

Nickel-cadmium

Used in

Two-way radios, power tools, medical equipment and many other portable devices.

Used where long life, high discharge rate and economical price are important. Of the different battery types, it has the lowest cost per cycle but the most demanding maintenance require-



Charging

Try to use up all the energy before re-charging.

Do not leave the battery in the charger for more than a day. This will reduce the likelihood of battery memory occurring.

Avoid getting the battery too hot during charging.

Charge methods: Constant current, followed by trickle charge when full. Fast charge is preferred over slow charge.

Slow charge = 16hrs

Rapid charge = 3hrs

Discharging

As one of the most durable chemistries, a full cycle does not harm NiCd batteries. Do run the battery fully down once per month.

Maintenance & Service Needs ¹

Discharge to 1V/cell [known as exercising] every 1 to 2 months to prevent memory. Running the battery down in the equipment may do this also.

Do not discharge battery before each recharge.

Exercise and recondition battery every 2 to 3 months to prolong battery life.

Storage ²

It is best stored at 40% charge in a cool and dry location.

If stored for more than 6 months, prime the battery before use.

Disposal ³

Do not dispose. Contains toxic metals. Must be recycled.

1. Tas Battery Clinic can provide you with all your maintenance and servicing requirements. This includes keeping records for the services your battery has completed. Our battery analysis will ensure your battery operates predictably and at optimum performance levels.
2. Tas Battery Clinic can prepare your battery for long term storage and also prepare it for use after a long storage period [6months or more]. We can also use the same program to prepare a new battery for use.
3. Tas Battery Clinic will ensure that your used battery is going to be recycled. Should you require, we can supply a replacement battery.

Depending on your needs, Tas Battery Clinic can test, analyse and re-condition your batteries with

If you have any questions or wish to discuss how you can get the most from your batteries, you can send us an email or call and we will be happy to assist.

e: tasbatteryclinic@bigpond.com

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HEALTHY BATTERIES LIVE LONGER



A Guide on How to Get the Most From Your Batteries



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Nickel-metal-hydride [NiMH]

Used In

Similar applications as NiCd including mobile phones, laptop computers, power tools and many other portable devices.

Used where higher energy density than NiCd is needed at the expense of a shorter life.

Charging

Run the battery fully down once every 3 months. Over-cycling [repeated charging and discharging] is not advised.

Do not leave the battery in the charger for more than a day. This will reduce the likelihood of memory problems.

Charge methods: Constant current followed by trickle charge when full. Slow charge not recommended. Battery will get warm towards full charge. Avoid getting the battery too hot during charging.

Rapid charge = 3hrs

Discharging

Avoid too many full cycles because of wear. Use to 80% depth of discharge.

Maintenance & Service Needs ¹

Discharge/exercise battery to 1V/cell every 3 months to prevent memory. Running the battery down in the equipment may do this also.

Do not discharge battery before each recharge.

Exercise and recondition battery every 3 months to prolong bat-

Storage ²

Store at 40% charge in a cool and dry place.

If stored for more than 6 months, prime the battery before

Disposal ³

Do not dispose.
Should be recycled.

Lithium-ion & Lithium-polymer

Used In

Mobile phones, laptops, video cameras, newer power tools.

Used where high energy density and light weight is of prime importance. Lithium batteries are more expensive than other battery chemistries and strict safety guidelines must be followed.

Charging

Charge the battery often.

Do not use if battery pack gets too hot during charging. Check the charger.

Charge methods: Constant voltage to 4.2V/cell [typical]. No trickle charge when full. Lithium based batteries may remain in the charger [does not suffer from memory problems]. Battery must remain cool.
No fast charge possible.

Discharging

The battery lasts longer with partial rather than full discharges. Avoid full cycle because of wear. Use to a maximum 80% depth of discharge.

Avoid full discharge as a low voltage may trip the internal safety circuit.

If your laptop is capable of running without a battery and fixed power

Maintenance & Service Needs ¹

No maintenance needed.

Battery loses capacity due to aging whether it is used or not.

Regular testing will give users the confidence and knowledge of the performance capability of the battery as it ages.

Storage

Prevent storing your batteries in a hot vehicle. Keep them cool.

Extended storage not recommended. If necessary, store at 40% charge in a cool and dry place. Do not store at full charge or at warm temperatures as it will accelerate aging of the battery.

Avoid purchasing spare batteries for later use. Do not buy old stock.

Disposal ³

Do not dispose.
Should be recycled.

Lead-acid

Used In

Transport, Forklifts, marine, UPS, wheelchairs, solar systems or RAPS and many other heavy duty applications.

Used for larger power applications. The most economical battery type where weight is of little concern. Low energy density limits lead-acid batteries to applications where battery size is not an issue.

Charging

Charge the battery immediately after use. Lead-acid batteries must always be kept in a charged condition.

Charge methods: Constant voltage to 2.4V/cell [typical], followed by float held at 2.25V/cell. Battery must remain cool.
No fast charge possible but can remain on float charge.
Slow charge = 14hrs
Rapid charge = 10hrs

Discharging

The battery lasts longer with partial rather than full discharges. Avoid full cycle because of wear [including hard sulphation].

Over-cycling is not advised. If the battery is subject to repeated deep discharges, use a larger battery.

Maintenance & Service Needs ¹

Apply topping charge every 4-6 weeks. Occasional charge/discharge may improve performance.

Where possible, regularly load test the battery, check the levels and specific gravity of the electrolyte. Top up with distilled water only and never overfill.

Adding Max Life Battery Booster battery life extension products

Storage

Always store at a full state of charge. The longer a battery is left discharged, the more sulphation build-up will occur and the shorter will be its life.

Do not store below 2.10V/cell. Apply a topping charge every 4-6 weeks, or store with the battery connected to a float charger.

Disposal ³

Do not dispose. Contains toxic metals and chemicals.
Must be recycled.