

MATERIAL SAFETY DATA SHEET

Date: May.13, 2024

File No.: GW-SDS-2405001-E

1. Identification of the substance/preparation and of the company/undertaking**Identification of the product:**

Product name: Rechargeable Li-ion Battery Module
Model: LXF3.2-20

Product name: Rechargeable Li-ion Battery System
Model: LX F6.4-H-20
LX F9.6-H-20
LX F12.8-H-20
LX F16.0-H-20
LX F19.2-H-20
LX F22.4-H-20
LX F25.6-H-20
LX F28.8-H-20

Manufacturer/supplier identification

Company: GoodWe Technologies Co.,Ltd.
Contact for information: No.90 Zijin Rd., New District, Suzhou, 215011, China
Emergency telephone No.: +86-512-69582260

Australia Importer

Company Name: GoodWe Australia Pty Ltd
Address: 2/6 Enterprise Drive, Rowville, Victoria, 3178, Australia
Contact Person Name: Dean Williamson
Contact Person Number: 61 402 817 522
Contact Person E-mail : Dean.williamson@goodwe.com

Emergency Phone Number

Emergency Phone +86-512-69582201

2. Composition/information on ingredients

Component	CAS No.	EC No.	Concentration (weight percent, %)
Lithium iron phosphate	15365-14-7	476-700-9	38.86
Graphite	7782-42-5	231-955-3	18.2
Ethylene carbonate	96-49-1	202-510-0	6.86
Ethyl methyl carbonate	623-53-0	-	1.14
Diethyl carbonate	105-58-8	203-311-1	9.15
Propylene carbonate	108-32-7	203-572-1	2.86
Lithium hexafluorophosphate	21324-40-3	244-334-7	2.29
Polypropylene	9003-07-0	-	4.2

Copper	7440-50-8	231-159-6	1.68
Aluminum	7429-90-5	231-072-3	14.76

3. Hazards identification

Health Hazards (Acute and Chronic):

For the battery cell, chemical materials are stored in a hermetically sealed can, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials leakage.

However, if exposed to a fire, added mechanical shocks, decomposed, or added electric stress by misuse the cell case will be breached and hazardous materials may be released. Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted.

Carcinogenicity:

NTP: None IARC Monograph: None OSHA Regulated: None

Medical Conditions Generally Aggravated by Exposure:

An acute exposure will not generally aggravate any medical condition.

Human health effects:

Inhalation: The steam of the electrolyte has an anesthesia action and stimulates a respiratory tract.

Skin contact: The steam of the electrolyte stimulates a skin. The electrolyte skin contact causes a sore and the stimulation on the skin.

Eye contact: The steam of the electrolyte stimulates eyes. The electrolyte eye contact causes a sore and the stimulation on the eye. Inflammation of the eyes may occur.

Environmental effects:

Since a battery cell remains in the environment, do not throw out it into the environment.

Specific hazards:

If the electrolyte contacts with water, it may generate detrimental hydrogen fluoride.

Since the leaked electrolyte is inflammable liquid, do not bring close to fire.

4. First aid measures

After inhalation contact: Make the victim blow his/her nose, gargle. Seek medical attention if necessary.

After skin contact: Remove contaminated clothes and shoes immediately. Immediately wash extraneous matter or contact region with soap and plenty of water.

After eye contact: Do not rub eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention.

After ingestion contact: Make the victim vomit. Immediately seek medical attention.

5. Fire-fighting measures

Extinguishing Media: Plenty of water, CO2 gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.

Specific methods of fire-fighting: When the battery burns with other combustibles simultaneously, take fire extinguishing method which corresponds to the combustibles. Extinguish a fire from the windward as much as possible.

Flammable Limits: Not available

6. Accidental release measures

The preferred response is to leave the area and allow the batteries to cool and the vapors to dissipate. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

7. Handling and storage

Avoid mechanical or electrical abuse. Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8. Exposure controls/personal protection

Specific control parameter: Not necessary under conditions of normal use.

Personal protective equipment : Not necessary under conditions of normal use.

Respiratory protection (Specify Type): Not necessary under conditions of normal use.

Ventilation: Not necessary under conditions of normal use.

Protective Gloves: Not necessary under conditions of normal use.

Eye protection: Not necessary under conditions of normal use.

Other Protective(Clothing or Equipment):

9. Physical and chemical properties

Appearance

Physical state: Solid

Form: Cylindrical

Color: Metallic color

Odor: No odor

PH: N/A

Specific temperatures: Temperature ranges changes in physical state occur.

Flash point: N/A

Explosion properties: N/A

Density: N/A

Solubility: with indication of the solvent(s): Insoluble in water

10. Stability and reactivity

Stability: Stable



Conditions to Avoid: When cell is exposed to an external short-circuit, crushes, deformation, high temperature above 100 degree C, it will cause heat generation and ignition. Avoid direct sunlight and high humidity.

Hazardous Decomposition: or **By-products:** Acid or harmful gas is emitted during fire.

Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids.

Hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity:

Copper: 60-100mg sized coarse particulate causes a gastrointestinal disturbance with nausea and inflammation.
TDLo, hypodermic - Rabbit 375mg/kg

Organic electrolyte: LD50, oral - Rat 2,000mg/kg or more

Further toxicological information:

Aluminum: By the long-term inhalation of coarse particulate or fume, it is possible to cause lung damage (aluminum lungs).

Graphite: Long-term inhalation of high levels of graphite coarse particulate may cause lung disease or a tracheal disease.

12. Ecological information

Ecotoxic effects: No information is available.

Biodegradable : No information is available.

Mobility in soil : No information is available.

Bioconcentration or biological accumulation: No information is available.

Other harmful effects: Don't abandon the battery into environment, may cause water or soil pollution.

13. Disposal considerations

Waste Chemicals: Before disposal should refer to the relevant national and local laws and regulation.

Contaminated Packaging: Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.

Disposal Recommendations: Refer to Waste chemicals and Contaminated packaging.

14. Transport information

Lithium batteries are classified to Lithium ion batteries (including lithium ion polymer batteries) and Lithium metal batteries (including lithium alloy batteries).

Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "PI965-970 section II of IATA-DGR" or "special provision 188 of IMO-IMDG Code".

Air transportation, according to IATA-DGR 62nd Edition (Effective 1 January-31December 2021)

UN Number : UN 3480

Proper Shipping Name : LITHIUM ION BATTERIES

Hazard Class : Class 9

Packaging requirement : PACKING INSTRUCTION 965 of section IB

Sea transportation, according to IMO IMDG Code (Amend 39-18) UN Number : UN 3480

Proper Shipping Name : LITHIUM ION BATTERIES

Hazard Class : Not restricted

Special provision : sp188

Package instruction : Not-restricted goods

EmS No. : F-A, S-I

15. Regulatory information

Dangerous Goods Regulation (DGR)

Recommendations on the Transport of Dangerous Goods Model Regulations International Maritime

Dangerous Goods (IMDG)

Occupational Safety and Health Act (OSHA)

Toxic Substances Control Act (TSCA)

16. Other information

Make people:

Professional post: R&D Engineer

Name(sign): Dewei.kong

Make unit:

Name: R&D Department

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