

Material Safety Data Sheet for LSE102A

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GS Yuasa Technology Ltd.

1 . PRODUCT IDENTIFICATION

Model : LSE102
Common Name : Lithium-ion Secondary Cell
Rated Capacity : 102Ah
Nominal Voltage : 3.7V
Chemical System : Lithium Cobalt Dioxide / Organic Electrolyte / Carbon

Emergency Contact

Company : GS Yuasa Technology Ltd.
Large-scale Lithium-ion Battery Engineering Dept.
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2 . HAZARDOUS INGREDIENTS

Important Note : The cell shall not be opened or burned, since the following ingredients are contained within the cell.
Positive Electrode : Lithium Cobalt Dioxide (active material)
Polyvinylidene Fluoride (binder)
Carbon (conductor)
Negative Electrode : Carbon (active material)
Polyvinylidene Fluoride (binder)
Electrolyte : Organic Solvent (mixture of alkylcarbonate solvents)
Lithium hexafluorophosphate (Li salt)
Others : No heavy metals such as mercury, cadmium, lead and chromium.

3 . PHYSICAL PROPERTIES

Lithium-Cobalt Dioxide

Melting Point : Above 1,000 degrees C
Vapor Pressure : Effectively Zero at 20 degrees C
Appearance & Odor : Black Powder, Odorless

Electrolyte

Appearance & Odor : Colorless Liquid
Density : 1.221 at 20 degrees C
Boiling point : 118 degrees C
Melting point : Below - 30 degrees C
Vapor Pressure : 2.7 kPa (20 mmHg) at 20 degrees C
Flash point : 29.3 degrees C

4 . FIRE and EXPLOSION

Lithium Cobalt Dioxide

Not Flammable material.

Electrolyte

Flammable. HF and POF_3 gases may be formed in contact with moisture.

Fire extinguishing materials: Spray water, dry chemical, and carbon dioxide.

NOTE: Cool the cell completely, or the cell may cause re-ignition.

5 . FIRST AID PROCEDURE

Lithium Cobalt Dioxide

Skin contact : Wash off with soap and water.
Eye contact : Flush off with plenty of water for about 15 minutes, and get medical attention.
Swallowed : Wash the stomach with large quantity of a dilute brine solution, and get medical attention.

Electrolyte

Skin contact : Immediately wash thoroughly with soap and water.
Eye contact : Immediately flush off with plenty of water for at least 15 minutes, and get medical attention.
Inhalation : Remove to fresh air. Get medical attention.
Swallowed : Immediately rinse mouth with water and get medical attention. Do not try to vomit electrolyte.

6 . LEAK and DISPOSAL PROCEDURE

Lithium Cobalt Dioxide

Wear dust protector to avoid inhalation. Wash the area thoroughly after the material is picked up. Dispose of clean-up water properly.

Waste Disposal Method : Follow state and local regulations

Electrolyte

Remove all sources of ignition. Wear suitable protector such as self-contained breathing apparatus or organic canister mask, safety goggles and gloves. Absorb it using absorbent and inert material, and seal it up in a suitable container. Burn it in chemical incinerator equipment.

7 . SPECIAL HANDLING INFORMATION

Storage: Keep in a cool, dry, ventilated area. Protect against physical damage. Keep away from heat, sparks and flames (combustible electrolyte). To prevent short-circuit, do not store the cell together with a metal plate, a metal bar and a material covered with metal.

8 . TRANSPORT INFORMATION

The 102Ah Lithium-ion cell* is confirmed to meet the all safety criteria required for Class 9 on the basis of tests performed in accordance with the United Nations Recommendations on the Transportation of Dangerous Goods: Manual of Tests and Criteria (UN Document ST/SG/AC.10/11).

Water, IMO	Hazard Class	: 9
	Packing Group	: II
Air, IATA	Hazard Class	: 9
	Packing Group	: II

* *LSE102 is assigned to UN. No. 3480, class 9.*