24M Eternalyte Electrolyte

Radically improve your batteries' performance today. The next-generation Eternalyte™ electrolyte integrates seamlessly with existing manufacturing processes and equipment, driving significant improvements in cycle life, rate capability, fast charge rates and low temperature performance.

Eternalyte is a revolutionary new electrolyte that delivers high-rate capability to enhance battery performance and safety. The drop-in formulation means you can achieve these advancements without transforming your manufacturing or production process.

24M's expanded portfolio of Eternalyte electrolytes maximize charge rate, safety and cold temperature performance of today's batteries — regardless of chemistry. In addition to lithium-metal batteries, Eternalyte is ideal for silicon and graphite-based batteries used in applications that require high power, rapid charge rates and long life spans.

This new breakthrough technology offers immediate improvements for a variety of applications, especially electric vehicles, consumer electronics and eVTOLs that demand a peak combination of performance and value.

Benefits:

Fast Charge Rates: Low overpotential and high voltage stability enable industry-leading fast charge rates that can allow a typical EV to recover nearly 200 miles of range in under four minutes (from SOC 15% to 80%).

High Rate Capability: With up to three times the ionic conductivity (~26mS/cm at 25°C, ~0.6 Li^+ transference number) of standard electrolytes, Eternalyte increases rate performance without impacting energy density, regardless of the chemistry.

Easy Implementation: The Eternalyte viscosity is compatible with conventional manufacturing equipment enabling seamless integration into existing manufacturing processes.

Low Temperature Performance: High ionic conductivity preserves battery performance at extremely low temperatures. When comparing individual cells, Eternalyte cells retain nearly 90% of their capacity at a cell temperature of -20°C/-4°F, while cells with conventional electrolytes generally lose more than 80% of their capacity. This means that EVs with Eternalyte will have little to no range reduction in cold weather as compared to EVs using today's electrolytes that can lose 20-30% of their capacity or more in extreme conditions.

Enhanced Safety: Exhibits strong performance in USABC and other abuse tests, slowing dendrite growth and resisting thermal runaway.