



THE NEW POWER GENERATION™

Battery Technology

FACTS ABOUT LITHIUM

Ultralife Batteries, Inc. manufactures advanced-technology batteries using compounds that include the element lithium. What exactly is lithium? How is it used? Is it safe? The answers may be surprising to any-lithium and lithium compounds are used in a large number of products that touch people's daily lives.

Light, but Tough

Lithium is a naturally occurring element -- number three on the Periodic Table, for anyone who remembers high school chemistry. It is mined primarily from brine deposits in the Andes Mountains of South America, and from the ore of a mineral called spodumene in North America and Australia. Lithium can also be extracted from sea water. In all, more than a dozen countries, from Argentina to Zimbabwe, produce over 6,000 tons of lithium compounds each year.

Lithium is the lightest metal -- indeed, the lightest solid substance -- on earth. It also has the greatest energy potential of any solid. In addition, materials coated with lithium-based compounds can withstand extreme forces and temperatures.

From Batteries . . .

With this unique combination of light weight, high energy and temperature endurance, lithium is an ideal material with which to make batteries. Ultralife's 9-volt lithium battery, for example, lasts up to four times longer than alkaline 9-volt batteries, and is the only 9-volt battery warranted for ten-year life in critical applications such as smoke alarms. Ultralife lithium batteries are also used in search-and-rescue transponders, medical equipment, wireless microphones, and a broad range of other portable electronic devices. The Ultralife 9-volt lithium battery has even been used to power experiments aboard the space shuttle. Lithium is also the key ingredient in the most common photographic batteries -- the kind that power almost all of today's automatic cameras and flashes. .

. . . to Cookware . . .

The ability of lithium-based compounds to resist extreme forces and temperatures makes lithium a key ingredient in tough, resilient surface coatings. Such coatings have a wide variety of uses, from the most commonplace products to the highest-technology applications. In the kitchen, for example, lithium is found in stovetops and ceramic cookware. In the living room, the glass in color TV tubes contains lithium. Outdoors, lithium compounds are found on the soles of shoes and in photo-chromic eyeglass lenses that get darker when the sun shines. Duffers can thank lithium for helping DuPont™ invent Surlyn™ the "cut-proof" golf ball cover. And NASA scientists can count on lithium to help rocket nose cones survive the stratosphere. .

. . . to 7-Up?

Lithium is remarkably versatile. In addition to its industrial uses, it has significant therapeutic value. Back in the 1940's, the beverage known today as 7-Up was called "Lithiated Lemon-Lime Soda" and promised "an abundance of energy, enthusiasm, a clear complexion and shining eyes." In modern medicine, lithium is the primary treatment for manic depression. Medical research indicates that lithium compounds are effective in treating aggression, alcoholism, epilepsy, premenstrual syndrome, and schizophrenia as well. Combined with other chemicals, lithium also helps keep swimming pools and air conditioners clear of health-threatening bacteria.

Serious About Safety

Ultralife takes extensive measures to ensure the proper use of lithium, and the Company has been using lithium safely at its manufacturing facilities since 1991. Because lithium is flammable and requires careful handling, a great deal of planning and technology goes into the safe storage, shipping, recycling, and disposal of the material. For example, waste containing lithium is sealed in receptacles with non-flammable mineral oil, staged in a secure area away from occupied buildings, and shipped to a licensed disposal facility for incineration. Note: lithium combustion does not release toxic materials into the air.

Should you have any additional questions about the environmental or safety aspects of lithium, you are welcome to write to Ultralife at 2000 Technology Parkway, Newark, NY 14513, Attention: Manager of Environment, Health and Safety.