

Report No.: SZARR190117012-01

# SAFETY DATA SHEETS

Client Name : CHONGQING UNITED TECHNOLOGY INC.  
Address : 23-18 SOUTH TOWER OF CENTURY EMPEROR,  
NO.38 JIANXIN ROAD, JIANGBEI CHONGQING,  
400020 CHINA  
Product Name : WIND INDICATOR  
Date : Jan. 23, 2019

**Shenzhen Anbotek Compliance Laboratory Limited**

**Shenzhen Anbotek Compliance Laboratory Limited**

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**The submitted sample and sample information was/were submitted and identified by/on the behalf of the client**

**Sample Name** : WIND INDICATOR  
**Model No.** : CWI200  
**Battery Capacity** : 2200MAH  
**Manufacturer** : CHONGQING UNITED TECHNOLOGY INC.  
**Supplier** : CHONGQING UNITED TECHNOLOGY INC.  
**Buyer** : CIRRUS OUTDOORS,LLC.  
**Trade Mark** : CIRRUS  
**Country of Origin** : CHINA  
**Sample Received Date** : Jan. 17, 2019  
**Testing Period** : Jan. 17, 2019 to Jan. 23, 2019  
**Preparation standard** : Hazard Communication standard (OSHA HCS) 29 CFR 1910.1200

Tested by



Willow Liu

Test engineer

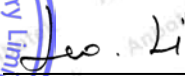
Reviewed by



Zoe Zheng

Test engineer

Approved by



Leo Li

Authorized signatory



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## Section 1. Chemical Product and Company Identification

### Product identifier

**Product name** : WIND INDICATOR

Model : CWI200

CAS No. : Refer to section 3

EC No. : Refer to section 3

Molecular formula : Refer to section 3

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

Relevant identified uses : /

Uses advised against : /

### Details of the supplier of the safety data sheet

Supplier : CHONGQING UNITED TECHNOLOGY INC.

Manufacturer : CHONGQING UNITED TECHNOLOGY INC.

Country of origin : CHINA

Export to : /

Website : /

Telephone : /

Fax : /

E-mail address : /

### Emergency telephone number

Emergency phone : /



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## Section 2. Hazards identification

### Hazards Classification

GHS Classification in accordance with Hazard Communication standard (OSHA HCS) 29 CFR 1910.1200, the sample is divided into the following hazard category.

- Physical hazard : Not classified as physical hazard category.
- Health hazard : Not classified as health hazard category.
- Environment hazard : Not classified as environment hazard category.
- Health hazard : Skin irritation (Category 2)  
Eye irritation (Category 2)
- Environment hazard : Chronic aquatic toxicity (Category 3)

### Label elements

- Hazard pictograms : 
- Signal word : Warning.
- Hazard statements : H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H413: May cause long lasting harmful effects to aquatic life
- Precautionary statements-Prevention : P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P273 Avoid release to the environment.
- Precautionary statements-Response : P303 +P361 +P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Precautionary statements-storage : No precautionary phrases.
- Precautionary statements-Disposal : P501 Dispose of contents/ container to an approved waste disposal plant.



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**Hazards not otherwise classified (HNOC) or not covered by GHS**

No available data.

**HMIS:**

Health: 1 Flammability: 1 Reactivity: 0 Personal protection: E

## Section 3. Composition/Information on Ingredients

Material	Chemical Name	Molecular formula	Percent of Content (%)	CAS No.	EC No.
Cartridge	Glycerin	C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>	0.5	56-81-5	200-289-5
	Propylene Glycol	C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>	0.4	57-55-6	200-338-0
Battery	Lithium cobalt oxide	LiCoO <sub>2</sub>	34.76	12190-79-3	/
	Graphite powder	C	16.35	7782-42-5	231-955-3
	Rubber	/	0.88	/	/
	Carbon black	C	0.91	1333-86-4	215-609-9
	SBR	(C <sub>8</sub> H <sub>8</sub> • C <sub>4</sub> H <sub>6</sub> )	0.47	9003-55-8	/
	Lithium hexafluorophosphate	LiPF <sub>4</sub>	1.78	21324-40-3	244-334-7
	EC	C <sub>3</sub> H <sub>4</sub> O <sub>3</sub>	3.51	96-49-1	202-510-0
	EMC	C <sub>4</sub> H <sub>8</sub> O <sub>3</sub>	3.22	623-53-0	N/A
	Dimethyl carbonate	C <sub>3</sub> H <sub>6</sub> O <sub>3</sub>	3.14	616-38-6	210-478-4
	Copper	Cu	8.29	7440-50-8	231-159-6
	Aluminum	Al	3.67	7429-90-5	231-072-3
Nickel	Ni	0.22	7440-02-0	231-111-4	

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## Section 4. First Aid Measures

- Inhalation** : If breathed in dust/smoke/vapour, remove victim from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical advice immediately.
- Skin Contact** : If on skin, Wash affected skin with soap and plenty of water.
- Eye Contact** : If contact with dust/smoke/vapour, rinse immediately with plenty of water for 15 minutes. If persist irritating, seek medical advice immediately.
- Ingestion** : If swallowed, rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical advice immediately.

### Most important symptoms and effects, both acute and delayed

No further relevant information available.

### Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## Section 5. Fire Fighting Measures

### Extinguishing media

Suitable Fire Extinguishing Media : Carbon dioxide, dry chemical extinguishers, water spray alcohol-resistant foam.

Unsuitable Fire Extinguishing Media : None.

**Special hazard arising from the substance or mixture** : Batteries may burst and release hazardous decomposition products when exposed to a fire situation or short-circuited.

**Combustion Products** : Carbon monoxide, carbon dioxide.

### Advice for firefighters

Special fire fighting procedures : As soon as possible, remove the goods from fire to open place. For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, Standing on the windward, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Do NOT use straight streams of water.

Protective Equipment : Wear suitable protective clothing, gloves, eye/face protection and self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear



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## Section 6. Accidental Release Measures

- Person precautions protective equipment and emergency procedures** : If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Prevent the spillage to flow into restrictive space like the sewer and the drainage channel. Provide maximum ventilation. Use absorption agent or other inert materials to absorb leakage liquid.
- Environment precautions** : Prevent to enter sewage, soil, river and sea.
- Methods and materials for containment and cleaning up** : Use the cleansing scoop to collect into container with lid that it dry and clean. Ventilate and watering after clean. Do not flush away residues with water. Retain as contaminated waste. Remove contaminated soil and dispose of safely
- Additional information** : In order to prevent birds or fish from being fed by the drainage system, they must be thoroughly recovered and reuse.

## Section 7. Handling and Storage

- Precautions for safe handling** : Keep away from sources of ignition. Operating personnel must train specially and follow close to the line of operating instruction. Ensure good ventilation/exhaustion at the workplace. Minimize vapor/aerosol generation and accumulation. Wear suitable protective clothing, gloves and eye/face protection. Do not eat, drink or smoke in working areas. Wash skin thoroughly before breaks and after handling. Equip with relevant types and quantities of extinguishment instruments and device for divulgence handling.

Avoid short circuit, short circuit in a long time can cause the battery to lose



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energy, produce a lot of hot burning skin, or even cause a fire or explosion. When transporting or storing the battery due to effective measures against short circuit, do not remove the decomposition of batteries, lithium-ion polymer batteries should be maintained in the 10-50% State of charge transport, and are not allowed in contact with water.

**Conditions for safe storage, including any incompatibilities** :

- Store in cool, dry, ventilated place.
- Keep container tightly closed in a cool, well-ventilated place.
- Keep away from sources of ignition - No smoking.
- When stored for a long time, and polymer lithium-ion battery should be maintained in the State of charge of 40-60%, stored in a cool, dry, ventilated place, performance loss at high temperature can cause battery leakage.
- Incompatibilities**
  - Keep separate with the oxidizing agent.
  - Avoid contacting with oxidizer and strong acid.
  - Keep the sample easy to be identified.

## Section 8. Exposure Controls/Personal Protection

### Control parameters

Occupational exposure limits :

- Propylene Glycol: TWA 150 ppm 474 mg/m<sup>3</sup>
- Glycerol: TWA 10 mg/m<sup>3</sup>
- Aluminum: TWA 10 mg/m<sup>3</sup>, 5 mg/m<sup>3</sup> (dust)
- Graphite: TWA 4 mg/m<sup>3</sup> (total dust), 2 mg/m<sup>3</sup> (inhalable dust)
- Copper: TWA 1 mg/m<sup>3</sup>; STEL 2 mg/m<sup>3</sup>
- Lithium hexafluorophosphate: TWA 2.5 mg/m<sup>3</sup>

Biological limit values : No available data.

### Exposure controls

Monitoring Method : Not available data.

Appropriate engineering controls : Operations with potential for generating high concentrations of airborne particulates or fumes should be evaluated and controlled as necessary.

### Personal protective equipment

Respiratory Protection : If the vapour density exceed in the air, must wear mask, or self-contained breathing.

Eye Protection : Wear suitable chemical safety goggles.

Body Protection : Wear work clothes.





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Hands Protection : Wear suitable protective gloves.  
 Other Protection : No smoking, dining and drinking water in the workplace. Keep good habit of hygiene. Shower and change clothes after work.

## Section 9. Physical and Chemical Properties

<b>Appearance</b>	: Steel and plastic shell	<b>Type</b>	: No available data.
<b>Odor</b>	: No unpleasant smell	<b>Voltage</b>	: No available data.
<b>Rate Capacity</b>	: 2200 mAH, 7.92Wh	<b>Quantity of electric charge</b>	: No available data.
<b>Vapor Density</b>	: No available data.	<b>Density</b>	: No available data.
<b>Explosion Upper Limits</b>	: No available data.	<b>Explosion Lower Limits</b>	: No available data.

## Section 10. Stability and Reactivity

**Stability** : Stable under normal temperature and pressure.  
**Distribution of Ban** : Strong acids and strong basis  
**Conditions to Avoid** : Strong acids and strong basis  
**Hazardous** : No available data.  
**Polymerization**  
**Hazardous** : No available data.  
**Decomposition Products**

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## Section 11. Toxicological Information

**Acute Toxicity** : No available data.

Component	CAS No.	LD50	LC50
Glycerin	56-81-5	Dermal - Rabbit > 10,000 mg/kg	-
Propylene Glycol	57-55-6	Oral - rat - 20,000 mg/kg Dermal - rabbit - 20,800 mg/kg	-
Aluminum	7429-90-5	Oral-Rat: > 2,000 mg/kg	Inhalation-Rat-4 h: > 888 mg/l
Graphite	7782-42-5	Oral - Rat - female > 2,000 mg/kg	-
Copper	7440-50-8	Intraperitoneal-Mouse: 3.5 mg/kg	-
Dimethyl carbonate	616-38-6	Oral - rat: 13000 mg / kg	-
Lithium hexafluorophosphate	21324-40-3	Oral-rat: > 50-300 mg/kg	-

**Skin corrosion/irritation** : Glycerin: Eyes - Rabbit: Mild eye irritation - 24 h  
Risk of irritation only occurs if cells or batteries are mechanically, thermally or electrically abused and the enclosure is compromised.

**Serious eye damage/eye irritation** : No available data.

**Respiratory or skin sensitisation** : No available data.

**Germ cell mutagenicity** : No available data.

**Carcinogenicity** : IARC: The product is not identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity** : No available data.

**Specific target organ toxicity-single exposure** : No available data.

**Specific target organ toxicity-repeated exposure** : No available data.

**Aspiration hazard** : No available data.

**Additional information** : No available data.

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## Section 12. Ecological Information

**Eco-toxicity** : No known significant effects or critical hazards.

Component	CAS No.	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to algae
Glycerin	56-81-5	-	-	-
Propylene Glycol	57-55-6	NOEC - Pimephales promelas (fathead minnow) - 52,930 mg/l - 96 h	EC50 - Daphnia magna (Water flea) - > 10,000 mg/l - 48 h	-
Graphite	7782-42-5	LC50-Danio rerio (zebra fish): > 100 mg/l-96 h	EC50 - Daphnia magna (Water flea): > 100 mg/l-48 h	-
Lithium hexafluorophosphate	21324-40-3	-	EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h	-

**Biodegradable** : No applicable.

**Non-biodegradable** : No applicable.

**Bioconcentration or biological accumulation** : No available data.

**Other harmful effects** : May cause ecological destruction of drainage, measures must be in accordance with the data in this safe use recommended use.

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## Section 13. Disposal Considerations

- Waste disposal methods** : Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. Dispose in accordance with federal, state, and local health and environmental regulations. Prevent materials from entering drains, sewers, or waterways.
- Attention abandoned** : Prevent materials from entering drains, sewers, or waterways.

## Section 14. Transport Information

### Transport Attentions:

According to PACKING INSTRUCTION 965 of IATA DGR 60th Edition for transportation, the special provision 188 of IMDG (inc Amdt 39-18). The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles. Don't put the goods together with oxidizer and chief food chemicals. The transport vehicle and ship should be cleaned and sterilized before transport. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don't stop over in the residential area and congested area.

UN Number	3481
UN Proper shipping name	Lithium Batteries
Hazard class	Class 9, Miscellaneous Dangerous Substances and articles.
Packaging group (if applicable)	II / PI 967
Packaging label	

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## Section 15. Regulatory Information

### TSCA Status:

All components of this product are listed on the TSCA Inventory.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 311/312 Hazards

Reactive hazard: no

Pressure hazard: no

Fire hazard: yes

Immediate/acute: no

Delayed/chronic: no

### SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313

This product do not contains toxic chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right- To-Know Act of 1986 and 40 CFR 372. Any such toxic chemical(s) are shown below. This information must be included in all MSDS's that are copied and distributed for this material.

### Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act,

## Section 16. Other Information

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

\*\*\*\*\* End of SDS \*\*\*\*\*

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