Rechargeable lithium-ion battery
MP 144350

High performance
Medium Prismatic cell

Benefits

- Extended autonomy and life for mobile systems
- Wide operating temperature range
- Recommended for ruggedized designs
- Easy integration into compact and light systems

Key features

- Very high energy density *(344 Wh/l and 143 Wh/kg)*
- Unrivalled low temperature performance
- Excellent charge recovery after long storage, even at high temperature
- Maintenance free
- Long cycle life *(over 80% initial capacity after 500 cycles at 100% DoD)*

Main applications

- Mobile asset tracking
- Small UPS
- Soldier of the future equipment
- Portable radios
- Professional portable lighting
- Bar code readers
- Portable payment terminal

Electrical characteristics	
Nominal voltage (0.5 A rate at 20°C)	3.75 V
Typical capacity 20°C (at 0.5 A 20°C 2.5 V cut off)	2.60 Ah (when charged up to 4.2 V) 2.35 Ah (when charged up to 4.1 V)
Mechanical characteristics (Unsleeved 100% charged cell)	
Thickness max	14.5 mm
Width max	43 mm
Height max	50 mm
Typical weight	68 g
Lithium equivalent content	0.8 g
Volume	28 cm^3
Nominal energy	10 Wh
Operating conditions	
Charge method	Constant Current/Constant Voltage
Charge voltage	4.20 +/– 0.05 V
Maximum recommended charge current	2.6 A (C rate)
Charge temperature range*	–20°C to +60°C
Time at 20°C	To be set as a function of the charge current: C rate → 2 to 3 h C/2 rate → 3 to 4 h C/5 rate → 6 to 7 h
Maximum continuous discharge current*	5.0 A (~2C rate)
Pulse discharge current	up to 10 A (~4C rate)
Discharge cut off voltage	2.5 V
Discharge temperature range	–50°C to +60°C

** Consult Saft for optimized charging below 0°C*

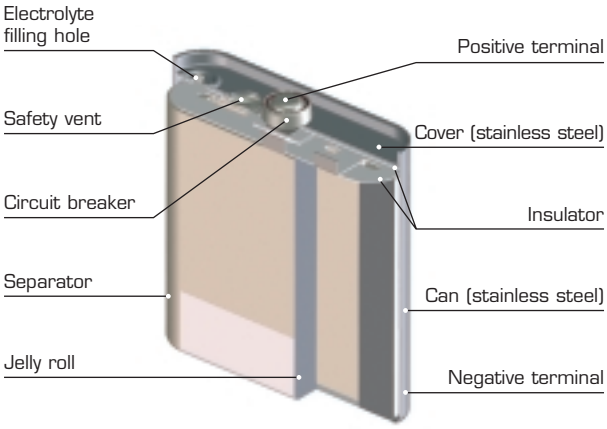
saft

November 2005

MP 144350

Technology

- Graphite-based anode
- Lithium Cobalt oxide-based cathode
- Electrolyte: organic solvents
- Built-in redundant safety protections
- Batteries assembled from MP cells feature an electronic protection circuit



Built-in protection devices ensure safety in case of:

- Exposure to heat
- Exposure to direct sunlight for extended periods of time
- Short circuit
- Overcharge
- Overdischarge

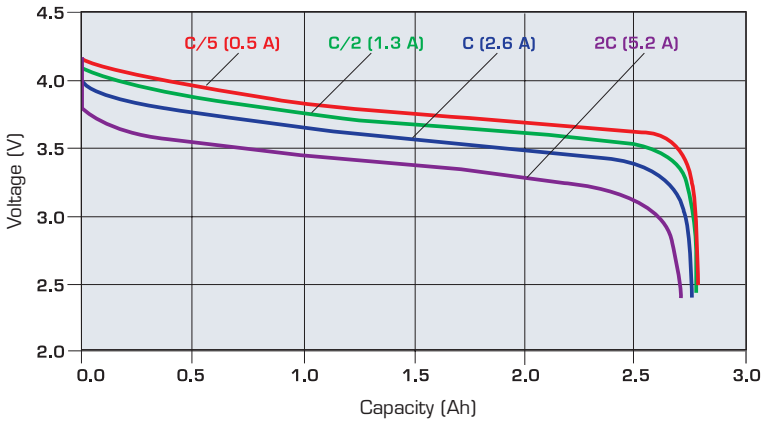
When handling Saft MP batteries:

- Do not solder directly to cell terminal
- Do not disassemble
- Do not remove the protection circuit
- Do not incinerate

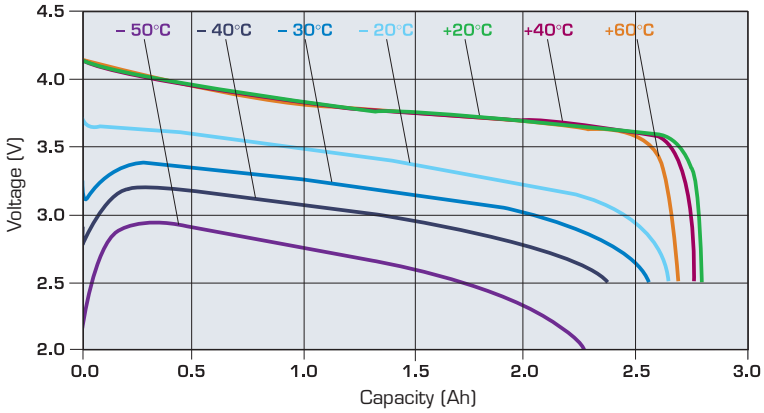
Transportation and storage:

- Store in a dry place at a temperature preferably not exceeding 30°C
- For long-term storage, keep the battery within a (30 ± 15) % state of charge

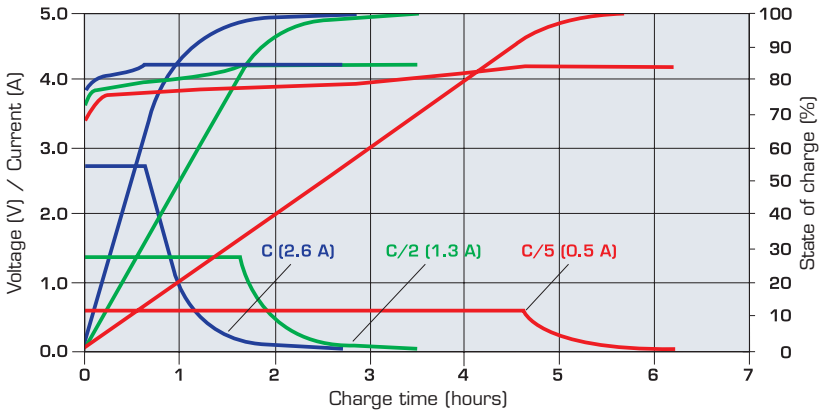
Capacity versus current at 20°C



Typical discharge profiles (0.5 A - C/5 rate)



Charge characteristics to 4.2 V at +20°C at C, C/2, and C/5 rates



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