<table>
<thead>
<tr>
<th>Title: Pouch Type Lithium ion Rechargeable Battery</th>
<th>Number: 792200-0010(ASDB592347-P1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model: 792200-0010(ASDB592347-P1)</td>
<td>Rev: 5 (2019.05.04.)</td>
</tr>
</tbody>
</table>

**SDS (Safety Data Sheet) OF Pouch TYPE**

**LI-ION RECHARGEABLE BATTERY**

**MODEL: 792200-0010(ASDB592347-P1)**

**PRESENTED TO:**

<table>
<thead>
<tr>
<th>Accepted by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
</tr>
</tbody>
</table>

**routejade Inc.**

<table>
<thead>
<tr>
<th>Prepared by: Jihoon-Jang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review by: Young-gun Kim</td>
</tr>
<tr>
<td>Approved by: Changmoon jeong</td>
</tr>
</tbody>
</table>

| Date: 2019.05.04                   |
| (Signature)                       |
| (Signature)                       |
| (Signature)                       |
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
Nonsan, Chung-Nam, Korea
320-844

Emergency Telephone Number
Tel : +82 70 8611 2053
Fax : +82 41 741 0831

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

<table>
<thead>
<tr>
<th>Hazardous Ingredients</th>
<th>%</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Foil</td>
<td>2-10</td>
<td>7429-90-5</td>
</tr>
<tr>
<td>Lithium Cobalt Dioxide(LiCoO2)</td>
<td>4-50</td>
<td>12190-79-3</td>
</tr>
<tr>
<td>Polystyrene Fluoride (PVDF)</td>
<td>&lt; 5</td>
<td>24937-79-9</td>
</tr>
<tr>
<td>Styrene butadiene rubber</td>
<td>&lt; 2.5</td>
<td>9003-55-8</td>
</tr>
<tr>
<td>Carboxymethyl Cellulose</td>
<td>&lt; 2.5</td>
<td>9000-11-7</td>
</tr>
<tr>
<td>Copper Foil</td>
<td>2-10</td>
<td>7440-50-8</td>
</tr>
<tr>
<td>Carbon (proprietary)</td>
<td>10-30</td>
<td>7440-44-0</td>
</tr>
<tr>
<td>Polyethylene terephthalate</td>
<td>&lt; 5</td>
<td>25038-59-9</td>
</tr>
<tr>
<td>Polypropylene</td>
<td>&lt; 2</td>
<td>9003-07-0</td>
</tr>
<tr>
<td>Electrolyte (proprietary)</td>
<td>10-20</td>
<td></td>
</tr>
</tbody>
</table>

Lithium hexafluorophosphate
Ethylene carbonate
Propylene carbonate
Dimethyl carbonate
Vinylene carbonate
Fluoroethylene carbonate
1,3-Propane sultone
Succinonitrile

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

<table>
<thead>
<tr>
<th>State</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>N/A</td>
</tr>
<tr>
<td>PH</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor density</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling point</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>N/A</td>
</tr>
<tr>
<td>Density</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Sensitization</th>
<th>Teratogenicity</th>
<th>Reproductive</th>
<th>Acute toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

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.

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

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