

Safety Information for Festool Li-Ion Batteries

(Hereafter battery or battery pack)

1. Designation of the Product and Company

1.1. Commercial Name

The following type designations apply for the individual batteries which can, however, also be a component of the equipment. The specific technical data can be read on the identification plate on the battery.

In the place of the xxx, the battery designations and the capacity information are usually shown.

BP 18 Li xxx

BPC 15 xxx

BPC 12 Li xxx

BP-XS xxx

1.2. Information Regarding the Manufacturer/Supplier

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2. Possible Hazards

If you use and handle the batteries in accordance with the manufacturer's guidelines, they are safe and not harmful to health.

- Misuse or circumstances which lead to incorrect operation can result in leaks and the battery's contents coming out and product disintegration.
- It can be generally assumed that contact with leaked battery components leads to a health and environmental hazard. Therefore, contact with conspicuous batteries (leakage of contents, deformations, discoloration, dents, and the like) requires sufficient body and breathing protection.
- Only use the charging device for the respective battery type.
- Do not short-circuit batteries.
- Do not mechanically damage batteries (drilling, piercing, deforming, disassembling, etc.).
- Keep batteries away from small children.

- Always store batteries in a cool, dry place.
- Do not immerse batteries in fluids.
- Do not heat batteries above the permitted temperature or burn them.
- Protect batteries from direct sunlight, heat and open fires – never throw a battery into a fire. Batteries can react severely in combination with fire. Battery components can hereby be emitted with considerable energy.

2.1. Handling and Operational Safety

Batteries are to be handled according to the manufacturer's information in all circumstances. This applies in particular for the adherence to the limits for mechanical and thermal stress (temperature of the battery cells).

Discharge: -10 °C to +80 °C

Charge: -5 °C to +55 °C

Festool batteries and Festool charging devices are marketed together as product packages which are compatible with one another. The batteries and charging devices may not be modified or manipulated under any circumstances.

Only use Festool batteries with Festool equipment and only charge them with the indicated charging device. Do not use or charge defective, damaged or deformed batteries.

Batteries can also continue to represent a source of danger in a supposedly discharged status and they can deliver a high short circuit current.

3. Composition, Details Regarding Components

- Cathodes:**
- Li-, Ni-, Al-, and Co/LiMn oxide (active material)
 - Polyvinylidene fluoride (binder)
 - Graphite (conducting material)
- Anodes:**
- Graphite (active material)
 - Styrene-butadiene rubber / carboxymethyl cellulose sodium salt (binder)
- Electrolytes:**
- Organic solvent (non-water based fluid)
 - Lithium salt

The product contains neither metal lithium nor lithium alloys.

4. First Aid Measures

4.1. Leaked Substances Coming into Contact with Skin or Eyes (electrolyte)

If such contact occurs, the affected areas are to be rinsed thoroughly with water for at least 15 minutes. In the case of contact with eyes, thoroughly rinse them and always additionally contact a doctor.

4.2. Burns

Any burns that are caused are to be treated accordingly. It is also strongly recommended to consult a doctor.

4.3. Airways

In the event of intense smoke formation or gas release immediately leave the room. For larger amounts or irritation to the airways consult a doctor. If possible, ensure sufficient ventilation. Rinse mouth and mouth area with water. Immediately contact a doctor.

5. Fire-Fighting Measures

Battery fires can generally be extinguished with lots of water. No special extinguisher is required. Battery environmental fires are to be fought with conventional extinguishers. Battery fires cannot be considered separately from environmental fires.

The cooling effect of water prevents the fire from reaching battery cells that have not yet reached the critical temperature for inflammation ("thermal runaway").

Reduce the fire load by singulating larger quantities and transport them away from the hazardous area.

6. Measures in the Event of Unintended Leakages

Electrolytes can leak if the battery housing is damaged. Batteries are to be sealed in an air-tight plastic bag filled with dry sand, chalk powder (CaCO_3) or vermiculite. Electrolyte traces can be mopped up with dry kitchen towel. Avoid touching the battery by wearing protective gloves. Clean with plenty of clean water.

Use appropriate PPE (protective gloves, protective clothing, face protector, breathing protector).

7. Handling and Storage

The warning notes on batteries and in user instructions should always be carefully observed. Only use the recommended battery types.

Batteries should preferably be stored at room temperature in dry conditions. Festool batteries should only be stored in the permitted temperature range, see Chapter 2.1 under "Handling and Operational Safety".

You should discuss the storage of large amounts of batteries with local authorities and insurance companies.

8. Limiting and Monitoring Exposure / PPE

Batteries are products (goods) from which no materials are released under normal and reasonably foreseeable usage conditions.

9. Physical and Chemical Characteristics

Compact battery pack with plastic cover.

10. Toxicological Information

No damage is known to health with proper handling and adherence to the generally applicable hygiene guidelines.

11. Environmental Information

No negative impact can be expected to the environment with proper use.

12. Notes on Disposal

The symbol of the crossed out waste bin is a reminder that batteries may not be disposed of in household refuse in the European Economic Area (EEA) but must rather be collected separately.

Please dispose of used batteries free of charge with Festool specialist retailers or an appropriate public collection point.

Disposal at a public collection point is not recommended for Festool Li-Ion batteries as even when they are free of charge the construction means external contact with the battery still has a charge. Festool Li-Ion batteries should be taken back to Festool specialist retailers for free disposal. Please note the guidelines applicable to your region for environmentally-friendly disposal.

In order to prevent short circuits and the accompanying warming, batteries may never be stored or transported unprotected with loose fillings. The battery must be returned protected against short circuits. Suitable measures against short circuits include:

- Inserting batteries in the original packing or in a plastic bag
- Taping the poles
- Embedding in dry sand

13. Information Regarding Transport

The commercial transport of batteries is subject to the hazardous goods law. The transport preparation and transport are to be carried out exclusively by trained personnel or the process must be accompanied by an appropriate expert or qualified company.

13.1. Transport Guidelines

Batteries are subject to the following hazardous goods guidelines and exceptions from these – in the respectively valid version.

Class: 9 **Hazard Label:** 9A

	German Designation	English Designation
UN 3480	Lithium-Ionen-Batterien	Lithium-ion batteries
UN 3481	Lithium-Ionen-Batterien in Ausrüstungen	Lithium-ion batteries contained in equipment
UN 3481	Lithium-Ionen-Batterie, mit Ausrüstungen verpackt	Lithium-ion batteries packed with equipment

ADR, RID:

- Special regulations: SP188, SP230, SP376, SP377, SP636b
- Packing instructions: P903, P908, P909
- Transport category: 2
- Tunnel category: E

IMDG Code:

- Special regulations: SP188, SP230, SP376, SP377, SP636b
- Packing instructions: P903, P908, P909
- EmS: F-A, S-I
- Stowage category: A
- Stowage code: SW19

ICAO, IATA-DGR:

- Special regulations: A88, A99, A154, A164, A183
- Packing instructions: PI965, PI966, PI967

13.2. Test Regulations

Festool batteries have passed tests and criteria according to the UN manual, Part III, Section 38.3 and are approved for transport.

Defective or damaged batteries are subject to intensified regulations which can lead to a complete transport ban. The transport ban applies for air transport (ICAO T.I., IATA DGR – Special Provisions A 154). Contact the Festool distribution company before transporting defective or damaged batteries.

However, refer to the packing instructions (P903a and P903b / ADR) for the transport of sold – but undamaged – batteries.

Waste batteries and batteries sent for recycling or disposal are forbidden in air traffic (IATA Special Provision A183). Exceptions are to be approved by the relevant national authorities and the state of the air craft company.

14. Legal Guidelines

Transport guidelines according to IATA, ADR, IMDG, RID

15. Notes Regarding the Battery

If there are indications of smoke, heat, smell, noise formation or if deformation is recognizable – separate the battery from the device and immediately position yourself at a safe distance from the battery. Keep children and animals away from the area. Keep the battery away from flammable materials.

16. Other Information

These notes provide assistance for adhering to legal regulations but do not replace these. They are based on the current state of awareness.

This information was compiled to the best of our knowledge.

They do not represent an assurance of characteristics. Applicable laws and guidelines are to be observed by operators and users at their own responsibility.

This document is based on the "Safety information for Lithium-Ion Batteries for Cordless Power Tools and Electric Garden Equipment" of the EPTA (European Power Tool Association).

This information has been compiled with the advice of the Umweltkanzlei Dr. Rhein Beratungs- und Prüfgesellschaft mbH, Sarstedt – www.umweltkanzlei.de

This leaflet aims to compile legal guidelines in a more succinct and understandable form. Due to the complexity and the possible variations on location, this leaflet cannot be complete. In case of doubt please seek clarification from Festool, the authorities or another competent expert.