

SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

Product Name : Lithium Iron Phosphate Battery

Synonyms : LiFePO₄, LFP Battery

Product Use : Electric Storage Battery

Manufacturer : Volthium Energy Inc

Address : 2600 Boul Ford, Chateauguay,
Quebec Canada
J6J 4Z2

Phone : 514 989-9586

Email : support@volthium.com

Revision Date : 04 January 2021

SECTION 2 : COMPOSITION / INFORMATION ON INGREDIENTS

Under normal use, the item does not expose the user to hazardous materials.

Chemical Name		CAS No	Content %
Lithium Iron Phosphate		15365-14-7	30-33%
Graphite		7782-42-5	15-17%
Copper		7440-50-8	7-9%
Aluminium		7429-90-5	5-7%
Electrolyte	Ethylene Carbonate	96-49-1	15-20%
	Dimethy Carbonate	616-38-6	
	Ethyl Methyl Carbonate	623-53-0	
	Lithium Hexafluoro Phosphate	21324-40-3	

SECTION 3 : HAZARDS IDENTIFICATION

Emergency Overview :

This product contains a chemical substance. Intended use of the product should not result in exposure to the chemical substance.

If the battery cell is mechanically, thermally or electrically abused and the case is rupture, the below hazard exist.

Potential Health Effects :

Eyes: irritation.

Skin: moderate irritation, defeating, dermatitis.

Inhalation: respiratory irritation, effects, dizziness, weakness, nausea, headache

Ingest: irritation, nausea, vomiting & diarrhea.

SECTION 4 : FIRST AID MEASURES

Eyes Contact :

Flush with plenty of water, Get medical attention.

Skin Contact :

Wash thoroughly with soap & water.

Inhalation:

Remove to fresh air, Get medical attention.

Ingestion:

Do not induce vomiting, Keep warm. Get medical attention.

The most important symptom and harm effect:

Acid burn.

The protection to the first aid person:

According to procedure to disposal.

SECTION 5 : FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, msha/niOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable liquid and vapor.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point:

45deg C (113.00 deg F)

Autoignition Temperature:

Not available.

Explosion Limits, Lower:

Not available.

Upper:

Not available.

NFPA Rating:

Not published.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal Precautions :

Wear protective equipment.

Spill Release Procedures :

Remove ignition sources, evacuate area. Use suitable absorbent materials and recover for proper disposal in accordance with section 13.

SECTION 7 : HANDLING AND STORAGE

Handling:

Use spark -proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

Storage:

Insulate positive and negative terminals to avoid short circuiting the cell.

Avoid mechanical damage of the cell.

Keep the Battery fully charged.

Store the Battery in a dry and cool place, away from the sun, rain, and heat.

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection :

In case of cell rupture, use a self-contained full face respiratory mask.

Hand Protection : Gloves:

Nitrile rubber.

Eye Protection:

Chemical splash goggles

Other Protective Equipment:

Impervious clothing & boots.

Work Hygienic Practices:

Avoid contact with skin and eyes; do not breathe vapors/mist.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Substance estate: mixture

Shape: solid

Color : N/A

Smell: thrill smell

PH value: N/A

Boiling point/ boiling point scope: N/A

Decomposition temperature: N/A

Firepoint: N/A

Test method : N/A

Self-ignite temperature: Non -combustible

Explosion limit: N/A

Vapor tension: N/A

Vapor density: N/A

Density: N/A

Solubility: The electrolyte dissoluble in water; and the whole battery isn't dissoluble in water

Nominal voltage: 12.8V

Rated Capacity: 100Ah

SECTION 10 : STABILITY AND REACTIVITY DATA

Form: Solid

Color: N/A

Odor: Odourless

Conditions to Avoid: Incompatible materials, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids, alkali metals, metallic salts.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

SECTION 11 : TOXICOLOGICAL INFORMATION

Not applicable

SECTION 12 : ECOLOGICAL INFORMATION

Not available

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal Methods:

Dispose Of Collected Material In Accordance With Local, State And Federal Regs.

SECTION 14 : TRANSPORT INFORMATION

All Lithium Battery with the necessary testing requirements under the UN 38.3 Manual of Tests and Criteria as referenced in the following transportation regulations.

- UN recommendations on the Transport of Dangerous Goods Model Regulations.
- U.S. Department of Transportation of Dangerous Goods Model Regulations.
- International Civil Aviation Organization (ICAO) Technical Instructions.
- International Maritime Dangerous Goods (IMDG) code.
- IATA DGR 61th Edition [2020].
- Transport Packing Specification: PI965.

DOT regulations

UN Classification :	Class 9-Micellaneous Dangerous Goods
UN number :	3480 or 3481
Packing group :	II
UN Proper shipping name :	Lithium ion batteries
Marine pollutant (Y/N) :	Y
Label :	9

Land transport ADR/RID

ADR/RID class :	Class 9-Micellaneous Dangerous Goods
Danger code (Kemler) :	9
UN number :	3480 or 3481
Packing group :	II
Marine pollutant (Y/N) :	Y
Description of goods:	Lithium ion batteries

Sea transport IMDG

IMDG Class :	Class 9-Micellaneous Dangerous Goods
UN Number :	3480 or 3481
Label :	9
Packaging group :	II
EMS Number :	F-A, S-I
Marine pollutant(Y/N) :	Y
Special regulate :	IMDG 188, 230, 310, 348, 957
Proper shipping name :	Lithium ion batteries

Airtransport ICAO -Tl and IATA-DGR:

UN/ID Number :	3480 or 3481
Label :	9
Packaging group :	II
Marine pollutant (Y/N) :	N
Proper shipping name :	Lithium ion batteries

SECTION 15 : REGULATORY INFORMATION

LAW Information:

- 《Dangerous Goods Regulation》
- 《Recommendations on the Transport Of Dangerous Goods Model Regulations》
- 《International Maritime Dangerous Goods》
- 《Technical Instructions for the Safe Transport of Dangerous Goods》
- 《Classification and code of dangerous goods》

OSHA Hazard Communication Standard Status.
Toxic Substances Control Act(TSCA)Status.
SARA Title III.
RCRA.
U.S. Federal Regulations.
European/International Regulations.
In accordance with all federal, state and local laws.

SECTION 16 : OTHER INFORMATION

Other Information: the above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the result of its use, this information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.