

Product Information Data Sheet

Lithium ion battery is not a target product for SDS (safety data sheet).

This sheet is intended to be issued in order to provide “reference information” to ensure the safe handling of the product.

1. Chemical Product and Company Identification

Product name : Lithium Ion Cells (Laminated Type) (L0978G8D1)
Model number : Lithium Ion Batteries (121L0978G8D1-1)
Information on company
Company name : THE FURUKAWA BATTERY CO.,LTD.
Department in charge : Environmental promotion
Address : No.2-4-1 HOSHIKAWA, HODOGAYA-KU, YOKOHAMA, KANAGAWA, JAPAN
Phone number : 81-45-336-5055
Fax number : 81-45-333-2534

2. Hazards Identification

A lithium ion cell is normally stable under appropriate handling and storage conditions.

If a lithium ion cell generates abnormal heat, leave away from the cell to avoid inhaling internal materials.

Chemicals utilized in lithium ion cells do have some toxicity and inhalation may cause irritation.

3. Composition / Information on Ingredients

Components	CAS#	Content (wt%)
Lithium Nickel Cobalt Manganese Complex Dioxide	182442-95-1	less than 40wt%
Ester carbonate (-)	-	less than 17wt%
Lithium Hexafluorophosphate (LiPF ₆)	21324-40-3	less than 17wt%
Graphite (C)	7782-42-5	less than 22wt%
silicon (Si)	7440-21-3	
Aluminum(Al)	7429-90-5	less than 6wt%
Copper(Cu)	7440-50-8	less than 11wt%
Nickel metal and inert materials	7440-02-0 and others	Remainder

※About Lithium Ion cell (L0978G8D1).

4. First-Aid Measures

In case of contact with released electrolyte, immediately flush eyes or skin with plenty of water for at least 15 minutes, and remove contaminated clothes and shoes. To avoid inhaling internal materials, leave the area immediately. If irritation persists, consult a physician immediately.

5. Fire Fighting Measures

Extinguishing Media: Plenty of water, dry chemical powder or carbon dioxide.

Specific hazards: Fire may cause corrosive gases.

Protection of firefighters: Extinguish from upwind.

Wear appropriate chemical protective equipment such as respirator and safety glasses when extinguishing fire.

6. Accidental Release Measures

Steps to be taken in case material is released or spilled:

Wear appropriate protective equipment (gloves, protective glasses, protective clothing and the like), when processing the leakage.

Leave from contaminated area.

In case of contact with electrolyte, wash out electrolyte with plenty of water at least 15 minutes.

If irritation persists, consult a physician immediately.

Method for containment and clean-up:

Remove spilled electrolyte and batteries with absorbent and avoid making contact with the electrolyte.

7. Handling and Storage

Handling:

The risk of heat, fire, explosion:

- Do not dip or wet the cell or battery in water.
- Do not put the cell or battery into a fire or heat it. Do not solder the cell directly. Do not use or leave the cell or battery in a place near fire or heaters.
- Do not disassemble. Do not apply heavy impact to the cell or battery.
- Do not connect the cell or battery reversed in positive (+) and negative (-) terminals in the charger or equipment.
- Do not use any battery charger not specified by manufacturer and be sure to follow the charge conditions specified by the manufacturer.
- Do not connect the battery directly to an electric outlet or cigarette heater socket in a car.

Storage:

- Store in cool place (preferably below 30°C/86°F) but prevent condensation on cells or batteries.
- Charge the battery every 6 months to the amount specified by the manufacturer, even if the battery is not used.

8. Exposure Controls and Personal Protective Equipment

ACGIH (2024)	: Lithium Nickel Cobalt Manganese Complex Dioxide TLV-TWA = 0.02mg/m ³ as Co TLV-TWA = 0.2mg/ m ³ as Ni TLV-TWA = 0.2mg/ m ³ as Mn Lithium Hexafluorophosphate TLV-TWA =2.5 mg/m ³ as F Graphite (C) TLV-TWA =2 mg/m ³ (as dust)
Ventilation measures	: Not necessary under normal use.
Personal protective equipment	
Respiratory protection	: Wear respiratory protective equipment as necessary.
Hand protection	: Wear impermeable protective gloves.
Eye protection	: Wear protective glasses, goggle type safety glasses and the like.
Skin and body protection	: Wear protective clothing, protective apron and the like as necessary.

9. Physical and Chemical properties

Melting Point(°C): Lithium Nickel Cobalt Manganese Complex Dioxide (Above1000°C)

Specific Gravity: Lithium Nickel Cobalt Manganese Complex Dioxide (4.7g/cm³)
, Graphite (2.1g/cm³)

Appearance: Lithium Nickel Cobalt Manganese Complex Dioxide and Graphite are black powder.

10. Stability and Reactivity

Stability: Product is stable under storage conditions described in Section 7.

Conditions to avoid: Do not heat above 100°C (212°F) ,incinerate, or expose contents to water.

Hazardous Decomposition or Byproducts: N/A

Hazardous Polymerization: Will not occur.

11. Toxicological Information

None unless internal materials are exposed.

In case of internal gas released or electrolyte spilled: Electrolyte containing LiPF₆ and organic solvents has a small amount of toxicity and may cause irritation of skin or eyes. Released gas may also cause irritation of skin or eyes.

12. Ecological Information

Persistence/ degradability: Since a cell and the internal materials remain in the environment, do not bury or throw out into the environment.

13. Precautions for Disposal

Disposal considerations : In the disposal, follow “Waste Management and Public Cleansing Law” and the standards of the local government.
Entrust disposal to industrial waste disposal contractor who have obtained a license from local governor, otherwise if the local government is performing waste disposal, entrust them disposal.

14. Transport Information

Shipping Name (UN Number)

LITHIUM ION BATTERIES (UN3480)

LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (UN3481)

LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (UN3481)

Hazard Classification : Class 9 (Miscellaneous)

International Regulations (Hazardous Materials)

Area	Method	Organization	Packing Instruction or Special Provision
International	Air	IATA, ICAO	PI 965-967
International	Maritime	IMO	SP 230
U.S.A	Air, Rail, Road, Maritime	DOT	49 CFR Section 173.185

Their regulations are based on the UN Recommendations.

Each packing instruction or special provision provides specifications on exceptions and packaging for lithium ion cells and batteries.

1) Air transportation: In IATA DGR (64th edition), the packing requirements for lithium ion cells and batteries transport is specified in PI 965, for lithium ion cells and batteries packed with equipment in PI 966, and for lithium ion cells and batteries contained in equipment in PI 967.

This laminated lithium ion batteries which have a Watt-hour rating of more than 100Wh can be transported according to Section IA (Class 9 Dangerous Goods) of PI 965.

2) Maritime transportation: This laminated lithium ion batteries which have a Watt-hour rating of more than 100Wh can be transported as “Class 9 Dangerous Goods” according to SP 230 of IMDG Code (2022 edition).

15. Regulatory Information

Major applicable regulations for the transportation of lithium-ion cells and batteries are as follows:

- 1) UN (United Nations) Recommendations on the Transport of Dangerous Goods: Model Regulations 22nd revised edition
- 2) UN (United Nations) Recommendations on the Transport of Dangerous Goods: Manual of Test and Criteria.
- 3) The International Civil Aviation Organization (ICAO): Technical Instructions for Safety Transport of Dangerous Goods by Air, 2023-2024 edition
- 4) The International Air Transport Association (IATA): Dangerous Goods Regulations, 64th edition
- 5) International Maritime Organization (IMO): International Maritime Dangerous Goods (IMDG) Code, 2022 edition

16. Other Information

Notice:

The contents described in this PIS are prepared based on the data and information currently available to us. However, it does not intend to be any guarantees in regard to content, physical and chemical properties, hazards, etc.

Please handle this product in the responsibility of the user after referring to this PIS .

In addition, the precautions are intended for normal handling. Please use under implementing safety measures that are suitable for application/usage if you want to special handling.