**Section 1. Chemical Product and Company Name**

# Lithium-Ion Rechargeable Battery Pack
# BL4080F

Safety Data Sheet

Complies with the OSHA Hazard Communication Standard:
29 CFR 1910 1200

Makita U.S.A., Inc.
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Date Revised: 06/06/2022

**Emergency Contact Information**

**Telephone Number for Information:** MAKITA: 1-510-657-9881

**Emergency Response**

For Chemical Emergency
Spills, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada 1-800-424-9300

## Section 2. Hazard Identification

**Class Name:** Not applicable for regulated class

**Hazard:** If battery terminals are in contact with other metals, it may cause heat generation or electrolyte leakage. Electrolyte is flammable. In case of electrolyte leakage, remove battery from fire immediately.

**Toxicity:** Vapor generated from burning batteries may cause eyes, skin and throat irritation.

## Section 3. Composition/ Information on Ingredients

**IMPORTANT NOTE:**
The battery pack uses twenty US21700VTC6AM lithium-ion rechargeable cell and control circuit on the PWB.
The battery pack should not be opened or burned since the following ingredients contained within the cell that could be harmful if exposed or misused.
The cell does not contain metallic lithium or lithium alloy.

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| **Cathode:** | Lithium Nickel Cobalt Oxides (active material) |
| | Polyvinylidene Fluoride Graphite (binder) |
| | Graphite (conductive material) |
| **Anode:** | Graphite (active material) |
| | Silicon Monoxide (active material) |
| | Organic Polymer (binder) |
| **Electrolyte:** | Organic Solvent (non-aqueous liquid) |
| | Lithium Salt |

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| **Others:** | Heavy metals such as Mercury, Cadmium, Lead and Chromium are not used in the battery. |
| **Enclosure:** | PC |
| **UN number (Class):** | UN3480 (Class 9) |
| **UN Packing Group:** | II |
| **Watt-hour rating:** | 288 Wh for battery pack |

## Section 4. First Aid Measures

The product contains organic electrolyte. In case of electrolyte leakage from the battery, actions described below are required.

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| **Eye contact:** | Flush eyes immediately with plenty of clean water for at least 15 minutes without rubbing. Seek medical advice. If appropriate procedures are not taken, this may cause eye irritation. |
| **Skin Contact:** | Wash the affected areas off immediately with plenty of water and soap.<br>If appropriate procedures are not taken, this may cause sores on the skin. |
| **Inhalation:** | Move to a well-ventilated area immediately. Seek medical advice. |

## Section 5. Fire Fighting Measures

- Use specified extinguishers (gas, foam, powder) and extinguishing system under the Fire Defense Law.
- Since corrosive gas may be produced at the time of fire extinguishing, use an air inhalator when danger is predicted.
- Use a large amount of water to get cooling effect if needed. (Indoor/outdoor fire hydrant)
- Remove flammable materials immediately in case of fire.
- Move batteries to a safe place immediately in case of fire.

## Section 6. Accidental Release Measures

- Wipe off with dry cloth
- Keep away from fire
- Wear safety goggles, safety gloves as needed

## Section 7. Precautions for Safe Handling and Use

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| **Storage:** | Store within the recommended limit of -30°C to 45°C (-22°F to 113°F), well-ventilated area.<br>Do not expose to high temperature 60°C (140°F). Since short circuit can cause burn hazard or safety vent to open, do not store with metal jewelry, metal covered tables or metal belt. |
| **Handling:** | Do not disassemble, remodel, or solder. Do not short + and - terminals with a metal.<br>Do not open the battery pack. |
| **Charging:** | Charge within the limits of -10°C to 55°C (14°F to 131°F) temperature.<br>Charge with specified charger designed for this battery pack. |
| **Discharging:** | Discharge within the limits of -20°C to 60°C (-4°F to 140°F) temperature. |
| **Disposal:** | Dispose in accordance with applicable federal, state and local regulations.<br>Do not incinerate. Do not disassemble.<br>Do not expose to high temperatures (140°F/60°C). |
| **Caution:** | Do not impact, pierce or crush the battery. Use Specified charger only.<br>Dispose of properly. |

## Section 8. Exposure Controls/Personal protection (In case electrolyte is leaked from battery）

**Acceptable Concentration:** Not specified in ACGIH.
**Facilities:** Provide appropriate ventilation such as a local ventilation system in the storage area.
**Protective Clothing:** Gas masks for organic gases, safety goggles, safety gloves.

## Section 9. Physical and Chemical Properties

**Appearance:** Lithium-ion rechargeable cells are set in a resin case.
**Average Operating Voltage:** 36.0 V

## Section 10. Stability and Reactivity

External short-circuit, deformation by crush, high temperature (over 100°C) exposure of the battery may cause generation of heat and ignition.

## Section 11. Toxicological Information

**Acute Toxicity:** No information as a battery
**Local Effects:** No information as a battery

## Section 12. Ecological Information

When an exhausted battery is buried in the ground, corrosion may occur on the outer case and cause electrolyte leakage. There is no information on environmental influence.

## Section 13. Disposal Considerations

When battery is disposed, isolate positive (+) and negative (-) terminals to avoid terminals from touching each other. If batteries are mixed with other batteries or metals, short-circuit may be caused. Dispose in accordance with applicable federal, state and local regulations.

**Section 14. Transport Information**

・When batteries are transported by ship, vehicle or railroad, avoid high temperature and condensation.
・Avoid transportation which may damage package.
・Lithium ion batteries, the Watt-hour rating is more than 100Wh, are subject to dangerous goods regulation for the purpose of transportation by the U.S. Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) or the International Maritime Dangerous Goods regulations (IMDG).With regard to air transport, the International Civil Aviation Organization (ICAO) Packing Instruction 965 Section I complies with the Recommendation as is; further, the International Air Transport Association (IATA) adopts ICAO Packing Instruction 965 Section I. In addition, the regulations of the US Department of Transportation for land, sea and air transportation are based on the UN Recommendations.
・IATA (International Air Transport Association): Dangerous Goods Regulation
Packing Instruction 965 (Lithium-ion or lithium polymer cells and batteries without electronic equipment)
With effect April 1, 2016: Lithium-ion cells and batteries must be offered for transport at a state of charge not exceeding 30 per cent of their rated capacity. UN 3480, PI 965, Section IA, IB and II will be restricted to carriage on cargo aircraft. All packages must contain the Cargo Aircraft Only label in addition to the other marks and labels required by Regulations. The shipment complies with the Packing Instruction 965 Section IA under IATA.
Each cell and battery are of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3.
The completed package for the cells or batteries meets the Packing Group II performance standards.
Even classified as lithium batteries packed with equipment (UN3481), IATA Dangerous Goods Regulations packing instruction 966 is applied.
Even classified as lithium batteries installed in equipment (UN3481), IATA Dangerous Goods Regulations packing instruction 967 is applied.

**Section 15. Regulatory Information**

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| ・**IMDG Code:** | International Maritime Dangerous Goods (IMDG) Code 2020 Edition |
| ・**ICAO TI:** | International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air 2021-2022 Edition |
| ・**IATA DGR:** | International Air Transport Association (IATA) Dangerous Goods Regulations 63rd Edition |

**Section 16. Other Information**

The information contained within is provided for your information only. The information and recommendations set forth herein are made in good faith and are believed to be accurate as of the date revised. However, Makita U.S.A, Inc. MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM RELIANCE ON IT.