



## MATERIAL SAFETY DATA SHEET

Date: Jan /20/2015  
File No.: PH-W5-883

### 1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Product name : Lithium Metal Battery  
Chemical System: Lithium and Thionyl Chloride (Li- SOCl<sub>2</sub> Battery)  
Model: Cylindrical and coin Type Batteries\_  
Designated for 'DO NOT RECHARGE'? ☒ Yes \_\_\_ No

Manufacturer/supplier identification

Company : GP LITHIUM BATTERY CO LTD.  
Contact for information : No.288 East Line Guangzhu, Lanhe Town, Nansha, Guangzhou  
Emergency telephone No. : 0086-20-34980429

### 2. Composition/information on ingredients

Ingredient	Percent	CAS Index No./EC No.	Molar mass	Molecular formula	Symbol
Carbon	28.6%	7440-44-0		C	
Lithium	1.0 %	7439-93-2		Li	
Solvent	26.3%	7719-09-7		SOCl <sub>2</sub>	
Lithium Salt	5.9%	N/A		N/A	
Fiberglas	2.7%	N/A		N/A	
Stainless Steel	32.2%	7439-89-6		Fe	

Remark: The weight of metallic lithium per battery is <1 g

### 3. Hazards identification

Routes of Entry:

Inhalation - Yes

Skin - Yes

Ingestion – Yes

Health Hazards (Acute and Chronic):

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is an acute exposure when the gas release vent works. Organic solvent has slight toxicity and can irritate skin and eyes. Lithium salt is irritating to skin, eyes and mucous membranes and should be avoided.

Carcinogenicity:

NTP: None IARC Monograph: None OSHA Regulated: None

Medical Conditions Generally Aggravated by Exposure:

An acute exposure will not generally aggravate any medical condition.

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#### **4. First aid measures**

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After skin contact :	In case of skin contact with contents of battery, flush immediately with water. If irritation persists, get medical help.
After eye contact :	For eye contact, flush with copious amounts of water for 15 minutes. Do not inhale leaked material. If irritation persists, get medical help.

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#### **5. Fire-fighting measures**

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Extinguishing Media: CO<sub>2</sub>

Flammable Limits: Not available

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#### **6. Accidental release measures**

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The preferred response is to leave the area and allow the batteries to cool and the vapors to dissipate. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

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#### **7. Handling and storage**

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

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#### **8. Exposure controls/personal protection**

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Specific control parameter :

Personal protective equipment :

Respiratory protection (Specify Type) :	Not necessary under conditions of normal use.
Ventilation:	Not necessary under conditions of normal use.
Protective Gloves:	Not necessary under conditions of normal use.
Eye protection:	Not necessary under conditions of normal use.
Other Protective (Clothing or Equipment):	Not necessary under conditions of normal use.

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## 9. Physical and chemical properties

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**Specific Gravity:** (H<sub>2</sub>O=1): C: 0.667

**Melting Point:** (°C): C decomposes at 3500 deg. C

C is a black, odorless powder.

Lithium is a soft, silvery metal.

Organic solvent is an odorless, colorless or light yellow liquid.

Lithium salt is a white, crystalline and odorless powder.

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## 10. Stability and reactivity

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Stability: Stable

Conditions to Avoid: Do not heat, disassemble or charge.

Hazardous Decomposition or By-products: N/A

Hazardous polymerization will not occur.

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## 11. Toxicological information

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Acute toxicity :

Organic solvent

Further toxicological information :

Lithium

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## 12. Ecological information

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Ecotoxic effects : N/A

Further ecological data : N/A

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### 13. Disposal considerations

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GP Lithium Battery Co.,Ltd encourages battery recycling. Our Li-SOCI2 batteries are recyclable through the Rechargeable Battery Recycling Corporation's (RBRC) **Charge Up to Recycle! Program**. For information call 1-800-8-BATTERY or see their website at [www.rbrc.org](http://www.rbrc.org). Li-SOCI2 batteries must be handled in accordance with all applicable state and federal laws and regulations.

DO NOT RECHARGE, disassemble, short, or subject battery batteries to temperatures in excess of 212 F. Do not use in combination with fresh and used lithium batteries neither with other type of battery.

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### 14. Transport information

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International transport regulations :   1. International Air Transport Association (IATA) pursuant to PI 968 Section II.  
  2. International Maritime Dangerous Goods Code (IMDG) pursuant to Special Provisions A88, A99, A154 and A164.

GP Lithium Battery Co.,Ltd   Li-SOCI2 batteries pass the tests defined in UN model regulation section 38.3.

Such batteries transported in accordance with Section II of Packing Instruction 968 must be labeled with the **CARGO AIRCRAFT ONLY** label.

If GP Lithium Battery Co.,Ltd   Li-SOCI2 batteries are used to construct battery packs, the assembler of that pack is responsible to ensure the battery has been tested in accordance with the requirements contained in the UN Model Regulations, Manual of Test and Criteria. Part III, subsection 38.3.

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### 15. Regulatory information

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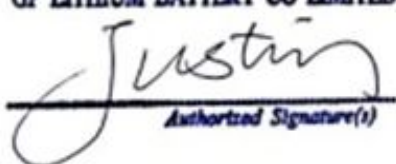
Batteries marketed by GP LITHIUM BATTERY CO LTD. have been classified as non-dangerous goods by the China Department of Transportation and the major international regulatory bodies and are therefore not regulated.

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### 16. Other information

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<b>Make people :</b>	Professional post : R&D Engineer	Name(sign) : Sophia Cui
<b>Make unit :</b>	Name : R&D Department	Phone : 0086-20-34980429
	Address : R&D Dept., Panyu Plant.,	
<b>Date of issue :</b>	2015/01/20	

For and on behalf of  
GP LITHIUM BATTERY CO LIMITED  
  
Authorized Signature(s)