SOLID ENERGIES INC. (DBA: SOLID MASTER)

Semi-Solid 6T Battery

High Energy 24 V 6T Semi-Solid Lithium-Ion Battery

SOLID ENERGIES.

NASA STTR Phase II · 10+ US Patents



- **Up to 2.7 kWh** in the standard NATO 6T envelope (108 Ah at 25.2 V)
- **183 Wh/kg** pack energy density, about 1.8× a commercial 6T LFP battery
- **32% smaller, 52% lighter** than a similar-energy LFP pack (two 6T packs)
- **No smoke, fire or explosion** in nail-penetration, short-circuit and 130 °C tests
- **–40 °C to +80 °C** cell operating range
- **Drop-in replacement** for MIL-PRF-32565 6T batteries

2.7 kWh
Nominal energy

183 Wh/kg
Pack energy density

–40 to +80 °C
Cell operating range

300 A / 650 A
Continuous / peak

TECHNICAL SPECIFICATIONS

Parameter	Value
Form factor	NATO 6T, MIL-PRF-32565 envelope
Cell	3.6 V / 28 Ah semi-solid pouch (NCM811 / Si-C), ~320 Wh/kg
Configuration	7S4P, 28 cells
Nominal voltage / capacity	25.2 V / 108 Ah (2.7 kWh)
Max current	300 A continuous, 650 A peak
Efficiency	92.4% DC energy
Energy density / weight	183 Wh/kg (aluminum enclosure); ~14.3 kg
Operating temperature	–40 °C to +80 °C (cell); full capacity to +60 °C
Cycle life (cell)	~80% capacity after ~700 cycles
Protection	Smart BMS with active balancing

SAFETY TESTING (CELL)

- Nail penetration: no smoke, fire or swelling
- Short circuit at RT and 50 °C: no fire
- 130 °C for 10 min: no fire or explosion
- 260 °C for 60 s: cell kept working

TYPICAL APPLICATIONS

- Tactical vehicles: M1 Abrams, Bradley, Stryker, AMPV
- Tactical trucks: HMMWV, MRAP
- Silent Watch
- Solar-charged storage and backup power

Data from prototype testing under CEC agreement EPC-21-039; temperature, cycle life and abuse results at cell level. Specifications are subject to change without notice and are for reference only.

Timothy Lin, CTO | contact@solidenergies.com | 714-770-0064