



Safety Data Sheet

Product name:
Lithium-ion Battery

Skinner Innovations LLC
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24 hour Emergency Telephone Numbers: +1 (801) 766-4782 or +1 (712) 297-4636
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Section 1, Identification

Company Identification:

Physical Address:

Skinner Innovations LLC
708 North Douglas Street
Lake City, Iowa 51449

Mailing address:

Skinner Innovations LLC
PO BOX 97
Lake City, Iowa 51449

Product name / Product identification:

Lithium-ion Battery

Models:

HSTBAT148 - Voltage: 14.8V – Capacity: 3000mAh – 44.4Wh-4 cells-Lithium content 0.9g per cell
HSTBAT185 - Voltage: 18.5V – Capacity: 3000mAh – 55.5Wh-5 cells-Lithium content 0.9g per cell
HSTBAT259 - Voltage: 25.9V – Capacity: 3000mAh – 77.7Wh-7 cells-Lithium content 0.9g per cell
HSTBAT296 - Voltage: 29.6V – Capacity: 3000mAh – 88.8Wh-8 cells-Lithium content 0.9g per cell

Section 2, Hazard(s) identification

Classification: Carcinogenic Category 3R40, Xn, sensitizing R43

Most important hazards: There's limited evidence of a carcinogenic effect. There are possible risks of irreversible effects. It may cause sensitization by skin contact.

Further information: The sealed lithium-ion battery is not hazardous when used according to recommendations. Under normal conditions of use, the integrity of the battery's package and security vent are maintained. The ingredients are not expected to pose a significant risk to man or the environment. The classification above is based on the contents being considered as a preparation in accordance with Directive 1999/45/EC.

Section 3, Composition/information on ingredients

The Lithium-ion battery is hermetically sealed; among its components, the following could potentially be hazardous upon release.

Ingredient	Concentration	CAS No.	EINECS No.
Lithium Cobaltite (LiCoO ₂)	25~30%	12190-79-3	235-362-0
Graphite Power	10~15%	7440-44-0	231-153-3
Copper Foil	15~20%	7440-50-8	231-259-6
Aluminum Foil	4~6%	7429-90-3	231-072-3
LiPF ₆	3~5%	21324-40-3	244-334-7
Ethylene Glycol Carbonate	10~15%	96-49-1	202-510-0
PP or PE	15~20%	/	/

Section 4, First-aid measures

General advice

Show this safety data sheet to the doctor in attendance.

The information below refers to exposure to the ingredients.

Inhalation

Immediate medical attention is required. Move to fresh air. If symptoms persist, call a physician.

Direct contact

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Eye contact

Immediate medical attention is required. Remove contact lenses. Rinse immediately with plenty of water for at least 15 minutes.

Ingestion

Immediate medical attention is required. Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Centre immediately.

Section 5, Fire-fighting measures

Suitable extinguishing media Foam dry powder, carbon dioxide (CO₂), sand.

Extinguishing media which must not be used for safety reasons

Water, water spray

Specific hazards

There's risk of receptacle bursting.

Special protective equipment for firefighters

In the event of fire, wear self contained breathing apparatus. Wear personal protective equipment.

Hazardous decomposition products

Lithium compounds, carbon oxides, hydrogen fluoride

Section 6, Accidental release measures

The information below refers to exposure to the ingredients.

Personal precautions

Use personal protective equipment. Avoid contact with skin and eyes.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Do not allow material to contaminate ground water system.

To avoid risks to man and the environment, comply with the instructions for use.

Methods for cleaning up

Pick up and transfer to properly labeled containers. Dispose of in accordance with local regulations.

Section 7, Handling and storage

Handling Technical measures/Precautions

No special technical protective measures required.

Safe handling advice

Avoid contact with skin and eyes. Use personal protective equipment.

Follow the instructions for use issued by the producer.

Storage Technical measures/Storage conditions

Keep in a dry, cool and well-ventilated place, preferably in the temperature range of +5 to +25°C at 65%(+5%) relative humidity.

Keep away from heat and sources of ignition. Keep away from water. Ensure battery terminals are protected during storage.

Section 8, Exposure controls/personal protection

Occupational exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Not required under normal use.

The information below refers to exposure to the ingredients.

Respiratory protection

Use effective dust mask.

Hand protection

Neoprene gloves (EN 374).

Eye protection

Safety glasses with side-shields conforming to EN166

Skin and body protection

Boots, apron, long sleeved clothing.

Hygiene measures

Follow general industrial hygiene practices

Environmental exposure controls

The information below refers to exposure to the ingredients

Prevent product from entering drains.

Do not allow material to contaminate ground water system.

Section 9, Physical and chemical properties

General Information

Form battery (sealed unit) **Color:** silvery **Odor:** odorless

Important Health Safety and Environmental Information

Not applicable

Section 10, Stability and reactivity

Stability

Stable under normal conditions

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Keep away from heat and sources of ignition.

Materials to avoid

Exposure to moisture

Hazardous decomposition products

Lithium compounds, carbon oxides, hydrogen fluoride

Section 11, Toxicological information

The information below refers to exposure to the ingredients.

Local effects

May cause eye/skin irritation. May cause irritation of respiratory tract.

Long term toxicity

No data available. Avoid repeated exposure.

Specific effects

May cause sensitization by inhalation and skin contact. Limited evidence of a carcinogenic effect.

Section 12, Ecological information

If used as directed and if the integrity of the battery's package and security vent are maintained, the ingredients are not expected to pose a significant risk to the environment.

Mobility

No data available.

Persistence and degradability

Not readily biodegradable.

Eco-toxicity effects

No data available.

Section 13, Disposal considerations

Waste from residues / unused products

Dispose of in accordance with local regulations. It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations. It should not be released into the environment.

Contaminated packaging

Not applicable.

Further information

Never incinerate Li-Ion batteries.

Never dispose Li-Ion batteries as landfill.

Section 14, Transport information

24 hour Emergency Telephone Numbers: +1 (801) 766-4782 or +1 (712) 297-4636

Lithium Ion Cells Packed with Equipment, UN3481, PI966, Section II

IATA Cargo IMP Code: ELI

Notes for PI966, section II:

The maximum number of batteries in each package must not exceed the minimum number required to power the equipment plus two spares.

Each package must display the lithium battery marking label.

The words "Lithium ion batteries UN3481, PI966, Section II packed with equipment" must be included on the air waybill. The information should be shown in the "Nature and Quantity of Goods" box of the air waybill.

For more information, please refer to the newest UN Manual of Tests and Criteria, Part III, sub-section 38.3 Lithium Batteries, IATA Dangerous Goods Regulations, UN Recommendations on the Transport of Dangerous Goods Model Regulations, International Maritime Dangerous Goods (IMDG) code, Regulations concerning the Intl Transport of Dangerous Goods by Rail (RID) and Agreement on Dangerous Goods by Road (ADR). It is especially important to ensure that batteries are packed in such a way to prevent short circuits.

Lithium Ion Batteries Contained in Equipment, UN3481, PI967, Section II

Battery less than 100Wh

Less than 2 batteries and less than 2 batteries per consignment

Battery marking label required

Battery declaration not required

Section 15, Regulatory information

61st Edition of IATA DGR: International Air Transport Association (IATA)

IMDG CODE: International Maritime Organization (IMO)

Section 16, Other information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.