



中国认可
检验
INSPECTION
CNAS IB0071



NO.2619050260

SAFETY DATA SHEET

Product Name: LiFePO₄ Li-ion battery 40172L 3.2V 20Ah

Effective Date: 2019-09-29

Compiler: He Xiaoshuang

Checker: Dongxuesheng

Approver: Zhangxiuqin



Shanghai Research Institute of Chemical Industry Testing Co., Ltd.



Zhejiang Xinghai Energy Technology Co., Ltd.

SAFETY DATA SHEET

LiFePO₄ Li-ion battery 40172L 3.2V 20Ah

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: LiFePO₄ Li-ion battery 40172L 3.2V 20Ah
Company: Zhejiang Xinghai Energy Technology Co., Ltd.
Address: No. 1346, Taihu Avenue, Economic Development Zone, Changxing County,
Zhejiang Province, 313100, P.R.China
Email: Zhz386@163.com
Fax: 86-572-6128570
Emergency Phone: 86-572-6128370
SDS Number: 2619050260
Effective Date: 2019-09-29

SECTION2 HAZARDS IDENTIFICATION

Hazards Identification:

Class 9, miscellaneous. The battery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN 38.3.

Emergency Overview:

Caution: Avoid contact and inhalation the electrolyte contained inside the battery.

SECTION3 INFORMATION ON INGREDIENTS

Product name: LiFePO₄ Li-ion battery 40172L 3.2V 20Ah

Ingredient	Concentration	CAS No.	EC No.
Lithium iron phosphate	32.55%	15365-14-7	/
Steel shell	15.39%	7439-89-6	231-096-4
Graphite	17.67%	7782-42-5	231-955-3
Copper foil	7.99%	7440-50-8	231-159-6
Lithium hexafluorophosphate	8.1%	21324-40-3	244-334-7
Diethyl carbonate	5.61%	105-58-8	203-311-1
Aluminium foil	5.15%	7429-90-5	231-072-3
Ethylene carbonate	4.13%	96-49-1	202-510-0
Separator	2.01%	9003-07-0	/
Polyvinylidene fluoride	1.11%	24937-79-9	/

CMC (Carboxymethyl cellulose)	0.18%	9000-11-7	/
PP seal ring	0.07%	9003-07-0	/
PVC membrane	0.04%	9002-86-2	208-750-2

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If the internal battery materials of an opened battery cell come into contact with the skin, immediately flush with plenty of water.

Eye Exposure:

In case of the internal battery materials in contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Inhalation Exposure:

If inhaled the internal materials of battery, remove immediately to fresh air and seek medical attention.

Oral Exposure:

If swallowed the internal materials of battery, do not induce vomiting. Seek immediate medical attention.

SECTION5 FIRE FIGHTING MEASURES

Extinguishing Media:

Suitable: Dry chemical, Sandy soil, Carbon dioxide or appropriate foam.

Firefighting:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazards: Emit toxic fumes under fire conditions.

SECTION6 ACCIDENTAL RELEASE MEASURES

Procedure of Personal Precaution:

If batteries show signs of leaking, avoid skin or eye contact with the material leaking from the battery. Use chemical resistant rubber gloves and non-flammable absorbent materials for clean up. Mix with inert material (e.g. dry sand, vermiculite) and transfer to sealed container for disposal.

SECTION7 HANDLING AND STORAGE

Handling:

Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Avoid mechanical or electrical abuse. More than a momentary short circuit will generally reduce the battery service life. Avoid reversing battery polarity within the battery assembly. In case of a battery unintentionally be crushed, rubber gloves must be used to handle all battery components. Avoid contact with eyes, skin. Avoid inhalation. No smoking at working site. Materials to Avoid: Strong oxidizing agents, Corrosives.

Storage:

Store in a cool, well-ventilated area. Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Materials to Avoid: Strong oxidizing agents, Corrosives.

SECTION8 EXPOSURE CONTROL/PPE

Engineering Controls:

Use ventilation equipment if available. Safety shower and eye bath.

Personal Protective Equipment:

Respiratory System: Not necessary under conditions of normal use.

Eyes: Not necessary under conditions of normal use.

Clothing: Wear appropriate protective clothing.

Hand: Safety gloves.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

Appearance: Blue cylinder plastics film and metal shell

Odor: Odorless

Melting Point/°C: >300°C

Solubility: Partial soluble in water

SECTION10 STABILITY AND REACTIVITY

Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Avoid exposure to heat and open flame. Avoid mechanical or electrical abuse. Prevent short circuits.

Prevent movement which could lead to short circuits.

Materials to Avoid:

Strong oxidizing agents, Corrosives.

Hazardous Polymerization:

Will not occur.

Hazardous Decomposition Products:

Metal oxides, CO, CO₂.

SECTION11 TOXICOLOGICAL INFORMATION

Toxicity Data:

Not available.

Irritation Data:

The internal battery materials may cause irritation to eyes and skin.

SECTION12 ECOLOGICAL INFORMATION

No data available.

SECTION13 DISPOSAL CONSIDERATION

Appropriate Method of Disposal of Substance:

Lithium batteries are best disposed of as a non-hazardous waste when fully or mostly discharged. Contact a licensed professional waste disposal service to dispose of large quantities materials.

SECTION14 TRANSPORT INFORMATION

The product has passed the test items of UN Model Regulations, Manual of Test and Criteria Section 38.3.

IATA DGR (60th Edition):

Proper Shipping Name: Lithium ion batteries

UN Number: UN3480

Hazard Class: 9

The product shall meet the General Requirements and section IA of Packaging Instruction 965 (IATA DGR).

IMO IMDG Code (2016 Edition):

Proper Shipping Name: Lithium ion batteries

UN Number: UN3480

Hazard Class: 9

EmS No. : F-A, S-I

SECTION15 REGULATORY INFORMATION

ICAO:

1. Unless be exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480, PI 965) and lithium metal cell/batteries (UN 3090, PI 968) are forbidden for carriage on passenger aircraft.
2. Unless be approved according to ICAO TI, Lithium ion cells/batteries (UN 3480, PI 965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.
3. A shipper is not permitted to offer for transport more than one (1) package prepared according to Section II of PI 965 and PI 968 in any single consignment. Not more than one (1) package prepared in accordance with Section II of PI 965 and PI 968 may be placed into an overpack.
4. Packages prepared according to Section II of PI 965 and PI 968 must be offered to the operator separately from other cargo and must not be loaded into a unit load device (ULD) before being offered to the operator.

SECTION16 OTHER INFORMATION

Date:

2019-09-29

Department:

Shanghai Research Institute of Chemical Industry Testing Co., Ltd.

Tel (Fax) : +86-21-52815377/31765555

Revision:

0

Other Information:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information.

