

# 24M Impervio™ Separator

Safety challenges continue to limit the commercial viability of next-generation battery cells, preventing widespread adoption of EVs and other battery-powered applications. Impervio from 24M® offers a solution. The proprietary separator technology enables unprecedented safety advancements for lithium batteries by preventing dendrites and enabling early fault detection, shutting down fires before they occur.

## Benefits

- **Dendrite prevention:** Impervio starts at the source by blocking dangerous dendrite growth within the battery.
- **Early fault detection:** By continuously monitoring the cell, Impervio can detect a potential short and enable a safe discharge and shutdown of the individual battery cell.
- **Targeted product recalls:** Impervio prevents mass recalls by pinpointing defective products, making it possible to recall only those affected.
- **Overcharging protection:** Overcharging can lead to dendrite formation and an internal short, but Impervio controls the cell at the individual electrode level to shut down shorts.
- **Chemistry compatibility:** Impervio offers the same safety benefits for conventional lithium-ion cells, lithium metal, and 24M SemiSolid™ cells.

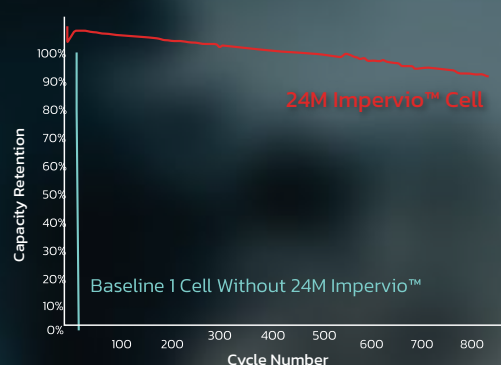
### About 24M Technologies

24M is an established battery technology company that is changing the way the world makes batteries. Our innovations tackle the toughest challenges in the battery industry today to accelerate global adoption and meet the world's growing energy demands.

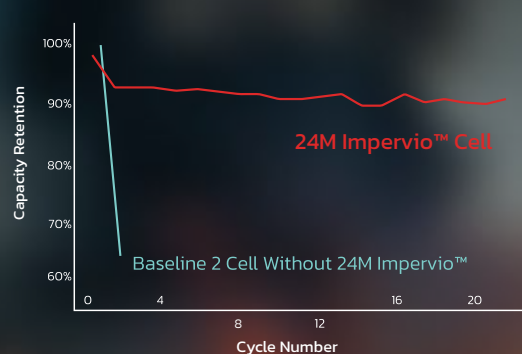
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Eliminate battery fires.  
Prevent mass recalls.  
Redefine battery safety.

#### Suppression of Stainless Steel Dendrites



#### Suppression of Lithium-Metal Dendrites



Internal comparison tests of identical NMC/graphite cells with and without Impervio demonstrate the separator's significant safety advantages.

In new testing conducted at 24M labs, battery cells fitted with the Impervio separator demonstrated robust performance without shorting or overheating through a full hour of overcharge. Without Impervio, the cell experienced an internal short within 15 minutes and caught fire after 30.

Scan here



for a side-by-side comparison video