



## Technical Data Sheet

Ryobi Lithium-Ion Battery Pack  
Battery Voltage: 12V  
Battery Capacity: 1.3Ah / 15Wh

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Lithium-Ion Battery — Rechargeable

**Model Number:**

CB120L

**Issue Date:**

January 2020

Techtronic Industries Power Equipment  
P.O. Box 1288  
Anderson, SC 29622

**Company Phone Number:**

1-800-525-2579

**Emergency Contact Number:**

**Chemtrec (United States only):** 1-800-424-9300  
**(International):** +1-703-741-5970

### SECTION 2: HAZARDS IDENTIFICATION

Refer to battery cell SDS for more information.

No exposure to hazards during routine handling of product.

#### ▲ WARNING:

- To reduce the risk of injury, user must read operator's manual.
- Risk of fire and burns.
- Do not open, crush, heat above 50°C, incinerate, or short terminals.
- Follow manufacturer's instructions.
- Use only with charger listed in operator's manual.
- Remove battery from tool when storing, changing attachments, or making adjustments.
- To reduce the risk of explosion and possible injury, do not place battery near fire or heat.
- Do not crush, drop, or damage battery pack.
- Do not use a battery pack that has been dropped or received a sharp blow. A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.
- Under extreme usage or temperature conditions, battery leakage may occur. If fluid comes in contact with your skin, wash immediately with soap and water. If fluid gets into your eyes, flush them with clean water for at least 10 minutes, then seek immediate medical attention. Following this rule will reduce the risk of serious personal injury.
- Battery cells and battery pack assembly will burn if incinerated.

### SECTION 3: COMPOSITION/INFORMATION OF INGREDIENTS

Refer to battery cell SDS for more information.

## SECTION 4: FIRST AID MEASURES

Refer to battery cell SDS for more information.

No exposure to hazards during routine handling of product.

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- Battery cells and battery pack assembly will burn if incinerated.
- No exposure during routine handling of product. Risk of exposure occurs only if the battery is mechanically or electrically abused.
- No effect under routine handling and use to eyes, skin, or if inhaled. Ingestion is not likely, given the physical size and state of the cell. If swallowed, seek medical attention immediately.
- If exposure to internal materials within cell due to damaged outer casing, the following actions are recommended:

#### EYE CONTACT:

Flush with water for 10 minutes without rubbing and immediately seek medical attention.

#### SKIN CONTACT:

Wash area immediately with soap and water. If irritation continues, seek medical attention.

#### INHALATION:

Leave area immediately, move to fresh air, and seek medical attention.

#### INGESTION:

If swallowed, contact POISON CONTROL CENTER immediately.

## SECTION 5: FIRE FIGHTING MEASURES

Refer to battery cell SDS for more information.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS:

- Use standard industrial clothing in normal use.
- If handling large containers of cells, wear steel-toed footwear.

### ENVIRONMENTAL PRECAUTIONS:

No special precautions necessary.

### METHODS FOR CONTAINMENT:

- Transport container outdoors.
- Always consult and obey all international, federal, and local environmental laws.

### METHODS FOR CLEANUP:

No data available

### OTHER INFORMATION:

No data available

## SECTION 7: HANDLING AND STORAGE

### HANDLING:

- Use only approved charging equipment.
- Do not disassemble battery or battery pack.
- Do not puncture, crush, or dispose of in fire.

### STORAGE:

To obtain the longest possible battery life, we suggest the following:

- Remove the battery pack from the charger once it is fully charged and ready for use.

For battery pack storage longer than 30 days:

- Store the battery pack where the temperature is below 80°F and away from moisture.
- Store battery packs in a 30%-50% charged condition.
- Every six months of storage, charge the pack as normal.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to battery cell SDS for more information.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Battery pack consists of battery cells assembled in resin enclosure and is a solid odorless product that will burn if incinerated.

## SECTION 10: STABILITY AND REACTIVITY

Refer to battery cell SDS for more information.

No exposure to hazards during routine handling of product.

### ▲ WARNING:

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- Risk of fire and burns.
- Do not open, crush, heat above 50°C, incinerate, or short terminals.
- Follow manufacturer's instructions.
- Use only with charger listed in operator's manual.
- Remove battery from tool when storing, changing attachments, or making adjustments.
- To reduce the risk of explosion and possible injury, do not place battery near fire or heat.
- Do not crush, drop, or damage battery pack.
- Do not use a battery pack that has been dropped or received a sharp blow. A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.
- Under extreme usage or temperature conditions, battery leakage may occur. If fluid comes in contact with your skin, wash immediately with soap and water. If fluid gets into your eyes, flush them with clean water for at least 10 minutes, then seek immediate medical attention. Following this rule will reduce the risk of serious personal injury.
- Battery cells and battery pack assembly will burn if incinerated.

## SECTION 11: TOXICOLOGY INFORMATION

Refer to battery cell SDS for more information.

No exposure to hazards during routine handling of product.

### ▲ WARNING:

- To reduce the risk of injury, user must read operator's manual.
- Risk of fire and burns.
- Do not open, crush, heat above 50°C, incinerate, or short terminals.
- Follow manufacturer's instructions.
- Use only with charger listed in operator's manual.
- Remove battery from tool when storing, changing attachments, or making adjustments.
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- Do not crush, drop, or damage battery pack.
- Do not use a battery pack that has been dropped or received a sharp blow. A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.
- Under extreme usage or temperature conditions, battery leakage may occur. If fluid comes in contact with your skin, wash immediately with soap and water. If fluid gets into your eyes, flush them with clean water for at least 10 minutes, then seek immediate medical attention. Following this rule will reduce the risk of serious personal injury.
- Battery cells and battery pack assembly will burn if incinerated.

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION:

None in routine handling of product.

### TOXICITY:

No data available

### PERSISTENCE AND DEGRADABILITY (BIOPERSISTENCY & BIODEGRADABILITY):

None in routine handling of product.

### POTENTIAL OF BIOACCUMULATION:

None in routine handling of product.

### MOBILITY IN SOIL:

None in routine handling of product.

### OTHER ADVERSE EFFECTS:

No data available

### DISPOSAL:

Follow guidelines in Section 13.

## SECTION 13: DISPOSAL CONSIDERATIONS

This product contains Lithium-ion batteries. Local, state or federal laws may prohibit disposal of batteries in ordinary trash. Consult your local waste authority for information regarding available recycling and/or disposal options.

### DISPOSAL:

- Dispose in accordance with appropriate regulations.
- Always consult and obey all international, federal, provincial/state, and local hazardous waste disposal laws. Some jurisdictions require recycling of this spent product. Battery recycling is encouraged.
- Lithium-ion batteries are safe for disposal in the normal municipal waste stream since they are not defined by the federal government as hazardous waste. However, Lithium-ion batteries are recyclable.
- To preserve natural resources, please recycle or dispose of batteries properly.

### ▲ WARNING:

- Upon removal, cover the battery pack's terminals with heavy-duty adhesive tape.
- Do not attempt to destroy or disassemble battery pack or remove any of its components.
- Batteries must be recycled or disposed of properly.
- Also, never touch both terminals with metal objects and/or body parts as short circuit may result.
- Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.
- This product does not contain mercury, cadmium or Lithium (metal).
- DO NOT INCINERATE battery cells.

## SECTION 14: TRANSPORTATION INFORMATION

### U.S. DOT Hazardous Material Regulations (Re: Ground Transport)

Lithium-ion batteries under 101 watt hours or Lithium-ion batteries packed with equipment under 101 watt hours when packaged correctly are not subject to any regulations when traveling by ground in the continental U.S.

### Canada Transport Dangerous Goods (Re: Ground Transport)

Lithium-ion batteries under 101 watt hours or Lithium-ion batteries packed with equipment under 101 watt hours when packaged correctly are not subject to any regulation when traveling by ground in Canada.

### International Dangerous Goods Regulations (Re: Air, Sea, Ground Transport)

Lithium-ion batteries under 101 watt hours or Lithium-ion batteries under 101 watt hours packed with equipment are not subject to any regulation when packaged correctly when shipped by sea.

No more than (16) Lithium-ion batteries under 101 watt hours can be shipped in a box by air, and no more than 2 shipments can be sent to a consignee in a day. The package must contain a Red Bordered Lithium-ion label (ICAO) containing an emergency contact telephone number and a Cargo Air Craft only label.

For accessory batteries under 101 watt hours when shipped by air, Dangerous Goods declaration must be presented to the air forwarder and the shipment identified as 1B on the declaration. The following labels must be attached: DG9 diamond label, Cargo Aircraft Only label, UN3480 Lithium-ion batteries label (all 3 of those labels must be on the same side of the carton), and the Red Bordered Lithium-ion label (ICAO), and UN3480 / 3481 label with the kg of lithium label . (all 4 of those labels must be on the same side of the carton).

## SECTION 15: REGULATORY INFORMATION

Compliant with, relevant transportation test requirements as described in the UN Manual of Tests & Criteria, Part III, Sub section 38.3.

### CALIFORNIA PROPOSITION 65

**⚠ WARNING: Cancer and Reproductive Harm – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

## SECTION 16: OTHER INFORMATION

The information contained within this document is provided for your information only. In case of any discrepancy, the information provided in the battery cell Safety Data Sheet takes precedence over the information provided in the battery pack Technical Data Sheet.

Prepared by: Techtronic Industries Power Equipment

The batteries referenced herein are considered exempt articles and are not subject to the OSHA Hazard Communication Standard; therefore an SDS is not required. This sheet is being provided as a service to our customers.

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. TECHTRONIC INDUSTRIES POWER EQUIPMENT makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereto.

## Safety data sheet for product

### 1. PRODUCT AND COMPANY IDENTIFICATION

- Product name: Lithium ion rechargeable battery cell
- Product code: None  
(All cylindrical models Sanyo manufactured and whose capacity is less than or equal to 5.4Ah, including the cell branded as Panasonic)
- Company name: Sanyo Electric Co., Ltd., Panasonic group
- Address: 222-1, Kaminaizen, Sumoto City, Hyogo, Japan
- Telephone number: +81-799-24-4111
- Fax number: +81-799-23-2879
- Emergency telephone number: [Weekday] +81-799-23-3931 [Night and holiday] +81-799-24-4131

### 2. HAZARDS IDENTIFICATION

For the battery cell, chemical materials are stored in a hermetically sealed metal or metal laminated plastic case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage.

However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by miss-use, the gas release vent will be operated. The battery cell case will be breached at the extreme, hazardous materials may be released.

Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted.

- GHS classification: Not available  
(This product is outside the scope of GHS system since it's considered as an "article".)
- Most important hazard and effects  
Human health effects:
  - Inhalation: The steam of the electrolyte has an anesthesia action and stimulates a respiratory tract.
  - Skin contact: The steam of the electrolyte stimulates a skin. The electrolyte skin contact causes a sore and stimulation on the skin.
  - Eye contact: The steam of the electrolyte stimulates eyes. The electrolyte eye contact causes a sore and stimulation on the eye. Especially, substance that causes a strong inflammation of the eyes is contained.Environmental effects: Since a battery cell remains in the environment, do not throw out it into the environment.
- Specific hazards:
  - If the electrolyte contacts with water, it will generate detrimental hydrogen fluoride.
  - Since the leaked electrolyte is inflammable liquid, do not bring close to fire.



## 3. COMPOSITION / INFORMATION ON INGREDIENTS

- Substance or preparation: Preparation
- Information about the chemical nature of product: \*1

Portion	Material name	CAS No.	Concentration range (wt %)
Positive electrode	Lithium transition metal oxidate (Li[M] <sub>m</sub> [O] <sub>n</sub> *2)	12190-79-3 12057-17-9 182442-95-1	20~60
Positive electrode's base	Aluminum	7429-90-5	1~10
Negative electrode	Carbon	7782-42-5 7440-44-0	10~30
Negative electrode's base	Copper	7440-50-8	1~15
Electrolyte	Organic electrolyte principally involves ester carbonate	—	5~25
Outer case	Iron	7439-89-6	1~30

\*1 Not every product includes all of these materials.

\*2 The letter M means transition metal and candidates of M are Co, Mn, Ni and Al. One compound includes one or more of these metals and one product includes one or more of the compounds. The letter m and n means the number of atoms.

## 4. FIRST-AID MEASURES

**Spilled internal cell materials**

- Inhalation:  
Make the victim blow his/her nose, gargle. Seek medical attention if necessary.
- Skin contact:  
Remove contaminated clothes and shoes immediately. Wash extraneous matter or contact region with soap and plenty of water immediately.
- Eye contact:  
Do not rub one's eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.

**A battery cell and spilled internal cell materials**

- Ingestion:  
Make the victim vomit. When it is impossible or the feeling is not well after vomiting, seek medical attention.

## 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Plenty of water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.
- Specific hazards: Corrosive gas may be emitted during fire.
- Specific methods of fire-fighting: When the battery burns with other combustibles simultaneously, take fire-extinguishing method which correspond to the combustibles. Extinguish a fire from the windward as much as possible.
- Special protective equipment for firefighters:  
Respiratory protection: Respiratory equipment of a gas cylinder style or protection-against-dust mask  
Hand protection: Protective gloves  
Eye protection: Goggle or protective glasses designed to protect against liquid splashes  
Skin and body protection: Protective cloth

## 6. ACCIDENTAL RELEASE MEASURES

Spilled internal cell materials, such as electrolyte leaked from a battery cell, are carefully dealt with according to the followings.

- Precautions for human body:  
Remove spilled materials with protective equipment (protective glasses and protective gloves). Do not inhale the gas as much as possible. Moreover, avoid touching with as much as possible.
- Environmental precautions: Do not throw out into the environment.
- Method of cleaning up: The spilled solids are put into a container. The leaked place is wiped off with dry cloth.
- Prevention of secondary hazards: Avoid re-scattering. Do not bring the collected materials close to fire.





## 7. HANDLING AND STORAGE

- Handling suggestions
  - Do not connect the positive terminal to the negative terminal with electrical wire or chain.
  - Avoid polarity reverse connection when installing the battery to an instrument.
  - Do not wet the battery with water, seawater, drink or acid; or expose to strong oxidizer.
  - Do not damage or remove the external tube.
  - Keep the battery away from heat and fire.
  - Do not disassemble or reconstruct the battery; or solder the battery directly.
  - Do not give a mechanical shock or deform.
  - Do not use unauthorized charger or other charging method. Terminate charging when the charging process doesn't end within specified time.
- Storage
  - Do not store the battery with metalware, water, seawater, strong acid or strong oxidizer.
  - Make the charge amount 30~50% then store at room temperature or less (temperature= -20~35 degree C) in a dry (humidity: 45~85%) place. Avoid direct sunlight, high temperature, and high humidity.
  - Use insulative and adequately strong packaging material to prevent short circuit between positive and negative terminal when the packaging breaks during normal handling. Do not use conductive or easy to break packaging material.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION (WHEN THE ELECTROLYTE LEAKS)

- Control parameters  
ACGIH has not been mentioned control parameter of electrolyte.
- Personal protective equipment
  - Respiratory protection: Respirator with air cylinder, dust mask
  - Hand protection: Protective gloves
  - Eye protection: Goggles or protective glasses designed to protect against liquid splashes
  - Skin and body protection: Working clothes with long sleeve and long trousers

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance
  - Physical state: Solid
  - Form: Cylindrical
  - Color: Metallic color
  - Odor: No odor

## 10. STABILITY AND REACTIVITY

- Stability: Stable under normal use
- Hazardous reactions occurring under specific conditions
  - Conditions to avoid: When a battery cell is exposed to an external short-circuit, crushes, deformation, high temperature above 100 degree C, it will be the cause of heat generation and ignition. Direct sunlight and high humidity.
  - Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids.
  - Hazardous decomposition products: Acrid or harmful gas is emitted during fire.

## 11. TOXICOLOGICAL INFORMATION

### Organic Electrolyte

- Acute toxicity:  
LD<sub>50</sub>, oral - Rat 2,000mg/kg or more
- Irritating nature: Irritative to skin and eye

## 12. ECOLOGICAL INFORMATION

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



### 13. DISPOSAL CONSIDERATIONS

- Recommended methods for safe and environmentally preferred disposal:

#### **Product (waste from residues)**

Specified collection or disposal of lithium ion battery is required by the law like as "battery control law" in several nations. Collection or recycle of the battery is mainly imposed on battery's manufacturer or importer in the nations recycle is required.

#### **Contaminated packaging**

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates, dispose as industrial wastes subject to special control.

### 14. TRANSPORT INFORMATION

In the case of transportation, avoid exposure to high temperature and prevent the formation of any condensation. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a cell. Please refer to Section 7-HANDLING AND STORAGE also.

#### **UN regulation**

- UN number: 3480 (3481 when the battery is contained in equipment or packed with equipment)
- Proper shipping name:  
Lithium ion batteries ("lithium ion batteries contained in equipment" or "lithium ion batteries packed with equipment")
- Class: 9 \*
- Packing group:

*\* Although this product meets the criteria of "dangerous goods" and are classified as "lithium ion batteries", depending on the battery's total capacity in the packaging, etc., they may not be subject to the fully regulated provisions.*

#### **Regulation depends on region and transportation mode**

- Worldwide - Air transportation:  
ICAO/IATA-DGR [packing instruction 965 section IB or II]  
(When shipping batteries "packed with" or "contained in" equipment, use packing instruction 966 or 967 as appropriate.)
- Worldwide - Ocean transportation:  
IMO-IMDG Code [special provision 188]
- Europe - Ground transportation:  
ADR [special provision 188]

*\* Instructions or provisions in the box brackets are conditions to make the battery cell exempted from full regulation.*

### 15. REGULATORY INFORMATION

- Regulations specifically applicable to the product:  
Wastes Disposal and Public Cleaning Law [Japan]  
Law for Promotion of Effective Utilization of resources [Japan]  
US Department of Transportation 49 Code of Federal Regulations [USA]

*\* About overlapping regulations, please refer to Section 14-TRANSPORT INFORMATION.*



## 16. OTHER INFORMATION

- This safety data sheet is offered an agency who handles this product to handle it safely.
- The agency should utilize this safety data sheet effectively (put it up, educate person in charge) and take proper measures.
- ***The information contained in this Safety data sheet is based on the present state of knowledge and current legislation.***
- This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

### Reference

Dangerous Goods Regulations – 57th Edition Effective 1 January 2016: International Air Transport Association (IATA)

IMDG Code – 2014 Edition: International Maritime Organization (IMO)

The European Agreement concerning the International Carriage of Dangerous Goods by Road – 2015:

The United Nations Economic Commission for Europe (UNECE)

First edition: Apr. 28, 2010  
Prepared and approved by: Technology Planning Department  
Rechargeable Battery Business Division  
Sanyo Electric Co., Ltd.  
Panasonic group

