Material Safety Data Sheet for LSE100-001

March, 2010
GS Yuasa Technology Ltd.

MATERIAL SAFETY DATA SHEET GS Yuasa Technology Ltd.

1．PRODUCT IDENTIFICATION

Model : LSE100-001
Common Name : Lithium-ion Secondary Cell
Rated Capacity : 100Ah
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.

Address : 1 Inobanbacho，Nishinosho，Kisshoin，Minami-ku，Kyoto Pref.,
601-8520 Japan

Phone : +81-75-312-0043 (office)
Fax Number : +81-75-312-0283 (office)
Emergency contact : CHEMTREC +1-800-424-9300

2．HAZARDOUS INGREDIENTS

Important Note : The cell should 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	: 1.223 at 20 degrees C
Boiling point	: 118 degrees C
Melting point	: Below –20 degrees C
Vapor Pressure	: 2.7 kPa (20 mmHg) at 20 degrees C
Flash point	: 27.9 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.
Swallowed	: Wash the stomach with large quantity of a dilute brine solution.

Electrolyte

Skin contact	: Immediately wash thoroughly with soap and water.
Eye contact	: Immediately flush off with plenty of water for at least 15 minutes.
Inhalation	: Remove to fresh air. Get medical attention.
Swallowed	: Wash the stomach with large quantity of a dilute brine solution. Get medical attention.

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 again 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

LSE100-001 is confirmed to meet the criteria for assignment to Class 9 on the basis of tests carried out in accordance with the United Nations Recommendations on the Transportation of Dangerous Goods: Manual of Tests and Criteria (UN Document ST/SG/AC.10/27).

United Nations	Hazard Class	: 9
	UN/ID	: 3480
Water, IMO	Hazard Class	: 9
	Packing Group	: II
Air, IATA	Hazard Class	: 9
	Packing Group	: II