

Section 1 Identification

1.1	Product Name	Superior Lithium Polymer Battery (SLPB)																																																
1.2	Battery Type	Rechargeable Battery																																																
1.3	Model	<p>SLPB Series</p> <table border="0" style="width: 100%;"> <tr> <td>SLPB075070180</td> <td>SLPB065070180</td> <td>SLPB4370270</td> <td>SLPB7570270</td> </tr> <tr> <td>SLPB080085270</td> <td>SLPB68106100P</td> <td>SLPB050106100</td> <td>SLPB98106100</td> </tr> <tr> <td>SLPB75106205</td> <td>SLPB150140140</td> <td>SLPB98188216P</td> <td>SLPB55205130H</td> </tr> <tr> <td>SLPB60205130H</td> <td>SLPB70205130P</td> <td>SLPB78205130H</td> <td>SLPB60216216</td> </tr> <tr> <td>SLPB72216216</td> <td>SLPB78216216H</td> <td>SLPB90216216</td> <td>SLPB100216216H</td> </tr> <tr> <td>SLPB120216216</td> <td>SLPB58253172MH</td> <td>SLPB90255255H</td> <td>SLPB100255255H</td> </tr> <tr> <td>SLPB110255255H</td> <td>SLPB120255255</td> <td>SLPB125255255</td> <td>SLPB125255255H</td> </tr> <tr> <td>SLPB125255255A</td> <td>SLPB130255255P</td> <td>SLPB130255255G1</td> <td>SLPB60460330H</td> </tr> <tr> <td>SLPB70460330</td> <td>SLPB70460330H</td> <td>SLPB80460330H</td> <td>SLPB120460330</td> </tr> <tr> <td>SLPB140460330</td> <td>SLPB160460330</td> <td>SLPB160460330H</td> <td>SLPB135460330MC</td> </tr> <tr> <td>SLPB120216216G1</td> <td>SLPB120216216G2</td> <td>KDX17020-6</td> <td>KDX18012</td> </tr> <tr> <td>KDX18013</td> <td>KDX19010</td> <td>KDX19012</td> <td>SLPB125255255G1H</td> </tr> </table>	SLPB075070180	SLPB065070180	SLPB4370270	SLPB7570270	SLPB080085270	SLPB68106100P	SLPB050106100	SLPB98106100	SLPB75106205	SLPB150140140	SLPB98188216P	SLPB55205130H	SLPB60205130H	SLPB70205130P	SLPB78205130H	SLPB60216216	SLPB72216216	SLPB78216216H	SLPB90216216	SLPB100216216H	SLPB120216216	SLPB58253172MH	SLPB90255255H	SLPB100255255H	SLPB110255255H	SLPB120255255	SLPB125255255	SLPB125255255H	SLPB125255255A	SLPB130255255P	SLPB130255255G1	SLPB60460330H	SLPB70460330	SLPB70460330H	SLPB80460330H	SLPB120460330	SLPB140460330	SLPB160460330	SLPB160460330H	SLPB135460330MC	SLPB120216216G1	SLPB120216216G2	KDX17020-6	KDX18012	KDX18013	KDX19010	KDX19012	SLPB125255255G1H
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1.4	Electrochemical System	<p>Negative Electrode - Carbon</p> <p>Positive Electrode – Lithium Nickel Cobalt Manganese Oxide (LiNi_xCo_yMn_zO₂)</p> <p>Electrolyte - Solution of lithium hexafluorophosphate (LiPF₆) in a mixture of organic solvent ethylene carbonate + ethyl methyl carbonate</p>																																																
1.5	Manufactured by	<p>Kokam Co., Ltd</p> <p>[Head office] 30-78, Gyeongsu-daero 1220beon-gil, Jangan-gu, Suwon-si, Gyeonggi-do, Republic of Korea, ZIP 16201</p> <p>[Factory] 19, Gayagongdan-gil, Gayagok-myeon, Nonsan-si, Chungcheongnam-do, Republic of Korea, ZIP 32020</p>																																																
1.6	Emergency Situation	<p>For Hazardous Materials [or Dangerous Goods] Incident</p> <p>Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night</p> <p>Within USA and Canada: +1-703-741-5970 CCN200262</p> <p>Outside USA and Canada: +1 703-527-3887 (collect calls accepted)</p>																																																
1.7	Technical Information	+82-31-362-0100 or + 82-41-740-3800																																																
1.8	Date of Prepared	August 21, 2006																																																
1.9	Revision Date	April 10, 2020																																																

Section 2 Hazard(s) Identification

- 2.1 Classification of the substance or mixture; No classification according to EU CLP regulation, since the product is legally an article rather than chemical substance which is subject to EU CLP and/or to 67/548/EEC.
- 2.2 GHS Classification : Not available
This product is outside the scope of GHS system since it's considered as an "article"
- 2.3 There is no hazard when the measures for handling and storage are followed.
- 2.4 In case of cell damage, possible release of dangerous substances and a flammable gas mixture.
- 2.5 May explode in a fire, which could release hydrogen fluoride gas. Use extinguishing media suitable for materials burning in fire.

Section 3 Composition/Information on Ingredients

Chemical Name	CAS Number	% Content
Lithium Nickel Cobalt Manganese Oxide (LiNi _x Co _y Mn _z O ₂)	182442-95-1	20 ~ 50
Carbon (Graphite, Proprietary)	7782-42-5	15 ~ 35
PVDF (1,1-Difluoroethene homopolymer; Poly(vinylene fluoride))	24937-79-9	< 8
Aluminum Foil	7429-90-5	3 ~ 12
Copper Foil	7440-50-8	3 ~12
Electrolyte	EC: 96-49-1, EMC: 623-53-0 LiPF6: 21324-40-3	10 ~20
Al Film Cover	n/a	< 5

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Section 4 First-Aid Measures

In the event of battery rupture or explosion, evacuate personnel from contaminated area and provide maximum ventilation to clear out fumes/gases. In all cases, seek immediate medical attention.

- 4.1 Eye Contact Flush with plenty of water (eyelids held open) for at least 15 minutes.
- 4.2 Skin Contact Remove all contaminated clothing and flush affected areas with plenty of water and soap for at least 15 minutes. Do not apply grease or ointments.
- 4.3 Ingestion Dilute by drinking plenty of water and seek immediate medical attention. If substances are swallowed, be sure that aspiration of vomit does not occur. Ensure that mucus does not obstruct the airway. Do not prescribe oral medication/aid to an unconscious person.
- 4.4 Inhalation Ventilate the contaminated area and evacuate affected personnel. Provide oxygen or artificial respiration, if necessary.

Section 5 Fire-Fighting Measure

- 5.1 Fire and Explosion Hazards The battery can leak and/or release vaporized or decomposed and combustible electrolyte fumes when exposed to temperatures above 60°C when improperly handled; or due to the environment. Cells or batteries may flame or leak potentially hazardous vapors if exposed to excessive heat or fire. Fire, excessive heat, or over voltage can potentially be hazardous and lead to decomposition of products. Damaged or opened cells or batteries can result in rapid heating and the release of flammable vapors. Vapors may be heavier than air and may travel on ground or be moved by ventilation to an ignition source and flash back. Use a positive pressure self-contained breathing apparatus if batteries are contained in a fire. Full protective clothing is necessary. During water application, caution is advised as burning pieces of flammable particles may be ejected from the fire.
- 5.2 Extinguishing Media Suitable: CO₂, Water, Dry chemical or Foam extinguishers or Type D extinguishers
- 5.3 Special Exposure Hazards If cells overheat due to an external source or improper use, electrolyte leakage or battery container rupture may occur and release inner component/material in the environment.
 - 5.3.1 Eye Contact The electrolyte solution contained in the battery is an irritant and can damage ocular tissues.
 - 5.3.2 Skin Contact The electrolyte solution contained in the battery causes skin irritation.
 - 5.3.3 Ingestion The ingestion of electrolyte solution causes tissue damage to throat and gastro/respiratory tract.

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- 5.3.4 Inhalation Contents of a leaking or ruptured battery can cause respiratory tract mucus, membrane irritation and edema.
- 5.4 Special Protective Equipment Use self-contained breathing apparatus to avoid breathing irritant fumes. Wear protective clothing and wash the body with an electrolyte solution.

Section 6 Accidental Release Measure

The material contained within the batteries can only be expelled under abusive conditions. Using a shovel or broom cover the battery or expelled substances with dry sand or vermiculite. Place the battery in a separate container (after cooling, if necessary) and dispose in accordance with local regulations.

Section 7 Handling and Storage

Batteries should not be disassembled, destroyed or incinerated as they may leak, rupture and release chemicals into the environment.

- 7.1 Handling Batteries are designed to be recharged. However, improperly charging a cell or battery may cause the cell or battery to ignite. Use only approved chargers and follow standard operating procedures. Never disassemble a battery or bypass any safety device. Do not crush, pierce, short (+) and (-) battery terminals with conductive (i.e. metal) goods. Do not directly heat or solder. Do not throw into fire. Do not mix batteries of different types and brands. Do not mix new and used batteries. Keep batteries in non conductive (i.e. plastic) trays.
- 7.2 Storage Do not store batteries above 60°C. Store batteries in a cool (below 25°C), dry area that is subject to little temperature change. Elevated temperatures can result in reduced battery service life. Do not store batteries in a manner that allows terminals to short circuit. Extended short-circuiting creates high temperatures in the cell. High temperatures can cause skin irritation or cause the cell to flame. Avoid reversing battery polarity within the battery assembly. Doing so may cause the cell to ignite or to leak. Do not place batteries near heating equipment, or expose to direct sunlight for long periods.
- 7.3 Other Follow the manufacturer’s recommendations regarding maximum recommended currents and operating temperature range. Applying pressure to the battery may cause disintegration, releasing irritant materials that are hazardous to the eye, skin, and throat.

Section 8 Exposure Controls and Personal Protection

No engineering controls are required for handling batteries that have not been damaged.

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8.1	Respiratory Protection	It is not necessary under normal use. In event of battery rupture, use self-contained full-face respiratory equipment.
8.2	Hand Protection	It is not necessary under normal use. Use gloves when handling a leaking or ruptured battery.
8.3	Eye Protection	It is not necessary under normal use. Wear safety goggles/glasses with side shields if handling a leaking or ruptured battery.
8.4	Skin Protection	It is not necessary under normal use. Use rubber protective working when handling of a ruptured battery.

Section 9 Physical and Chemical Information

9.1	State	Solid
9.2	Odor	n/a
9.3	PH	n/a
9.4	Vapor pressure	n/a
9.5	Vapor density	n/a
9.6	Boiling point	n/a
9.7	Solubility in water	Insoluble
9.8	Specific gravity	n/a
9.9	Density	n/a

Section 10 Stability and Reactivity

- 10.1 Conditions to avoid :
- Heat above 60°C
 - Deform, mutilate, crush, pierce, disassemble
 - Short circuit
 - Prolonged exposure to humid conditions
- 10.2 Materials to avoid : n/a
- 10.3 Hazardous Decomposition Products; None(during normal operating conditions). If cells are opened, hydrogen fluoride(HF) and carbon monoxide(CO) may be released.

Section 11 Toxicological Information

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11.1	Irritancy	The electrolytes contained in this battery can irritate eyes with any direct contact. Prolonged contact with the skin or mucous membranes may cause irritation.
11.2	Sensitization	No information is available at this time.
11.3	Carcinogenicity	No information is available at this time.
11.4	Reproductive toxicity	No information is available at this time.
11.5	Teratogenicity	No information is available at this time.
11.6	Mutagenicity	No information is available at this time.

Section 12 Ecological Information

Ecological injuries are not known or expected under normal use. Do not flush into surface water or sanitary sewer system.

Section 13 Disposal Consideration

- 13.1 Dispose in accordance with applicable regulations according to country (in most countries, the disposal of used batteries is forbidden and the end-users are invited to dispose them properly, eventually through not-for-profit or profit organizations, mandated by the local government or organized on a voluntary basis by professionals).
- 13.2 Batteries should be completely discharged prior to disposal and/or the terminals taped or capped to prevent short circuit. When completely discharged, it is not considered hazardous.
- 13.3 This product does not contain any materials listed by the United State EPA as requiring specific waste disposal requirements. These are exempted from the hazardous waste disposal standards under Universal Waste Regulations. Disposal of large quantities of Lithium-ion batteries or cells may be subject to federal, state, or local regulations.
- 13.4 Consult your local, state and provincial regulations regarding disposal of these batteries.

Section 14 Transporting 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 shock the results in a mark of hitting on a cell. Please refer section 7- HANDINH AND STORANG also.

- 14.1 United Nations Regulation
 - UN Class : UN 3480

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- Hazard Class : 9
- Proper shipping name: LITHIUM ION BATTERIES
- Packing Group : II
- Marine Pollutant : No
- Packing Instruction : 965 Section IA
- Label : Use class 9 miscellaneous dangerous goods and UN identification labels for transportation of lithium ion batteries which are assigned class 9 in USA code of federal regulation, 49 CFR Ch.1 § 173-185

Section 15 Regulatory Information

- 15.1 International civil aviation organization (ICAO) technical instructions (2019-2020 Edition)
- 15.2 The international air transport association (IATA) dangerous goods regulations (60th Edition)
- 15.3 The international maritime dangerous goods (IMDG) code (2016 Edition)
- 15.4 US department of transportation 49 code of federal regulations
- 15.5 The UN recommendations on the transport of dangerous goods, manual of tests and criteria 38.3 lithium batteries, 6th revised edition (UN3480)

Section 16 Other Information

- 16.1 This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty (ether expressed or implied) or guarantee is made to the accuracy, reliability or completeness of the information contained herein.
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