

Item no.: 651248

## Material Safety Data Sheet

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### 1. Product & Company Identification

<b>Product:</b>	Lithium Metal Battery (size A, type ER 18505)
<b>Nominal voltage:</b>	3,6 V
<b>Nominal capacity:</b>	3500 mAh
<b>Manufacturer:</b>	Conrad Electronic SE
<b>Address:</b>	Klaus-Conrad-Strasse 1, D-92240 Hirschau
<b>Telephone:</b>	+49 (0) 9604 / 40 - 8988
<b>Date of issue:</b>	10.03.2014

### 2. Composition And Information About The Ingredients

Chemical System: Lithium and Thionyl Chloride (Li-SOCl<sub>2</sub> Battery)

Ingredient	Percent	CAS Index No./EC No.	Molecular formula
Carbon	28.6%	7440-44-0	C
Lithium	4.3%	7439-93-2	Li
Solvent	26.3%	7719-09-7	SOCl <sub>2</sub>
Lithium Salt	5.9%	N/A	N/A
Fiberglass	2.7%	N/A	N/A
Stainless Steel	32.2%	7439-89-6	Fe

Remark: The weight of metallic lithium per cell is &gt; 1.0 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

**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.

### 5. Fire Fighting Measures

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

Flammable Limits: Not available.

### 6. Accidental Release Measures

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

### 7. Handling and storage

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.

### 8. Exposure Controls/Personal Protection

Specific control parameter:

Personal protective equipment:

Respiratory protection: 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 protection (Clothing or Equipment): Not necessary under conditions of normal use

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### 9. Physical and Chemical Properties

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

**Melting point (°C):** C decomposes at 3500 °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.

### 10. Stability and Reactivity

Stability: Stable

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

Hazardous Decomposition or By-products: N/A

Hazardous polymerization will not occur.

### 11. Toxicological information

Acute toxicity: Organic solvent

Further toxicological information: Lithium

### 12. Ecological Information

Ecotoxic effects: N/A

Further ecological data: N/A

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### 13. Disposal Considerations

Do not recharge, disassemble, short, or subject battery cells to temperatures in excess of 212°F (= 100°C). Do not use in combination with fresh and used lithium batteries neither with other type of battery.

### 14. Transport Information

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

UN-No.: 3090

IATA Packing Instruction: Section II of PI 968

The batteries pass the tests defined in UN model regulation section 38.3.

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

If Li-SOCl<sub>2</sub> 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.

### 15. Regulatory Information

The batteries have been classified as non-dangerous goods and are therefore not regulated.

### 16. Other Information

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. We make no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.