

## PRODUCT NEWS

# Sulfarid extends battery life

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There are lots of devices on the market which have claims to improve performance, extend service life or make the world a better place to live in by reducing pollution. The companies selling such products will typically show test results and some may even offer certified results from reputable laboratories or organizations.

Some of these products may work as advertised while others may, to be polite, be just a bundle of wires or fluids that don't do much at all. At best, they are like placebos - those tablets which contain nothing more than salt but which patients are told will solve their aches and pains... and they believe that and get better!

There are some products that also have a sound basis for their claims and it's hard not to believe them though the thing that is often asked is : if it is so great, how come manufacturers haven't adopted it? Typically, it could be due to the high cost of the product or the very high cost that the inventor will charge for the rights to the patent, making it not cost-effective. Or the carmaker's engineers just don't think it's worthwhile.

One such product which has an interesting and plausible scientific basis is the Sulfarid Battery Life Maximizer, a product that is claimed to extend a car's battery life by 3 - 5 times (not years!). It works with the standard 12-volt lead-acid batteries in virtually all cars and is said to be able to even bring dead batteries back to life.

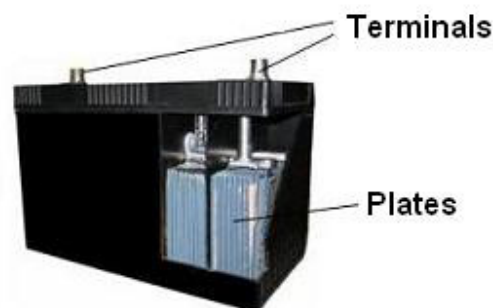
The device also monitors battery condition and can warn of impending failure, something which many motorists who have suddenly found that they cannot start their engine on a cold wet night will greatly appreciate. Batteries seem to have a way of dying without warning and being able to get early notice will certainly be welcome.

Research shows that battery failures are due to four main reasons:-

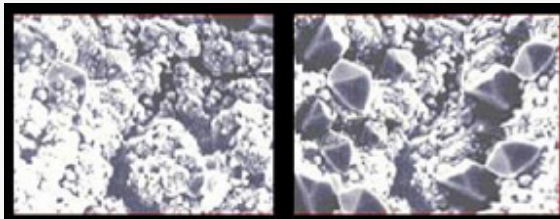
- Normal wear and tear after long usage;
- Abuse, eg not using distilled water;
- Lack of proper maintenance, eg not keeping fluid level topped-up; or
- Crystallization of lead sulfate.



*The Sulfarid Battery Life Maximizer.*



*Simple diagram showing main parts of a car battery*



*Normal condition of the lead sulfate (left) is spongy. Over time, the chemical process creates crystallization on the lead plates (right) reducing the surface area of the plates for the chemical reactions that generate electricity.*

The last reason has been found to account for 84% of battery failures and Sulfarid extends battery life is by acting on this process which occurs inside the battery. This is part of the chemical reaction as electricity is generated and the battery is discharging. The lead sulfate that is produced forms a soft spongy coating on the plates, gradually decreasing the

battery's capacity as the plates lose exposure to the acid. The lead sulfate also has a hard crystalline form and in the harsh environment of the engine bay, vibrations can cause the lead sulfate to crack and break off, taking some pieces of the plates with it. As this happens, the plates also lose their efficiency and need a stronger charge from the alternator. This increases the operating temperature of the battery, further shortening its life.

Using its Amplitude Modulating Pulse (AMP) technology, Sulfarid generates pulses at a specific wavelength into the battery and this wavelength is at just the right frequency to resonate the tough layer of lead sulfate crystals and break them down. With the bond broken down and weakened, charging of the battery will now reconvert the lead sulfate into its ionic form (lead and sulfuric acid) and off the plates. In effect, this is like having a new battery since the plates can now function as if they are new. With a dead battery which has a greater extent of crystallization, the process could take longer to revive the battery, sometimes even days.

In this way, the service life of the battery can be longer, and the chances of sudden battery failure will be lower. Fully encapsulated in an anodized aluminium casing and able to withstand the harsh environment of the engine bay, Sulfarid is claimed to require no maintenance at all. It consumes about 1 watt of electrical power when operating but this is such a small amount that it would take a year to fully discharge a 60AH battery if it was operating all the time without the engine running.

Like steering locks, Sulfarid is one of those products which you can take to the next car. Its solid-state design means there are no moving parts to wear out and so it should last many years as it is transferred from battery to battery in different cars you own. Should the LED on the unit not illuminate, it means that the unit has failed.

According to the manufacturer, Sulfarid, which weighs 180 grams, should be easy to install by a motorist with a basic knowledge of wiring. All that is needed is to connect it correctly to the battery terminals and it can be left in place permanently. As it is directly connected to the battery, it should not have any effect on other electrical systems of the car.

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