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PowerGenix Bows Non-Toxic Lineup Of Rechargeables

By John Laposky -- TWICE, August 3, 2009

San Diego — PowerGenix has rolled out to retailers its first self-branded non-toxic, nickel-zinc (NiZn) rechargeable AA batteries for consumers.

The company called the batteries “the first rechargeable to deliver power equivalent to primary, single-use batteries — a 30-percent increase compared to conventional AA rechargeable battery technologies.”

[Amazon.com](#), [GreenBatteries.com](#) and DepotEco began carrying the batteries late last month.

PowerGenix's NiZn batteries are non-combustible and non-toxic, as certified by independent third-party testing to meet Reduction of Hazardous Substances (RoHS) standards. The batteries contain no heavy metals, such as lead, and no metal hydrides that are difficult to recycle.

According to battery developers, because NiZn rechargeable batteries have a high open circuit voltage (1.6 volts) that closely approximates the open circuit voltage of alkaline primary cells (1.5 volts), they are well suited for substitution in small electronic devices.

Developers believe NiZn may have the potential to replace lead-acid batteries because of their higher energy-to-mass ratio and higher power-to-mass ratio — up to 75 percent lighter with the equivalent power output.

In addition, because the batteries are specifically designed to utilize existing nickel-cadmium manufacturing processes, techniques and equipment, PowerGenix said it can offer the supply-chain scaling OEMs seek. The company is pursuing applications to replace existing nickel-cadmium and nickel-metal hydride batteries in the multi-billion dollar rechargeable battery market.

“Consumers worldwide are looking at ways to save money and lessen their impact on the environment, through leading retailers such as Amazon.com we're able to provide a no-compromise, economical and environmentally responsible battery solution direct to technology users,” said Dan Squiller, CEO of PowerGenix. “With the first true replacement for disposable battery technology, PowerGenix is focused on offering a better battery alternative and expanding rechargeables share of the \$5.2 billion global consumer market.”

The NiZn batteries have received certification from the Rechargeable Battery Recycling Corporation (RBRC) for collection and recycling at its more than 30,000 drop-off points in North America.

The AA batteries will be introduced in a pack of four with a charger for \$34.99 and in four-packs for \$14.99.

A PowerGenix spokeswoman said the company currently offers other battery formats, such as a sub-C and D cells, to OEMs in the power tool, electric scooter and lawn and garden industry (U.S. and Asian markets). The company plans to introduce AAA batteries for the consumer market, “likely in 2010.”

While NiZn technology is hardly new — Thomas Edison received a patent for a recharged NiZn battery system in 1901 — historically the chemistry's number of recharge cycles has been very limited.

The PowerGenix spokeswoman said about 25 patents went into the development of the battery's electrode and electrolyte composition, as well as the cell manufacturing process itself, to make the battery behave as a reliable rechargeable model.

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