms except graphite fibers	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic (vacated) TWA: 2.5 mg/m ³ respirable dust natural (vacated) TWA: 10 mg/m ³ total dust synthetic (vacated) TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ respirable dust

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.



Skin and body protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Respiratory protection

Handle in accordance with good industrial hygiene and safety practice.

Hygiene Measures

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Solid		
Appearance	Solid	Odor	No data available
Color	No information available	Odor Threshold	Not applicable
Property	Values	Remarks	Method
pH	No data available	None known	
Melting / freezing point	No data available	None known	
Boiling point / boiling range	No data available	None known	
Flash Point	No data available	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	No data available	None known	
Water Solubility	Insoluble		
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	NA		
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	
Explosive properties	No data available		
Oxidizing properties	No data available		

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.



Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

None known.

Incompatible materials

None known.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information****Inhalation**

Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).

Eye contact

Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain. May cause temporary eye irritation.

Skin contact

Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). Irritating to skin. Prolonged contact may cause redness and irritation.

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Manganese dioxide 1313-13-9	= 9000 mg/kg (Rat)	-	-
Supplier Trade Secret	= 29000 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
Supplier Trade Secret	> 4000 mg/kg (Rat) = 775 mg/kg (Rat)	1000 - 2000 mg/kg (Rabbit)	20 - 63 mg/L (Rat) 6 h

Information on toxicological effects**Symptoms**

Erythema (skin redness). May cause redness and tearing of the eyes. Coughing and/ or wheezing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

No information available.

Mutagenic Effects

No information available.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Reproductive toxicity	Contains a known or suspected reproductive toxin.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	No known effect based on information supplied.
Target Organ Effects	None known.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)

732.00 mg/kg

ATEmix (dermal)

11,095.00 mg/kg (ATE)

ATEmix (inhalation-gas)

6,316.00 ppm (4 hr)

ATEmix (inhalation-dust/mist)

2.11 mg/l

ATEmix (inhalation-vapor)

15.44 ATEmix

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Supplier Trade Secret	72h EC50: > 500 mg/L (Desmodesmus subspicatus)	96h LC50: > 1000 mg/L (Cyprinus carpio) 96h LC50: = 5300 mg/L (Leuciscus idus)	EC50 > 10000 mg/L 17 h	48h EC50: > 500 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical name	Log Pow
Manganese dioxide 1313-13-9	<0
Supplier Trade Secret	0.48

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods



Disposal methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

California Waste Codes 141

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste
Lithium 7439-93-2	Corrosive Ignitable Reactive

14. TRANSPORT INFORMATION

Note: The transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule)
Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"

DOT
Proper Shipping Name NOT REGULATED
Emergency Response Guide Number NON-REGULATED
 138

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA
Proper Shipping Name NON REGULATED
Hazard Class N/A
ERG Code 9FZ

IMDG/IMO
Proper Shipping Name NON-REGULATED PER SP 188
Hazard Class N/A
EmS-No. F-A, S-I



RID Not regulated

ADR Not regulated

Tunnel restriction code (E)

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Not determined

DSL Not determined

IECSC

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Manganese dioxide - 1313-13-9	1313-13-9	10 - 30	1.0
Supplier Trade Secret -		1 - 5	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Manganese dioxide 1313-13-9	X		X	X	X
Supplier Trade Secret	X	X	X	X	X
Graphite 7782-42-5	X	X	X		
Lithium 7439-93-2	X	X	X		

International Regulations

Mexico

National occupational exposure limits

Chemical name	Carcinogen Status	Exposure Limits
Manganese dioxide		Mexico: TWA= 0.2 mg/m ³
Graphite		Mexico: TWA= 2 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class

Not determined

16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 0	Instability 0	Physical and Chemical Hazards W Personal Protection X
HMIS	Health Hazards 0	Flammability 0	Physical Hazard 0	

Prepared By Product Stewardship
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Disclaimer

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End of Safety Data Sheet