

# SAFETY DATA SHEET

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

### Product identifier

**Product Name** Toshiba 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.

**Supplier Address** Dong Keng Industrial Zone, Dong Keng Village,  
Gongming Town  
Shenzhen  
NA  
NA  
CN

**Supplier Phone Number** Phone:755-2754-3060  
Fax:+86 755 2754-3062

**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 (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**

<b>Signal word</b>	<b>Danger</b>	
<b>Hazard Statements</b> 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.		
<b>Appearance</b> Solid	<b>Physical state</b> Solid	<b>Odor</b> No information 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
Supplier Trade Secret	Trade Secret	10 - 30	*
Supplier Trade Secret	Trade Secret	3 - 7	*
Supplier Trade Secret	Trade Secret	1 - 5	*
Supplier Trade Secret	Trade Secret	1 - 5	*
Supplier Trade Secret	Trade Secret	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 immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.

**Skin contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen.

**Ingestion**

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. 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**

Dry chemical, soda ash, lime or sand. DRY sand, dry chemical, soda ash or lime or withdraw from area and let fire burn. Move containers from fire area if you can do it without risk.

**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

<b>Personal precautions</b>	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Stop leak if you can do it without risk. DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.
<b>Other Information</b>	DO NOT GET WATER on spilled substance or inside containers.

### Environmental precautions

<b>Environmental precautions</b>	Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
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### Methods and material for containment and cleaning up

<b>Methods for containment</b>	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Dike for later disposal; do not apply water unless directed to do so. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not breathe dust. Avoid generation of dust. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.
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### Conditions for safe storage, including any incompatibilities

<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.
<b>Incompatible Products</b>	Strong acids. Strong oxidizing agents. Strong bases.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

<b>Exposure Guidelines</b>	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
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Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
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Supplier Trade Secret	TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Supplier Trade Secret	TWA: 2 mg/m <sup>3</sup> respirable particulate matter all forms except graphite fibers	TWA: 15 mg/m <sup>3</sup> total dust synthetic TWA: 5 mg/m <sup>3</sup> respirable fraction synthetic (vacated) TWA: 2.5 mg/m <sup>3</sup> respirable dust natural (vacated) TWA: 10 mg/m <sup>3</sup> total dust synthetic (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m <sup>3</sup> TWA: 2.5 mg/m <sup>3</sup> 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** If splashes are likely to occur. Wear safety glasses with side shields (or goggles). None required for consumer use.

**Skin and body protection** Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves.

**Respiratory 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.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Do not breathe dust. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical and Chemical Properties**

<b>Physical state</b>	Solid	<b>Odor</b>	No information available
<b>Appearance</b>	Solid	<b>Odor Threshold</b>	Not applicable
<b>Color</b>	No information available		
<b>Property</b>	<b>Values</b>	<b>Remarks</b>	<b>Method</b>
<b>pH</b>	No data available	None known	
<b>Melting / freezing point</b>	No data available	None known	
<b>Boiling point / boiling range</b>	No data available	None known	
<b>Flash Point</b>	No data available	None known	
<b>Evaporation Rate</b>	No data available	None known	
<b>Flammability (solid, gas)</b>	No data available	None known	
<b>Flammability Limit in Air</b>			
<b>Upper flammability limit</b>	No data available		
<b>Lower flammability limit</b>	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	Not applicable	
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**

Excessive heat.

**Incompatible materials**

Strong acids. Strong oxidizing agents. Strong bases.

**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



damage. (based on components). Severely irritating to eyes. May cause irreversible damage to eyes.

**Skin contact**

Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). 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
Supplier Trade Secret	= 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. May cause blindness. Burning. 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.

*IARC (International Agency for Research on Cancer)  
Group 3 - Not Classifiable as to Carcinogenicity in Humans*

**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. Contains a known or suspected reproductive toxin. Possible risk of irreversible effects. May cause adverse effects on the bone marrow and blood-forming system. Carcinogenic potential is unknown. May cause adverse liver effects.

**Target Organ Effects**

Respiratory system. Eyes. Skin. Reproductive System. Blood. Central Nervous System (CNS). Central Vascular System (CVS). Kidney. Cardiovascular system. Liver.

**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

<b>12. ECOLOGICAL INFORMATION</b>
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**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: = 5300 mg/L (Leuciscus idus) 96h LC50: > 1000 mg/L (Cyprinus carpio)	EC50 > 10000 mg/L 17 h	48h EC50: > 500 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulation**

Chemical name	Log Pow
Supplier Trade Secret	<0
Supplier Trade Secret	0.48

**Other adverse effects**

No information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment 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**

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

Chemical name	California Hazardous Waste
Supplier Trade Secret	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  
Emergency Response Guide  
Number

NOT REGULATED  
NON-REGULATED  
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**TDG**

Not regulated

**MEX**

Not regulated

**ICAO**

Not regulated

**IATA**

Proper Shipping Name  
Hazard Class

Not regulated  
NON REGULATED  
N/A

**IMDG/IMO**

Proper Shipping Name

Not regulated  
NON-REGULATED PER SP 188



<b>Hazard Class</b>	N/A
<b>EmS-No.</b>	F-A, S-I
<b>RID</b>	Not regulated
<b>ADR</b>	Not regulated
<b>Tunnel restriction code</b>	(E)
<b>ADN</b>	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/NDL - 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 %
Supplier Trade Secret -		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
Supplier Trade Secret	X		X	X	X
Supplier Trade Secret	X	X	X	X	X



Supplier Trade Secret	X	X	X		
Supplier Trade Secret	X	X	X		

### International Regulations

#### Mexico

#### National occupational exposure limits

Chemical name	Carcinogen Status	Exposure Limits
Supplier Trade Secret		Mexico: TWA= 0.2 mg/m <sup>3</sup>
Supplier Trade Secret		Mexico: TWA= 2 mg/m <sup>3</sup>

Mexico - Occupational Exposure Limits - Carcinogens

#### Canada

#### WHMIS Hazard Class

Non-controlled

## 16. OTHER INFORMATION

<b>NFPA</b>	<b>Health Hazards</b> 1	<b>Flammability</b> 0	<b>Instability</b> 1	<b>Physical and Chemical Hazards - Personal Protection</b> X
<b>HMS</b>	<b>Health Hazards</b> 0	<b>Flammability</b> 0	<b>Physical Hazard</b> 1	

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#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**

