

CARE AND HANDLING PRECAUTIONS FOR LITHIUM BATTERIES: TL, TLL, TLH AND SL

Tadiran Lithium Batteries are power sources with high energy content. They are designed to represent the highest possible degree of safety. In addition, the following Handling and Safety Instructions should be followed. Observe the warning notice given on each battery.

1. Storage, Packing

Warning! Risk of Short-Circuit! Use only supplier's original packaging. The uppermost layer of each box shall be a suitable cover or a tray. The uppermost layer shall be secured against moving by sufficient suitable padding material. Do not store loosely or like bulk goods. Do not lay on or close to bare metal. Avoid contact with the terminals (short circuit). Batteries stored preferably in cool and dry places.

2. Short Circuit

Tadiran Lithium Batteries are safe from short circuit either by intrinsic limitation or by built-in fuses. Short circuits should, however, be avoided (loss of capacity).

3. Single Cells

Observe correct polarity. Load currents should not exceed the maximum values given in the Product Data Catalogue. Avoid reversal under load or charging from external power supply. Do not assemble cells into batteries without consulting Tadiran Batteries.

4. Batteries and End Voltage

Batteries of more than three cells in series will usually be protected against reversal by a diode in parallel with each cell. Multi-cell batteries are equipped with fuses or current limiters. Under no circumstances must fuses be bridged or replaced with fuses of higher rating. Load currents should not exceed the maximum values. Refer to our Technical Brochure or respective Technical Notice for additional advice.

Design and assembly of batteries are performed by Tadiran Batteries according to custom specifications. Tadiran recommends stopping discharge at 2V per series cells, which in some case can prevent overdischarge of cells.

5. Do Not Recharge

The cells and the batteries are not rechargeable. Therefore charge current should be avoided. In cases where unintentional charging is possible, diodes and resistors are to be installed (two protecting elements in case that one fails). Please refer to our Product Data Catalogue or Technical Brochure for charge current limit. Charging current in the order of usual reverse currents of semiconductor devices is -permitted.

6. Other Abuses

If mistreated there is possibility of fire, explosion, and severe burn hazard. Batteries must not, heated above 100°C (TLH series above 125°C) or disposed of in fire. In addition, the contents should not be exposed to water. Do not open, puncture or squeeze batteries. Do not weld or solder to the battery's body. Tadiran Batteries offer all kinds of solder terminals.

7. Fire Protection

Fire extinguishers for metal fire (class D) are preferred. Do not attempt to extinguish fires with small amounts of water, wet sand, or carbon dioxide extinguishers. In spite of the reaction between lithium and water, sprinkler systems are admissible which in case of a fire can provide copious amounts of water for cooling and protection of other areas endangered by fire. Do not use extinguishers with dry powder or Halon because they show little effectiveness and can attribute to the formation of irritant gases. Please refer to the MSDS on fire fighting.

8. Disposal

Storage and transport of batteries for disposal require protection from short circuit. The best practice is to use the original packaging. The disposal of cells and batteries is subject to country and state specific laws and regulations.

9. Transportation

A separate notice is available on Transport Regulations.

For further Information:

Tadiran Batteries LTD, P.O. Box 1, Kiryat Ekron, Israel 76950

Telephone: 972-8-9444503, Fax: 972-8-9413079, Emergency Call: USA: 1-800-424-9300, INT'L: 1-703-527-3887.

CARE AND HANDLING PRECAUTIONS FOR LITHIUM BATTERIES: HLC, TLP (PULSES PLUS), TLM AND TLI

Tadiran Lithium Batteries are power sources with high energy and **high current** content. They are designed to represent the highest possible degree of safety. In Addition, the following Handling and Safety Instructions should be followed. Observe the warning notice given on each battery.

1. Storage, Packing

Warning! Risk of Short-Circuit! Use only supplier's original packaging. The uppermost layer of each box shall be a suitable cover or a tray. The uppermost layer shall be secured against moving by sufficient suitable padding material. Do not store loosely or like bulk goods. Do not lay on or close to bare metal. Avoid contact with the terminals (short circuit). Batteries stored preferably in cool and dry places.

2. Short Circuit

Tadiran Lithium Batteries are safe from short circuit either by intrinsic limitation or by built-in fuses. Short circuits should, however, be avoided (loss of capacity).

3. Single Cells

Observe correct polarity. Load currents should not exceed the maximum values given in the Product Data Catalogue. Avoid reversal under load or charging from external power supply. Do not assemble cells into batteries without consulting Tadiran Batteries.

4. Batteries and End Voltage

Batteries of more than two cells in series will usually be protected against reversal by a diode in parallel with each cell. Multi-cell batteries are equipped with fuses or current limiters. Under no circumstances must fuses be bridged or replaced with fuses of higher rating. Load currents should not exceed the maximum values. Refer to our Technical Brochure or respective Technical Notice for additional advice.

Design and assembly of batteries are performed by Tadiran Batteries according to custom specifications.

Tadiran recommends stopping discharge at 2V per series cells, which in some cases can prevent over discharge of cells.

5. Do Not Recharge

The cells and the batteries are not rechargeable (not applicable for TLI batteries). Therefore charge currents should be avoided. In cases where unintentional charging is possible, diodes and resistors are to be installed. Please refer to our Product Data Catalogue or Technical Brochure for charge current limits.

6. Other Abuses

If mistreated there is possibility of fire, explosion, and severe burn hazard. Batteries must not be heated above 100°C or disposed of in fire. In addition, the contents should not be exposed to water. Do not open, puncture or squeeze batteries. Do not weld or solder to the battery's body. Tadiran Batteries offer all kinds of solder terminals.

7. Fire Protection

Fire extinguishers for metal fire (class D) are preferred. Do not attempt to extinguish fires with small amounts of water, wet sand, or carbon dioxide extinguishers. In spite of the reaction between lithium and water, sprinkler systems are admissible which in case of a fire can provide copious amounts of water for cooling and protection of other areas endangered by fire. Do not use extinguishers with dry powder or Halon because they show little effectiveness and can attribute to the formation of irritant gases. Please refer to the MSDS on fire fighting.

8. Disposal

Storage and transport of batteries for disposal require protection from short circuit. The best practice is to use the original packaging. The disposal of cells and batteries is subject to country and state specific laws and regulations.

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