

Important Safety requirements for lithium polymer cells – absolutely necessary to pay attention to before use!



Generally: Don't put the lithium polymer cells in, before you have completely read and understood all safety requirements. This lithium polymer instruction leaflet contains important safety notices to avoid potential danger, causing injury to persons or damage of equipment. We will not be responsible and will not warrant for any damage, caused by improper use, storage and/or charge of the accumulators, or of use, storage and/or charge of the accumulators not following the safety requirements. The claim of guarantee automatically ends with manipulation by the owner. This includes for example the removal of elements (wires, tube, board), the self-confection of single cells to form a pack, soldering of wires and boards. We generally recommend to let only the manufacturer compile special packs, for this will guarantee effective and high quality work according to the safety requirements.



***For Self-compiling is generally valid:** Pay attention to compile only cells of the same charge, of equal voltage, capa-city and internal resistance. Otherwise imbalance will occur, which definitely causes damage of the cells or the pack, resulting from low voltage or overvoltage.

***Storage:** Never throw lithium polymer cell into the water and keep them away from damp. Do not store them next to fire, at warm and/or hot places, under direct sunlight or next to flammable materials. Cells getting hotter than 60° Cel-cius can destruct themselves or catch fire. Therefore always store lithium polymer cells at a fireproof area. It's absolute necessary to keep them away from children.

***Avoid short-circuit:** The leads of the lithium accumulator/accumulator pack must not , intentionally or by accident, have contact to any metallic materials, for this will normally cause a short-circuit! During a short circuit an extremely high current will occur within milliseconds, which will lead to overheat of the cell, leakage of electrolyte and this may result in explosion or fire. At any rate avoid swallowing of electrolyte or contact with eyes, skin or mucous membrane.

***Damage of the aluminium-alloy case:** Lithium polymer cells must by no means be opened, separated or put together or soldered with other packs. Solders may neither be bent, ripped off nor be thrown to the ground. This may result in a short-circuit and an explosion with fire.

***Charge:** Charge lithium polymer cells exclusively with proper chargers or the according charging programmes. Max. charging current must not be more than 1C (single capacity), this means with an 880 cell max. 880 mA, with a 1100 cell max. 1100 mA, with a 1800 cell max. 1800 mA, and so on. By any rate the charging voltage must not be higher than 4,2 V/cell! If the cell is getting too hot (>50°C) or if the voltage of the cell is higher than 4,2 V during the charging process, stop the charging process immediately! By no means use standard chargers for Ni-Cd or Ni-Mh! This also may lead to leakage of electrolyte and explosion.

Lithium polymer cells may only be charged and stored on fireproof, inflammable surfaces or in appropriate containers. We advice against charging in closed rooms. Also avoid unattended charging! Please always enclose the proper safety guard to your order!

***Discharge:** It's absolute necessary to keep to the given discharging currents. The impulse-discharge current is in a sector of milliseconds and may by no means used for constant current applications. The voltage of any cell must not be lower than 2,7 V, because in this case the cell will be irreparably damaged. At any case you have to cut the discharging before to avoid explosion.



***WARNING:** Because of the enormous density of energy damaged lithium polymer cells can catch fire or explode. This may result from extreme overcharging, an accident or mechanical damage ect. Therefore it is extremely important to observe the charging process. After an accident you should check the pack most careful. The pack can for example be damaged by an accident but get hot not until half an hour. In case of an accident keep the pack under observation. If you use a damaged accumulator in an electronic gadget, it can be damaged.

***Case of fire:** If the lithium polymer cells catch fire, you must by no means fight the fire with water. This would only favour the fire and make it worse. Please ask the local fire department for proper material for firefighting. This should be within reach during the charging process.



***Disposal:** Accumulator contain poisonous substances. Don't throw used lithium polymer cells in the normal domestic waste, but dispose it according to the law. To avoid inadvertent short-circuit, wrap the accumulator pack with insulating material.

Lithium cells may only be disposed at battery collecting securities deposit, trade and deposits under public law. Cells which are not completely discharged have to be protected against short-circuits by insulating material at the leads.

