P09L-4637

Material Safety Data Sheet for LSE51

July 10, 2009

GS Yuasa Technology Ltd.

MATERIAL SAFETY DATA SHEET GS Yuasa Technology Ltd .

1 . PRODUCT IDENTIFICATION

Product Name	: LSE51
Item Description	: Lithium-ion Secondary Cell
Rated Capacity	: 51Ah
Nominal Voltage	: 3.7V
Chemical System	: Lithium Cobalt Oxide / Organic Electrolyte / Carbon
Emergency Contact	
Company	: GS Yuasa Technology Ltd. Large-scale Lithium-ion 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 Oxide

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	:1.22 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	:28 degrees C

4．FIRE and EXPLOSION

Lithium Cobalt Oxide

Non Flammable material.

Electrolyte

Flammable.

HF will form in contact with moisture.

Fire extinguishing materials: Use carbon dioxide fire extinguisher.

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

5．FIRST AID PROCEDURE

Lithium Cobalt Oxide

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. Get immediate medical attention.

Electrolyte

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

6．LEAK and DISPOSAL PROCEDURE

Lithium Cobalt Oxide

Wear dust protector to avoid inhalation. Wash the area thoroughly after the material is picked up. Dispose of water used for washing 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. 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

LSE51 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.10/11).

UN No.	UN3480	9
	Packing Group	II
Air, IATA	Hazard Class	9
	Packing Group	II