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Material Safety Data Sheet

Name of Product: Primary Li-$SoCl_2$ Battery ER14505 3.6V 2500mAh

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Material Safety Data Sheet

1. Product and Company Identification

Name of product	Primary Li-$SoCl_2$ Battery ER14505 3.6V 2500mAh
Type/Model	ER14505 3.6V 2500mAh 9Wh
Manufacturer	HCB BATTERY CO., LTD
Address	Special NO.1，Taizhong Avenue，Gaoqiao Industrial Park，Wujiashan Economic Development Zone，Wuhan Hubei China
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2. Composition Information

Ingredient	Concentration %	CAS No.	Remarks
Lithium	3.0~3.5(0.72g)	7439-93-2	—
Carbon	2.7~3.6	7440-44-0	
Thionyl chloride	22.2~25.2	7719-09-7	—
Lithium Aluminum Tetrachloride	3.9~4.5	14024-11-4	—
Fiberglass material	0.7~1.0	14808-60-7	—
Stainless Steel	50.5~54.5	52013-36-2	—
Others	10.1~13.1	Not specified	—

3. Hazards Identification

Hazard classification: Class 9, miscellaneous.

Exposure way: Eye and skin contact, inhalation of the battery materials.

Health hazard: No specific toxicological study. Avoid direct contact with the battery materials. Avoid inhalation.

Environmental hazard: No known environmental hazard.

Combustion hazard: Do not heat over 85ºC, do not deform, destroy, disassemble, overcharge, short-circuit which may cause explosion.

4. First-aid measures

Skin contact: In case of skin contact with the battery materials, wash the exposed area with soap and rinse with plenty of fresh water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately.

Eye contact: In case of eye contact with the battery materials, lift the upper and lower eyelids, and immediately rinse the eyes with plenty of fresh water for at least 15 minutes to remove all the chemical residues. Get medical attention.
Inhalation: In case of inhalation of the battery materials, take the exposed person outside. If breathing is irregular, provide oxygen and get medical attention immediately.
Ingestion: In case of ingestion of the battery materials, do not induce vomiting. Get medical attention.

5. Fire fighting measures

Extinguishing media: Dry chemical, Sandy soil, Carbon dioxide. Do not use water or foam.
Firefighting: Protective Equipment: Wear self-contained breathing apparatus and protective clothes to prevent contact with skin and eyes. Put out the fire from windward side.

6. Accidental Release Measures

Measures against accidental leakage of the battery electrolyte: For accidental leakage of the materials in the battery, use a clean shovel to collect the spill in a dry, clean, and capped disposable container. The disposal worker should wear appropriate protective clothing.

7. Handling and Storage

Precautions for handling: When packaging the battery, the anode tab and the cathode tab should not contact each other, nor through other metal. Separate packaging is applied in the box or the plastic bag, so as to prevent short circuit and avoid any mobility that may cause short circuit. No smoking at the workplace. Provide ventilation system and equipment at the workplace.
Precautions for storage: Store the battery in a cool and ventilated warehouse. Keep it away from fire and heat sources. Avoid exposure to direct sunlight. Store the battery separated from strong oxidant and corrosives. Provide fire-fighting equipment and accidental leakage handling devices in the storage area. Storage temperature: ≤30°C, humidity: ≤75%RH.

8. Exposure control/PPE

Maximum concentration: No standard.
Monitoring method: Not applicable.
Engineering control: Provide ventilation system and equipment. Provide safe shower and eyewash equipment.

Respiratory protection: Respiratory protection is unnecessary under normal operating conditions. When the exhaust valve of the battery is on, try to turn on the ventilation equipment to the maximum power. Avoid cells in the exhaust valve confined in a narrow space.
Eye protection: Eye protection is unnecessary under normal operating conditions. If necessary, wear goggles.
Body protection: Wear protective clothing for general jobs.
Hand protection: Hand protection is unnecessary under normal operating conditions. If necessary, wear safety gloves.

Other protection: No smoking or eating at the workplace.

9. Physical and chemical properties

Product appearance: cylindrical.
Odor: odorless.
Flammability: Not applicable, except individual cell exposure test.
Solubility: Not applicable, except individual cell exposure test.

10. Stability and reactivity

Stability: The product is stable under normal temperature and pressure.
Conditions to avoid: Incorrect operation, heat, short circuit and mobility that may cause short circuit.
Incompatible materials: Oxidant, alkali, water.
Hazardous polymerization: Not applicable.
Hazardous decomposition products: HCl, H_2S, SO_2

11. Toxicological information

Toxicity Data: Not available

Irritation Data: The internal battery materials may cause irritation to eyes and skin.

Mutagenicity: Not specified

Chronic toxicity: Not specified

12. Ecological information

Not available

13. Disposal consideration

The disposal of the battery should, at all times, comply with local regulations. For example, battery disposal in China should comply with Law on the Prevention and Control of Environmental Pollution by Solid Wastes of the People's Republic of China, Pollution Prevention and Technology Policy for Spent Battery, and other applicable laws, regulations, policies, and standards.

14. Transport information

RID/ADR: Proper Shipping Name: Lithium metal batteries
UN Number: UN3090
Hazards Class: 9
EmS No.: F-A, S-I
The product shall meet the General Requirements and section IB of Packaging Instruction 968 (IATA DGR)

15. Regulation information

IATA **Dangerous Goods Regulations** Edition 62
38.3 UNITED NATIONS **Recommendations on the TRANSPORT of DANGEROUS GOODS Manual of Tests and Criteria**
IMDG Packing Code: IPTPT; 4G

16. Further information

—Do not incinerate.
—Do not weld the battery for long time.
—Do not recharge.
—No over-discharge.
—Do not connect the battery in series or in parallel without being authorized.
—Do not reverse.
—Do not swallow.
—Do not discard without instructions.
—Stop using it in case of heating or leakage.
—Read the manual carefully or contact the manufacturer before use.