

Rechargeable lithium-ion battery

MP 176065

High performance
Medium prismatic cell



Benefits

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

Key features

- Very high energy density (350 Wh/l and 165 Wh/kg)
- Unrivalled low temperature performance
- Excellent charge recovery after long storage, even at high temperature
- Maintenance free
- Long cycle life (over 70% capacity after 500 cycles 100% DoD)

Applications

- Mobile asset tracking
- Rack-mount telecom batteries
- Small UPS
- Future soldier equipment
- Portable radios
- Portable defibrillators
- Professional portable lighting
- Electric bikes and personal mobility

Electrical characteristics

Nominal voltage (V)	3.75
Typical capacity 20°C (Ah)	6.8 Ah @ 4.2 V 6.1 Ah @ 4.1 V

Mechanical characteristics

Thickness max at end of life (mm)	19.8
Width max (mm)	61
Height max (mm)	65
Typical weight (g)	155
Lithium equivalent content (g)	2.0
Volume (cm³)	73

Operating conditions

Charging method	Constant Current/Constant Voltage (CCCV)	
Charging voltage	4.20 V +/- 0.05 V per cell	
Max recommended charging current* (A)	6.8 (C rate)	
Charging temperature range*	- 20°C to + 60°C	
Timer @ 20°C	To be set as a function of the charging current:	
	1C	➔ 2 to 3 h
	0.5C	➔ 3 to 4 h
	0.2C	➔ 6 to 7 h

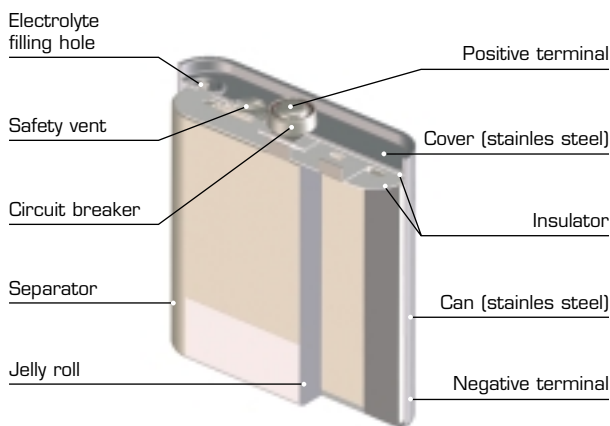
Max continuous discharge current (A)	13.6 (2C rate)
Pulse discharge current (A)	up to 27 (4C rate)
Discharge cut off voltage (V)	2.5
Discharge temperature range	- 50°C to + 60°C

* Consult Saft for optimized charging below 0°C

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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

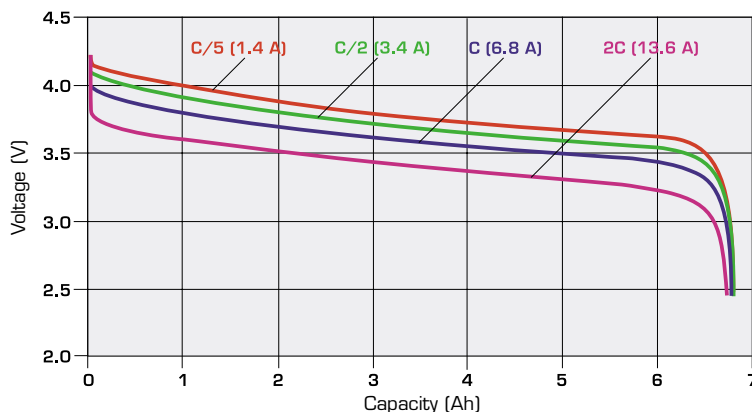
When handling Saft MP batteries:

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

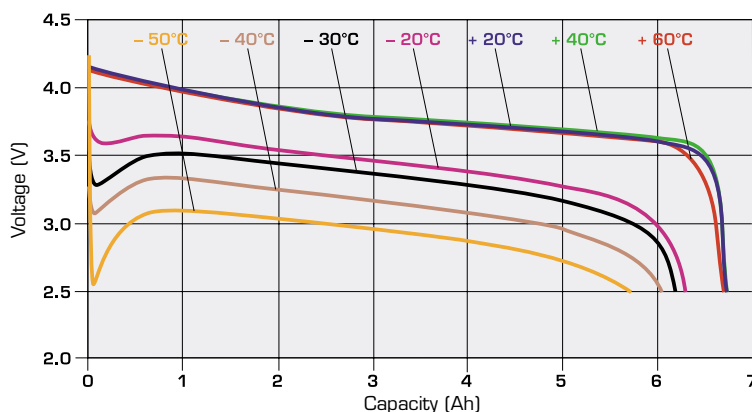
Transportation and storage:

- 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

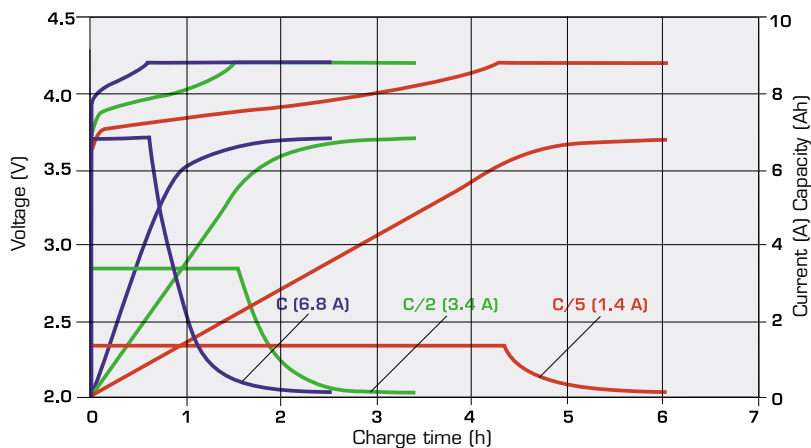
Discharge versus current at 20°C



Discharge characteristics at C/5 rate



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



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Doc. N° 54037-2-0305
Published by the Communications Department

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Produced by Arthur Associates

Société anonyme au capital de 31 944 000€
RCS Bobigny B 383 703 873

