



Safety Data Sheet

according to Regulation (EC) No 1907/2006

RP-Technik GmbH

LFP3245.WRLED

Revision date: 22.09.2026

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

LFP3245.WRLED

Product type

Rechargeable lithium iron phosphate battery (LiFePO₄); 3.2 V; 4500 mAh (4.5 +/- 0.3 Ah); 14.4 Wh

1.2. Relevant identified uses and uses advised against

Battery for emergency and safety lighting. Use only with compatible equipment and the specified charging system. Do not open or misuse the battery.

1.3. Details of the supplier of the safety data sheet

RP-Technik GmbH
Hermann-Staudinger-Str. 10-16, D-63110 Rodgau, Germany
Telephone: +49 (6106) 660 28 - 0; Fax: +49 (6106) 660 28 - 40
E-mail: info@rp-group.com
Contact: Francisco Goerke; product@rp-group.com

1.4. Emergency telephone number

For urgent medical assistance, contact the local emergency services or poison information centre. RP product information: +49 (6106) 660 28 - 0; 24-hour emergency availability is not confirmed.

SECTION 2: Hazards identification

2.1. Classification and hazard information

The intact sealed battery is an article. The following chemical hazards concern exposed internal contents rather than normal contact with the sealed battery.

The intact sealed battery is an article; normal handling does not involve exposure to its chemical contents. Mechanical damage or failure of the enclosure or safety circuitry can expose hazardous contents and stored electrical energy. High temperatures may lead to thermal runaway and fire. Released materials may irritate eyes, skin and the respiratory tract and may be harmful if swallowed.

2.2. Label elements

No chemical hazard label is assigned here to the intact battery. Observe battery product markings and the transport requirements in Section 14.

2.3. Other hazards

Stored electrical energy can cause short-circuit heating and burns. Do not open or damage cells. PBT/vPvB and endocrine-disrupting property assessments: no data available.



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SECTION 3: Composition/information on ingredients

3.1 / 3.2. Chemical characterisation

Sealed article containing the following materials. Internal contents are not accessible during normal use.

CAS No.	Component	Content, %
15365-14-7	Lithium iron phosphate	26 - 38
24937-79-9	Polyvinylidene fluoride (PVDF)	0.8 - 1.0
9000-11-7	Sodium carboxymethyl cellulose	0.2 - 0.3
9003-55-8	Styrene-butadiene rubber	0.4 - 0.5
Not established	Carbon / graphitic material	17 - 19
9003-07-0	Polypropylene	2 - 3
21324-40-3	Lithium hexafluorophosphate	1.2 - 1.5
616-38-6	Dimethyl carbonate	2.5 - 3.0
623-53-0	Ethyl methyl carbonate	4.0 - 6.0
96-49-1	Ethylene carbonate	2.0 - 2.5
7440-50-8	Copper	7.0 - 9.0
7429-90-5	Aluminium	3.0 - 4.0
7439-89-6	Iron	20 - 23
7439-92-1	Lead	Not detected
7440-43-9	Cadmium	Not detected
7439-97-6	Mercury	Not detected

Percentages are by mass. Detection limits for the entries reported as not detected are not available. The exact CAS identity of the carbon / graphitic fraction is not established.

Specific concentration limits, M-factors and product ATE values: no data available.

SECTION 4: First aid measures

4.1. Description of first aid measures

The following measures apply to exposure to released battery contents. Seek medical advice if symptoms occur or exposure is suspected.

After inhalation

Remove from exposure and move immediately to fresh air. Obtain medical attention. Oxygen, if needed, must be administered by trained personnel.

After skin contact

If leaked liquid contacts skin, do not rub. Rinse with water and obtain medical attention immediately.

After eye contact

If leaked liquid contacts the eyes, do not rub. Rinse with water and obtain medical attention immediately.

After ingestion

Seek medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects

Irritation or burns to eyes and skin; respiratory irritation following exposure to released contents. Ingestion can be harmful.

4.3. Immediate medical attention and special treatment

Medical assessment is required after significant exposure or swallowing. No specific antidote information is available.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Use extinguishing media suitable for the surrounding fire.

5.2. Special hazards

Hazardous combustion gases or vapours may develop. Batteries may expand or decompose explosively when heated or involved in fire.

5.3. Advice for firefighters

Use self-contained breathing apparatus and suitable protective clothing. Fight from a safe distance and protected position. Move batteries away only if safe. Prevent contaminated firefighting water from entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions and emergency procedures

Avoid contact with leaked material and inhalation of vapours or dust. Keep unprotected persons away. Refer to Section 8 for protective equipment.

6.2. Environmental precautions

Prevent release into soil, drains, sewers and waterways.

6.3. Containment and cleaning up

Stop further leakage if safe. Isolate the contaminated area, restrict access and provide ventilation. Prevent release to the environment. Collect spilled material with a clean shovel into a clean, dry, loosely closed container and move it away from the leak. Use appropriate protective equipment for the exposure.

6.4. Reference to other sections

See Sections 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in a well-ventilated place. Avoid contact with released materials, particularly the eyes. Keep away from heat, sparks, open flames and hot surfaces. Avoid damage and short circuit.

7.2. Conditions for safe storage

Store in a dry, cool and well-ventilated place, with containers closed. Keep away from heat, sparks, open flames, hot surfaces, incompatible materials and food.

7.3. Specific end use

Emergency and safety lighting battery. Follow the product operating instructions. Numerical operating and storage temperature limits are not established in this document.



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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No battery-specific occupational exposure limit is established. Exposure to internal components is not expected with intact batteries. If contents are released, assess applicable workplace limits for the substances listed in Section 3.

8.2. Exposure controls

Special protective clothing or respiratory protection is not normally required for intact batteries. Where exposure to released contents is possible, provide adequate ventilation, eye washing and emergency shower facilities and select appropriate eye, skin and respiratory protection for the assessed risk.

Engineering and hygiene measures

Use appropriate ventilation for handling damaged batteries. Avoid eating, drinking or smoking during cleanup; wash hands after handling released material. Remove and clean contaminated clothing before reuse.

Environmental exposure controls

Prevent release of battery contents and contaminated cleanup water to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Solid cylindrical battery, white housing. Odour: no data available.

Water solubility

No data available.

Other physical and chemical parameters

Melting/freezing point, boiling point, flash point, flammability limits, auto-ignition and decomposition temperatures, pH, viscosity, vapour pressure, density, partition coefficient and particle characteristics: no product-specific data available.

9.2. Other information

Electrical rating: 3.2 V; 4500 mAh (4.5 +/- 0.3 Ah); 14.4 Wh

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction expected during normal handling of an intact battery. Detailed reactivity data are not available.

10.2. Chemical stability

Stable under normal recommended conditions of storage and use.

10.3. Possibility of hazardous reactions

Heat, abuse or damage may cause rupture, leakage or ignition.

10.4. Conditions to avoid

Incompatible materials, heat, flame and sparks.

10.5. Incompatible materials

Strong oxidants and acids; halogens, interhalogens, halogen oxides, nitric acid, nitrous oxide, nitrates, nitrites, halogen oxyacid salts, chromates, permanganates, inorganic peroxides, metal oxides, metal acetylides and peroxyformic acid. Avoid water contact with exposed internal contents.

10.6. Hazardous decomposition products

Hazardous combustion gases or vapours may develop. Batteries may expand or decompose explosively when heated or involved in fire.



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SECTION 11: Toxicological information

11.1. Information on hazard classes

No effects are expected from intact batteries during normal use. Released materials can cause skin, eye and respiratory irritation. Swallowing released contents may cause poisoning. Quantitative product-specific toxicity data are not available.

Additional toxicological endpoints

Product-specific numerical LD50/LC50 values, ATE values, reproductive toxicity and aspiration-hazard data are not available. Lack of data is not evidence of absence of a hazard.

11.2. Information on other hazards

Endocrine-disrupting properties and other product-specific toxicological effects: no data available.

SECTION 12: Ecological information

12.1. Toxicity

No product-specific quantitative ecotoxicity data available. Avoid release of internal materials to the environment.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No assessment data available.

12.6. Endocrine-disrupting properties

No data available.

12.7. Other adverse effects

Intact sealed batteries do not release their contents during normal use. Damaged batteries and residues require controlled collection and disposal.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Cover the terminals of discarded batteries with insulating material to reduce short-circuit hazards. Dispose of batteries through appropriate collection / recycling routes in accordance with local regulations.

Contaminated materials

Collect contaminated absorbent and packaging separately for appropriate treatment. Do not discharge electrolyte into drains or the environment.



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SECTION 14: Transport information

14.1 / 14.2. UN number and proper shipping name

Battery shipped separately: UN 3480 - LITHIUM ION BATTERIES.
Installed in a luminaire: UN 3481 - LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT.
Packed with equipment: UN 3481 - LITHIUM ION BATTERIES PACKED WITH EQUIPMENT.

14.3. Transport hazard class

Class 9. Applicable marking and labelling depend on the transport mode and permitted exceptions.

14.4. Packing group

Not assigned.

14.5. Environmental hazards

Marine pollutant: not identified as such in the available transport information.

14.6. Special precautions for the user

Prevent short circuit and damage; secure batteries against movement. Apply the current ADR/RID, IMDG and ICAO/IATA provisions for the actual shipment. Air packing instructions: PI 965 (separate batteries), PI 966 (packed with equipment), PI 967 (contained in equipment). State-of-charge limits and passenger/cargo restrictions depend on the applicable instruction. Small-battery exceptions are conditional, not automatic. Damaged or defective batteries require separate assessment. The applicable UN 38.3 test summary must be available; this SDS is not a transport test certificate.

14.7. Maritime transport in bulk according to IMO instruments

Not intended for transport in bulk.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations

This document provides safety information for a battery article in a 16-section SDS format. REACH (EC) No 1907/2006 and CLP (EC) No 1272/2008 apply according to their scope. Battery-specific product, collection and waste obligations and applicable dangerous-goods rules must be observed. This document does not establish a blanket exemption from REACH or certify regulatory compliance.

15.2. Chemical safety assessment

No product-specific chemical safety assessment is available.

SECTION 16: Other information

Document revision

Revision 1.0; 22 September 2026. RP-Technik product identification, battery-specific safety information and transport configurations compiled in the RP-Technik format.

Abbreviations

CAS: Chemical Abstracts Service; CLP: Classification, Labelling and Packaging; REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals; ATE: acute toxicity estimate; PBT/vPvB: persistent, bioaccumulative and toxic / very persistent and very bioaccumulative; ADR/RID: road/rail dangerous-goods rules; IMDG: maritime dangerous-goods code; ICAO/IATA: air transport organisations; Wh: watt-hour.

Further information

The information describes safe handling of the identified battery and does not guarantee specific product properties. The user must assess the actual operating, storage and transport conditions. Values that are unavailable have not been replaced with assumed values.