



## Regenerating a battery with AccuLifting

Because AccuLifting will extend the useful life of your battery, you will not only make a better use of your money, but you will also contribute to decrease the landfill and environment waste.

You will reduce the environmental lead waste

and reduce the waste handling costs by increasing the utilization rate of your batteries.

### How does Acculifting work ?

Acculifting is a special chemical agent that helps lead sulfate ions, strongly bound to lead plates, to be dissolved, leaving clean plates.

The consequence is a dramatic internal resistance reduction and a reduction of the 'gassing' effect when recharging the battery.

When the internal resistance is reduced, you can get more power out of your battery, just because a high resistance will limit the current drawn from the battery.

Most battery charger cannot 'see' that resistance increase because they are driven by voltage to evaluate the battery state of charge. (SOC)

In order to achieve that result, you have simply to pour a little quantity of AccuLifting in each battery cell, within the existing acid.

A chemical reaction will immediately start which will remove the existing sulfate and prevent new deposits.

### What's the necessary equipment ?:

A battery charger, AccuLifting, demineralized water to refill the cells if necessary and a syringe (min. 5 ml) without the needle.

### Battery inspection :

Unfortunately all sulfated batteries cannot be systematically regenerated :

Before any attempt to revitalize a battery, please carefully inspect that battery :

If you see that the battery container is somewhat swollen, that means that the battery is likely heavily sulfated or has been overheated. In either cases, the consequence is that the plates are likely worn.

After the AccuLifting cleanup process, one or more cells will likely be in short circuit, because the insulating sulfate layer has been removed.

Also, do not attempt to regenerate batteries if any of the following applies :

When there is evidence of cracks or damages to the battery container.

With non lead acid batteries.

When the voltage remains low after a recharge, i.e. less than 10 Volts for a 12 Volts battery.

When there is evidence of acid leakage.

When tap water has been used to refill the cells. (only use demineralized water)

When a cell voltage remains low or acid boils under load. (short circuit)

With jellified batteries (Gel electrolyte)

### Before getting any further :

Carefully cleanup the battery and dry it in order to avoid any possibility to introduce strange matters into the cells when pouring the AccuLifting or water.

Cleanup the battery terminals.(use sand paper)

Refill the cells, if necessary, using only demineralized water.

The electrolyte level has just to be slightly above the plates level.

### First recharge the battery:

Recharge the battery during a few hours, depending on the battery capacity.

Disconnect the charger and let the battery rest during at least one hour.

If the total battery voltage is lower than the number of cells multiplied by 1.45V, it is likely useless to attempt to regenerate that battery.

Indeed, at least one of the cells is in short circuit.

(Please note that the battery can also be recharged with a vehicle generator.)

### Directions for use:

Remove all cell caps and dose an equal amount of AccuLifting in each cell.

Please note that you can use the AccuLifting bottle cap to dose 5 ml of AccuLifting.

Use the following dosage rules:

<u>Battery capacity in Ah</u>	<u>Dose per cell</u>
>120Ah	8-10 ml/l (Deep Cycle, traction)
120 Ah	4 ml
100 Ah	3 ml
80 Ah	3-3 ml
60 Ah	2 ml (standard car battery)
40 Ah	1-2 ml
20 Ah	1 ml (mower type battery)

### **Note :**

After having added the appropriate quantity of AccuLifting in each cell, allow 3 to 5 Charge/Discharge cycles for a maximum effect.

In case of deep sulfation, it can take one month before a complete battery regeneration.

The effect of the AccuLifting treatment will be to reduce the "gassing" when recharging the battery and increase the battery current sourcing capability under heavy loads. This can be verified using car lamps to load the battery and verify its capacity.

On deep cycle batteries there is usually an access to each cell terminal, so that it's possible to verify how individual cells are recovering their capacity.

The user can verify that there is a voltage increase of about 0.1V to 0.3 V per cell after the application of the AccuLifting in each cell and also that the voltage drop under load has decreased due to a lower battery internal resistance.

The user can also verify that the voltage is better equalized between the cells.

In all cases, it's better to anticipate the battery degradation by dosing the AccuLifting as soon as there is evidence of a battery weakness.

## Safety datas & properties

**Appearance :** amber, light  
slight ammoniac odour

**Water solubility :** completely miscible

**Ph :** 12-13

### **Risks :**

Very low toxicity

The principal risk is related to skin and eyes contact.

In case of projections, flush with enough clean water to reduce the Ph.

That product has a very low toxicity degree. However the ingestion will cause irritation. In all cases, reduce the Ph by drinking water or milk.

As a preventive protection against kids curiosity, please store that product in a safe place.

**Acid :** do not mix high quantity of Acculifting with acid. (exothermic reaction)

**Container :** do not store in a metal container

**Fire :** no danger – no influence on fire

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We've treated successfully several batteries of different type, used sometimes in a very difficult environment :

Tractors, forklifts, combine –harvesters  
traction batteries for carts  
deep cycle batteries in renewable energy generators ...

The common point with these applications is : a long idle period with a battery self-discharge for example during the winter or during activity shutdown..

This is a typical case where AccuLifting can prove its excellence in recovering the maximum battery capacity and extending the battery life. For cranking batteries, most of the time a 1 year life extension can be expected which represent an increase of about 20% of the utilization.

We would be delighted to receive your feed-back.

Thank you for using AccuLifting