

Title: Pouch Type Lithium ion Rechargeable Battery	Number: 792200-0010(ASDB592347-P1)
Model: 792200-0010(ASDB592347-P1)	Rev: 5 (2019.05.04.)

SDS(Safety Data Sheet) OF Pouch TYPE

LI-ION RECHARGEABLE BATTERY

MODEL: 792200-0010(ASDB592347-P1)

PRESENTED TO :

Accepted by:

Date:

routejade Inc.

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Date: 2019. 05. 04

SAFETY DATA SHEET

Lithium-Ion Battery 792200-0010(ASDB592347-P1)

1 Chemical Product and Company Identification

Product Identification

792200-0010(ASDB592347-P1) Lithium-Ion Battery

Manufacturer

Routejade Inc.
483-29, Yachon, Gayagok
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320-844

Emergency Telephone Number

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2 Hazards Identification

We would like to inform our customers that these batteries are exempt articles and are not subject to the 29 CFR 1910.1200 OSHA requirements, Canadian WHMIS requirements or GHS requirements.

Emergency Overview
OSHA Hazards-not applicable
Target Organs-not applicable
GHS Classification-not applicable
GHS Label Elements, including precautionary Statement-not applicable
Pictogram-not applicable
Signal words-not applicable
Hazard statements-not applicable
Precautionary statements-not applicable

3 Composition Information

Hazardous Ingredients	%	CAS Number
Aluminum Foil	2-10	7429-90-5
Lithium Cobalt Dioxide(LiCoO2)	4-50	12190-79-3
Polyvinylidene Fluoride (PVDF)	< 5	24937-79-9
Styrene butadiene rubber	< 2.5	9003-55-8
Carboxymethyl Cellulose	< 2.5	9000-11-7
Copper Foil	2-10	7440-50-8
Carbon (proprietary)	10-30	7440-44-0
Polyethylene terephthalate	< 5	25038-59-9
Polypropylene	< 2	9003-07-0
Electrolyte (proprietary)	10-20	
Lithium hexafluorophosphate		21324-40-3
Ethylene carbonate		96-49-1
Propylene carbonate		108-32-7
Dimethyl carbonate		616-38-6
Vinylene carbonate		872-36-6
Fluoroethylene carbonate		114435-02-8
1,3-Propane sultone		1120-71-4
Succinonitrile		110-61-2

Notice: The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. *routejade* makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

Li ion batteries are not manufactured to contain lithium metal and the lithium-equivalent content of batteries is 0.378g per cell (0.6 X 0.630Ah = 0.378g), gross weight is 12.5g per cell. The watt-hour rating of 7922200-0010(ASDB592347-P1) is 2.394Wh (3.8V X 0.630Ah = 2.394Wh)

4 First Aid Measures

Inhalation

If contents of an opened cell are inhaled, remove source of contamination or move victim to fresh air. Obtain medical advice.

Eye contact

Contact with the contents of an opened cell can cause burns. If eye contact with contents of an open cell occurs, immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes while holding the eyelids open. Neutral saline solution may be used as soon as it is available. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto face. Quickly transport victim to an emergency care facility.

Skin contact

Contact with the contents of an opened cell can cause burns. If skin contact with contents of an open cell occurs, as quickly as possible remove contaminated clothing, shoes and leather goods. Immediately flush with lukewarm, gently flowing water for at least 30 minutes. If irritation or pain persists, seek medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Ingestion

Contact with the contents of an opened cell can cause burns. If ingestion of contents of an open cell occurs, NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.

5 Fire Fighting Measures

General Hazard

Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

Extinguishing Media

Use extinguishing media suitable for the materials that are burning.

Special Firefighting Instructions

If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) may explode/vent.

Firefighting Equipment

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6 Accidental Release Measures

On Land

Place material into suitable containers and call local fire/police department.

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In Water

If possible, remove from water and call local fire/police department.

7 Handling and Storage

Handling

No special protective clothing required for handling individual cells.

Storage

Storage at room temperature (approx. 20°C) at approx. 20~60% of the nominal capacity

8 Exposure Controls / Personal Protection

Engineering controls

Keep away from heat and open flame. Store in a cool dry place.

Personal Protection

Respirator

Not required during normal operations. SCBA required in the event of a fire.

Eye/face protection

Not required beyond safety practices of employer.

Gloves

Not required for handling of cells.

Foot protection

Steel toed shoes recommended for large container handling.

9 Physical and Chemical Properties

State	Solid
Odor	N/A
PH	N/A
Vapor pressure	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

10 Stability and Reactivity

Reactivity

None

Incompatibilities

None during normal operation. Avoid exposure to heat, open flame, and corrosives.

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Hazardous Decomposition Products

None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

Conditions To Avoid

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

11 Toxicological Information

This product does not elicit toxicological properties during routine handling and use.

Sensitization	Teratogenicity	Reproductive	Acute toxicity
NO	NO	NO	NO

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

12 Ecological Information

Some materials within the cell are bioaccumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

13 Disposal Considerations

California regulated debris
RCRA Waste Code : Nonregulated
Dispose of according to all federal, state, and local regulations.

14 Transport Information

Lithium Ion batteries are considered to be "Rechargeable batteries" and meet the requirements of transportation by the U.S. Department of Transportation(DOT), International Civil Aviation Administration(ICAO).

Hereby We certify that this model of Lithium battery meets the requirements each test in the UN Manual of Tests and Criteria, Part 3, sub-section 38.3.
Not regulated for Transport under Special Provision 188 of the International Maritime Dangerous Goods Code (IMDG)

Even classified as lithium ion batteries (UN3480), 2019 IATA Dangerous Goods Regulations 60TH edition Packing Instruction 965 Section II is applied.
The Product is handled as Non-Dangerous Goods by meeting the following

Lithium ion cells and batteries offered for transport are not subject to other additional requirements of the UN Regulations if they meet the following ; (1)–(5)

1. for cells, the Watt-hour rating is not more than 20Wh.
2. for batteries, Watt-hour rating is not more than 100Wh.
3. each cell or battery is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria Part 3 subsection 38.3.

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- 4. each cells comply with Special Provision A154.
- 5. net quantity per package shall not exceed 2.5kg

The product has been evaluated according to the UN Manual of Tests and Criteria.

No.	Test Item	Criteria	Result
Test 1	Altitude simulation	-No leakage, venting, disassembly, rupture and no fire.	Pass
Test 2	Thermal test		Pass
Test 3	Vibration	-Measuring mass before/after each test. (If M>5g, less than 0.1%) -Measuring voltage before/after each test. (more than 90%) Pass	Pass
Test 4	Shock		Pass
Test 5	External short circuit	-No disassembly, rupture and fire within six hours of this test.	Pass
Test 6	Impact	-Max. temperature should not exceed 170°C.	Pass
Test 7	Overcharge	-No disassembly and fire within seven days of the test.	Pass
Test 8	Forced Discharge		Pass

15 Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

Non-hazardous

16 Other information

Revision No.

Rev 5.

Revision Date

2019. 05. 04

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