Rechargeable lithium-ion battery
MP 174865

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 *(380 Wh/l, 163 Wh/kg)*
- Unrivalled low temperature performance
- Excellent charge recovery after long storage, even at high temperature
- Maintenance-free
- Long cycle life *(over 70 % initial capacity after 500 cycles 100 % DoD)*
- Restricted for transport *(Class 9)*
- Underwriters Laboratories *(UL)* Component Recognition *(File Number MH 12609)*

Main applications

- Mobile asset tracking
- Rack-mount telecom batteries
- Small UPS
- Soldier of the future equipment
- Portable radios
- Professional portable lighting
- Electric bikes and personal mobility
- Portable gaz analysers
- Professional video

Electrical characteristics

Nominal voltage (1.1 A rate at 20°C)	3.75 V
Typical capacity 20°C (at 1.1 A 20°C 2.5 V cut-off)	5.3 Ah (when charged up to 4.2 V) 4.8 Ah (when charged up to 4.1 V)

Mechanical characteristics (Unsleeved 100 % charged cell)

Thickness (max)	19.0 mm
Width (max)	48 mm
Height (max)	65 mm
Typical weight	124 g
Lithium equivalent content	1.6 g
Volume	52 cm^3
Nominal energy	20 Wh

Operating conditions

Charge method	Constant Current/Constant Voltage
Charge voltage	4.20 +/– 0.05 V
Maximum recommended charge current**	5.0 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*	11 A (~2C rate)
Pulse discharge current	up to 21 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*
** *Electronic protection circuits within battery packs may limit the maximum charge/discharge current allowable. Consult Saft.*
ATEX-compliant cell version available on request

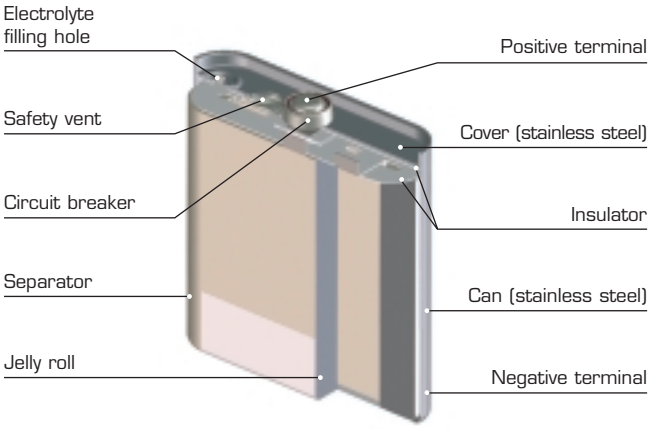
saft

November 2007

MP 174865

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

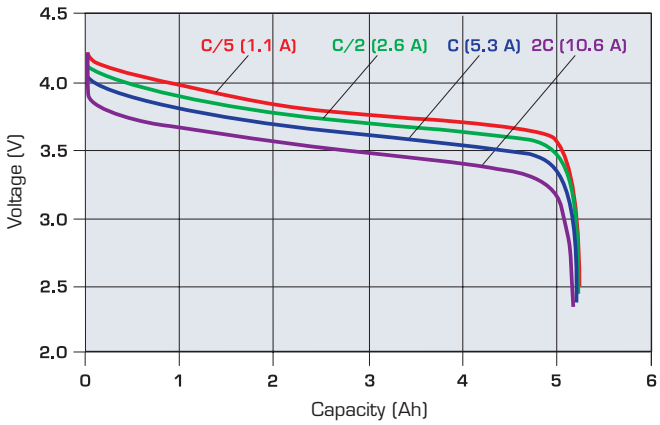
When handling Saft MP batteries:

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

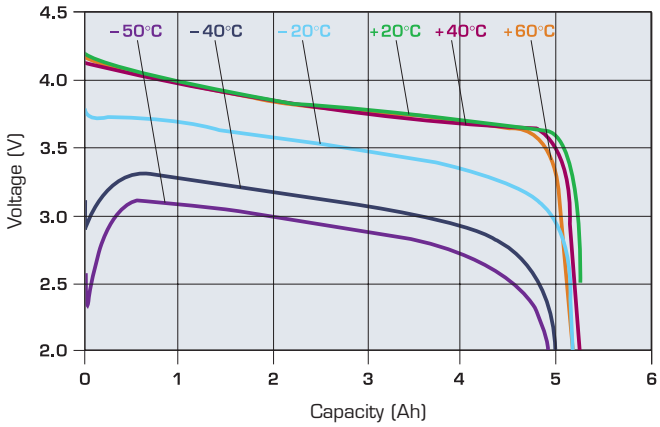
Transportation and storage:

- 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

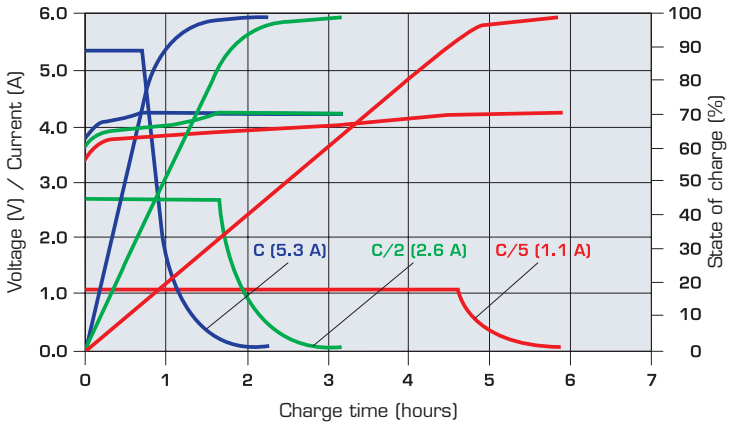
Capacity versus current at + 20°C



Typical discharge profiles (1.1 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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