



Uhome-5.8kWh/LV Battery

Safety data sheet (SDS)

1. Identification

Product Name: Uhome-LFP 5.8kWh/LV

Voltage: 48.0V

Company: AOBO ENVIRONMENTAL NEW ENERGY (WUXI) CO., LTD.

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Importer message

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2. Hazards Identification

Warning: Fire, explosion, and severe, burn hazard. Uhome-LFP 5.8kWh/LV battery has been designed to withstand temperatures and pressures encountered under routine use for the unit's specific applications.

Hazard class and label elements of the product according to GHS (the revised edition):

➤ GHS hazard class

This product meets the definition of an article. Under the globally harmonized system of classification and labeling of chemicals (GHS), 'Articles' as defined in the hazard communication standard (29 CFR 1910. 2010) of the Occupational Safety and Health Administration of the scope of the system. [Rev, 6 (2015) Part 1.3.2.1.1]

➤ GHS label Elements

Pictogram Not applicable

Signal word Not applicable

➤ Hazard statements

Not applicable

➤ Precaution statements

Prevention

Do not open or disassemble.

Do not expose to high temperature or open fire.



Do not mix with batteries if varying sizes, chemistries types.
Avoid using external impact battery.

Response

Not applicable

Storage

Store under roof in cool, dry, well-ventilated areas

Disposal

Dispose of contents/container in accordance with local/
regional/ international regulations.

3. Composition/ Information on Ingredients

Component	Concentration (weight present, %)	CAS No.	EC No.
Phosphoric acid, iron(2+) Lithium salt	Commercial secrets	15365-14-7	
Aluminum	Commercial secrets	7429-90-5	231-072-3
Graphite	Commercial secrets	7782-42-5	231-955-3
Copper	Commercial secrets	7440-50-8	231-159-6
Polyethylene phosphate(1-), hexafluoro-, Lithium	Commercial secrets	21324-40-3	244-334-7

4. First Aid Measures

➤ Description of first aid measures

General Immediate medical attention is required. Show this safety data sheet advice (SDS) to the doctor in attendance.

Eye contact Rinse thoroughly with plenty of water for least 15 minutes and consult a physician if feel uncomfortable.

Skin contact Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15minutes and consult a physician if feel uncomfortable.

Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Inhalation Move victim into free air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation. If victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.

Protection of First-Aiders Ensure that medical personnel are aware of the substance involved. Take precaution to protect themselves and prevent spread of contamination.

➤ Most important symptoms and effects, both acute and delayed

1 Substance accumulation, in the human body may occur and may cause some concern following repeated or long-time occupational exposure.

➤ Indication of any immediate medical attention and special treatment needed

- 1 Treat symptomatically.
- 2 Symptom may be delayed.

5. Fire Fighting Measures

➤ Extinguishing media

Suitable Dry chemical, carbon dioxide or alcohol-resistance form

Extinguishing media

Unsuitable media Do not use a solid water stream as it may scatter or spread fire extinguishing media

➤ Specific Hazards Arising from the Substance of Mixture

- 1 Containers may explode when heated
- 2 Fire exposed containers may vent contents through pressure relief valves.
- 3 May expansion or decompose explosively then heated or involved in fire.

➤ Advice for Firefighters

- 1 As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH proved or equivalent) and full protective gear.
- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accident Release Measure

➤ Personal Precautions, Protective Equipment and Emergency Procedures

- 1 Ensure adequate ventilation. Remove all source of ignition.
- 2 Evacuate personal to safe areas. Keep people away from and upwind of spill/leak.
- 3 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

➤ Environmental Precautions

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

➤ Methods and Materials for Containment and Cleaning up

- 1 Absorb spilled material in dry sand or insert absorbent. In case of large amount of spillage, contain a spill by bunding.
- 2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 3 Remove all source of ignition. Use spark-proof and explosion-proof equipment.

7. Handling and Storage

➤ Precautions for Handling

- 1 Handling is performed in a well ventilated place.
- 2 Well suitable protective equipment.
- 3 Avoid contact with skin and eyes.
- 4 Keep away from fire/ spark/ open flames/ hot surface.
- 5 Take precautionary measure against static discharge

➤ Precautions for Storage

- 1 Keep container tightly closed.



- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/ spark/ open flames/ heat surfaces.
- 4 Store away from incompatible material and foodstuff containers.

8. Exposure Controls/ Personal Protection

➤ Control Parameters

Occupational Exposure Limit Values

Component	Country/ Region	Limit Value-Eight Hours		Limit Value-short Term	
		ppm	mg/m ³	ppm	mg/m ³
Aluminum 7429-90-5	USA-OHSA	-	15	-	-
	South Korea	-	10	-	-
	Ireland	-	1	-	-
	Germany(DFG)	-	4	-	-
	Denmark	-	5	-	10
Copper 7440-50-8	Australia	-	10	-	-
	The Netherlands	-	0.1	-	-
	Poland	-	0.2	-	-
	Latvia	-	0.5	-	1
Graphite 7782-42-5	Germany(DFG)	-	0.01	-	0.02
	The Netherlands	-	0.1	-	-
	Poland	-	0.2	-	-
	Latvia	-	0.5	-	1
	Germany(DFG)	-	0.01	-	0.02

Biological Limit Values

No information available

Monitoring Methods

- 1 EN 14042 Workplace atmospheres. Guide for the application and use if procedure for the assessment of exposure to chemical and biological agent.
- 2 GBZ/T 160.1-GBZ/T 160.81-2004 Determination of toxic substances in workplace air (Series standard)

Engineering Controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

➤ Personal Protection Equipment

Eye protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH(US))
Hand protection	Wear protective gloves (such as butyl rubber), passing the test according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.
Respiratory protection	If exposure limits are exceeded or irritation or other symptoms are experienced, use a full-face respirator with multi-purpose



combination (US) or type AXBEK (EN 14387) respirator cartridges.

Skin and body protection Wear fire/ flame resistant/ retardant clothing and antistatic boots.

9. Physical and Chemical Properties

Appearance: Lithium ion batteries are installed in the equipment. Battery parameters: 48V 120Ah

Odor threshold: No information available

Melting Point/ Freezing Point (°C): No information available

Flash Point(°C) (Closed Cup) : not applicable

Flammability: No information applicable

Vapor pressure(MPa): Not applicable

Relative Density(Water=1): No information available

n-Octanol/Water Partition Coefficient: No information available

Decomposition Temperature(°C): No information available

Partical characteristics: No information available

Odor: No information available

pH: No information available

Initial Boiling Point and Biling Rng(°C): No information available

Evaporation Rate: No information available

Upper/ lower explosive limits[%(v/v)]: Upper limit: No information available; Lower limit: No information available

Relative Vapour Density(Air=1): No information available

Solubility: No information available

Auto-Ignition Temperature: No information available

Kinematic Viscosity(mm²/s): No information available

10. Stability and Reactivity

Reactivity Contact with incompatible substances can cause decomposition or other chemical reactions.

Chemical Stability Stable under proper operation and storage conditions.

Possible of Hazardous Reactions Ultrafine powder with self-ignite in the air at room temperature. Reacts severely with halogens, interhalogens or other strong oxidant, or causes a fire.

Conditions to Avoid Incompatible materials, heat, flame and spark.

Incompatible materials Oxidants, halogen, interhalogen and mercury. Halogen, interhalogen, strong oxidant, water and acids.

Hazardous Decomposition products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological Information

➤ **Acute Toxicity**

No information available

➤ **Skin Corrosion/ Irritation**

No information available

➤ **Serious Eye Damage/ Irritation**

No information available

➤ **Skin sensitization**

No information available

➤ **Respiratory sensitization**

No information available

➤ **Germ cell Mutagenicity**

No information available

➤ **Carcinogenicity**

ID	CAS No.	Component	IARC	NTP
1		Phosphoric acid, iron(2+) Lithium salt(1:1:1)	Not listed	Not listed
2	7429-90-5	Aluminium	Not listed	Not listed
3	-	Graphite	Not listed	Not listed
4	7440-50-8	Copper	Not listed	Not listed
5	-	Polyethylene	Not listed	Not listed
6	-	Phosphate(1-), hexafluoro-, Lithium	Not listed	Not listed

➤ **Reproductive toxicity**

No information available

➤ **Reproductive toxicity(Additional)**

No information available

➤ **STOT-Single Exposure**

No information available

➤ **STOT-Repeated Exposure**

No information available

➤ **Aspiration Hazard**

No information available

12. Ecological Information

➤ **Acute Aquatic Toxicity**

Component	CAS No.	Fish	Crustaceans	Algae
Copper	7440-50-8	LC ₅₀ :0.665mg/L (96h)(Fish)	EC ₅₀ :0.02mg/L(48h)	ErC ₅₀ :7.9mg/L (96h)
Aluminum	7429-90-5	LC ₅₀ :1.55mg/L (96h)(Fish)	No information available	No information available

➤ **Chronic Aquatic Toxicity**

No information available

➤ **Others**

Persistence and Degradability	No information available
Bioaccumulative potential	No information available
Mobility in Soil	No information available

Result of PBT and vPvB Assessment

Aluminum does not meet the criteria for PBT and vPvB according to Regulation (EC) No. 1907/2006, annex XIII.

Copper does not meet the criteria for PBT and vPvB according to regulation (EC) No. 1907/2006, annex XIII.

13. Disposal Considerations

Waste Chemicals	Before disposal should refer to the relevant and local laws and regulation. Recommend the use of incineration disposal.
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 section 13.1 and 13.2

14. Transport Information

Transporting Label



Marine pollutant	None
UN Number	3481
UN Proper Shipping Name	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (including lithium ion polymer batteries)
Transport Hazard Class	9
Transport Subsidiary Hazard Class	None
Packing Group	Packing should conform to the packing group II performance level

15. Regulatory information

International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCs	KECI	AICS	ENCS
Phosphoric acid, iron(2+) lithium salt(1:1:1)	×	√	×	×	×	×	√	×	×
Aluminum	√	√	√	√	√	√	√	√	×
Graphite	√	√	√	√	√	√	√	√	×
Copper	√	√	√	√	√	√	√	√	×
Polyethylene	×	√	√	√	√	√	√	√	√
Phosphate(1-), hex afluoro-, Lithium	√	√	×	√	×	√	√	√	×



[EINECS] European Inventory of Existing Commercial Chemical Substances

[TSCA] Unit State of Toxic Substances Control Act Inventory

[DSL] Canadian Domestic Substances List

[IECSC] China Inventory of Existing Chemical Substances

[NZIoC] New Zealand Inventory of Chemicals

[PICCs] Philippines Inventory of Chemicals and Chemical Substances

[KECI] Existing and Evaluated Chemical Substances

[AICS] Australia Inventory of Chemical Substances

[ENCS] Existing And New Chemical Substances

16. Additional Information

Creation date	2019/12/22
Revision date	2020/04/10
Reason for Revision	Add importer information、Regulatory Information and Additional Information

Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 7th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purpose. We do not assume responsibility for loss, damage or expense arising out of out of or in any way connected with the handing, storage, use or disposal of the product.