MATERIAL SAFETY DATA SHEET

1. Product Identification:
   Product Name: Lithium-ion battery
   Company of Producing: Infinity Energy(Suzhou)Co.,Ltd

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Composition</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>40~45%</td>
</tr>
<tr>
<td>Nickel-Cobalt-Manganese Oxide</td>
<td>6~8%</td>
</tr>
<tr>
<td>PVDF</td>
<td>12~15%</td>
</tr>
<tr>
<td>Carbon</td>
<td>2~5%</td>
</tr>
<tr>
<td>Electrolyte(EC/EMC/DEC/1molLiPF6)</td>
<td>8~12%</td>
</tr>
<tr>
<td>Copper</td>
<td>7~10%</td>
</tr>
<tr>
<td>Aluminum</td>
<td>5%</td>
</tr>
<tr>
<td>Nickel</td>
<td>2~5%</td>
</tr>
</tbody>
</table>

3. Hazard Identification

<table>
<thead>
<tr>
<th>Material</th>
<th>Emergency Overview (Appearance)</th>
<th>Toxicity (Potential Health Effects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>Blue-Black Powder (odorless)</td>
<td>Cobalt and Cobalt compounds are considered to be possible human carcinogen(s). By IARC: May irritate eyes, skin, nose, throat, and respiratory system. May cause allergic skin sensitization (rash).</td>
</tr>
<tr>
<td>Nickel-Cobalt-Manganese Oxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon</td>
<td>Black Powder (odorless)</td>
<td>No cases of carbon being harmful to humans have been reported. WHO and ILO have never verified that carbon irritation of the skin and mucous membrane, etc. In some individuals.</td>
</tr>
<tr>
<td>Bond</td>
<td>Odorless White Powder</td>
<td>Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. As a finished product, it is a synthetic, high molecular weight polymer. Due to its chemical and physical properties, this material does not</td>
</tr>
</tbody>
</table>
CAUTION!
MELT
PROCESSING
RELEASES
VAPORS
WHICH
MAY
CAUSE
EYE,
SKIN
AND
RESPIRATORY
TRACT
IRRITATION.

Electrolyte
Colorless Liquid
WARNING!
FLAMMABLE.
REACTS WITH WATER
TO FORM
HYDROFLUORIC ACID.
MAY CAUSE BURNS TO
SKIN AND EYES
EFFECTS MAY BE
DELEYED. MAY CAUSE
BLINDNESS.
PROBABLE
REPRODUCTIVE
HAZARD.

May cause moderate to severe irritation, burring, and dryness of the skin. May cause eye irritation or burning. Breathing of the mists, vapors or fumes may irritate the nose, throat and lungs or fumes may irritate the nose, throat and lungs. Exposure of material with areas which contain water may generate hydrofluoric acid which can cause immediate burns on skin, severe eye burns burns to the mouth and gastrointestinal tract if ingested, and laryngeal edema if inhaled. Direct exposure to areas of the body need to be treated immediately to prevent injury.

4. First Aid Measures
Eyes: Flush with water for at least 15 minutes. If irritation occurs and persists, contact a medical doctor.
Skin: Remove contaminated clothing and thoroughly wash with soap and plenty of water. If irritation persists, contact a medical doctor.
Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration and see a medical doctor IMMEDIATELY.
5. Fire Fighting Measures

Hazardous Combustion Products: When burned, hazardous products of combustion including fumes of carbon monoxide, carbon dioxide, and fluorine can occur.

Extinguishing Media: Water, carbon dioxide, dry chemical, or foam.

Basic Fire Fighting Procedures: Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire & Explosion Hazards: This material does not represent an unusual fire or explosion hazard.

Flash Point: 38°C (100F)

Autolignition Temperature: No Data.

Flammability Limits in Air, Lower, % by Volume: 1.4

Flammability Limits in Air, Upper, % by Volume: 11

6. Accidental Release Measures

Procedure for Release and Spill: Sweep up and place in a suitable container, Dispose or waste according to all local, state and Federal Laws and Regulations.

Before cleanup measures begin, review the entire MSDS with particular attention Potential Health Effects; and on Recommended Personal Protective Equipment.

7. Handling and storage

Handling: Avoid contact with eyes, skin or clothing, use with adequate ventilation. Wear safety glasses and rubber gloves. Wash thoroughly after handling.

Material Storage

Lithium Nickel-Cobalt-Manganese Oxide Keep away from strong acids. Keep container closed.

Carbon Store this material in a sealed enclosure to avoid dispersion of carbon fiber dust. Keep container closed.

Bond Store in a cool, dry place. This material is not hazardous under normal storage condition; however, material should be stored in closed container, in a secure area to prevent container damage and subsequent spillage.

Electrolyte Store in tightly closed containers in a cool, dry, isolated, well-ventilated area away from heat, sources of ignition and in compatibles. Store in original container. Keep from freezing. Avoid exposure to high temperatures

8. Exposure Controls/Person Protection.

Engineering controls: Investigate engineering techniques to reduce exposures use with adequate ventilation and Recommended personal protective Equipment

Eye/Face protection: Use good industrial practice to avoid eye contact. Processing of this product releases vapors or fumes which may cause eye irritation. Where eye contact may be likely wear chemical goggles and have eye flushing equipment available
Skin protection: Minimize skin contamination by following good industrial hygiene practices. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory protection: Avoid breathing dust and processing vapors. When adequate ventilation is not available, wear a NIOSH/MSHA respirator approved for protection against inorganic dusts.

Special clothing: Robber gloves.

Other: Quick-drench eye wash and safety shower.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material</th>
<th>Appearance</th>
<th>Odor</th>
<th>Molecular Weight</th>
<th>Vapor Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>LiNiCoMnO2</td>
<td>Solid, Blue-Black Powder</td>
<td>Odorless</td>
<td>211.51</td>
<td></td>
</tr>
<tr>
<td>Carbon</td>
<td>Black Powder</td>
<td>Odorless</td>
<td>12.01</td>
<td></td>
</tr>
<tr>
<td>PTFE</td>
<td>Latex</td>
<td>Odorless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PVDF</td>
<td>Powder</td>
<td>Odorless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>Metal</td>
<td>Odorless</td>
<td>63.55</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>Metal</td>
<td>Odorless</td>
<td>58.69</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>Metal</td>
<td>Odorless</td>
<td>26.98</td>
<td></td>
</tr>
<tr>
<td>Electrolyte</td>
<td>Colorless Liquid, Volatile</td>
<td>with a mild organic odor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Sublimating Point</th>
<th>Freezing Point/Melting Point</th>
<th>Solubility in water</th>
<th>Density (Specific Gravity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LiNiCoMnO2</td>
<td></td>
<td>&gt;1000 deg.C (1280 deg.F)</td>
<td>Insoluble</td>
<td></td>
</tr>
<tr>
<td>Carbon</td>
<td>3000°C or more</td>
<td>165-172°C</td>
<td>Insoluble</td>
<td>2.2 g/ml</td>
</tr>
<tr>
<td>PVDF</td>
<td></td>
<td>1083°C</td>
<td>Negligible</td>
<td>1.76-1.80 g/ml</td>
</tr>
<tr>
<td>Copper</td>
<td></td>
<td></td>
<td>Insoluble</td>
<td>8.96 g/ml</td>
</tr>
</tbody>
</table>
Nickel 1555°C Insoluble 8.91g/ml
Aluminum 660°C Insoluble 2.7 g/ml
Electrolyte 126°C Partial 1.22 (20/20°C)
(EC/EMC/DEC/1molLiPF6) WATER=1

10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Material</th>
<th>Stability</th>
<th>Incompatibility</th>
<th>Hazardous Polymerization</th>
<th>Hazardous Decomposition Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>LiNiCoMnO2</td>
<td>Stable</td>
<td>Acids</td>
<td>Dose not polymerize</td>
<td>None</td>
</tr>
<tr>
<td>Carbon</td>
<td>Stable</td>
<td>Strong oxidants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bond</td>
<td>Stable</td>
<td>Strong base, ester, Dose not occur HF, possible oxides of carbon Ketones, Silica, Titanium.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrolyte</td>
<td>Volatile</td>
<td>Strong reducers, Will not occur</td>
<td>Volatile pentafluoride compounds, bases, strong acids, oxidizing agents, Hydrogen fluoride, carbon monoxide moist air or water. Carbon dioxide and other decomposition product, etc.</td>
<td></td>
</tr>
</tbody>
</table>

11. Ecological Information

Eco Toxicological Information: No information available. Chemical Fate Information: No data are available. Environmental Effects: No data are available.

12. Disposal Information

Ensure disposal of material in compliance with all local, State and Federal-Laws and Regulations.

13. Transport Information

In the case of transportation, confirm no leakage, and no overspill from a container. 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.

- Codes and classifications according to international regulations for transport air IATA-DGR: special provision A45
- The UN classification number: Class 9 3090 However, since it corresponds to special provision A45 of IATA-DGR, this battery cell can be conveyed normally.

14. Regulatory Information

Regulations specifically applicable to the product: IATA UN No. 3090 (air transportation) US Department of Transportation 49 Code of Federal Regulations [USA] Wastes Disposal and Public Cleaning Law [Japan] Law for Promotion of Effective Utilization of resources [Japan]

15. Other Information
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.

16. Reference
Chemical substances information: China Advanced Information center of Safety and Health
International Chemical Safety Cards (ICSCs):
   International Occupational Safety and Health Information Centre (CIS)
1999 TLVs and BELs: American Conference of Governmental Industrial Hygienists (ACGIH)
MSDS of raw materials by prepared by the manufactures

: last data revised 2011/08/10

The material safety data sheet is furnished to every manufacturer as a reference to secure the safe handling of chemical. Every manufacturer is requested to carry out appropriate actions for chemical handling as their own responsibility. The supplier makes no warrantee, either express or implied. concerning of this products. User assumes all risks resulting from its use.