

# Rechargeable military lithium-ion battery

## 2 VL 34570

Extreme performance  
in demanding military environments

The battery is assembled from two VL 34570 Saft lithium-ion cells connected in series (2s1p configuration) and protected by a specific electronic monitoring circuit.

### Benefits

- Extended autonomy and life
- Wide operating temperature range with unrivalled low temperature performance
- Recommended for ruggedized designs
- Easy integration into compact and light systems
- Maintenance-free
- Light weight

### Key features

- Electronic protection against charger faults
- Very high energy density
- Excellent charge recovery after long storage, even at high temperature
- Long cycle life  
(over 70 % initial capacity after 500 cycles 100 % DoD)
- Restricted for transport (Class 9)
- Components cells with built-in circuit breaker, shut-down separator and safety vent
- Recommended Saft chargers EcMC<sup>2</sup> 250 and EcMC<sup>2</sup> 350
- Compatible with OEM or "Universal" military battery chargers
- Direct replacement for the BA-5800 primary Li-SO<sub>2</sub> battery
- Made in the EU

### Main applications

- GPS-PLGR +96
- AN/PSN-10 (small lightweight GPS Receiver)
- CP-1995 Battlefield computer
- NBC Respirators
- Night vision equipment



### Electrical characteristics

Nominal voltage (under 1.1 A at 20°C)	7.4 V
Typical capacity at 20°C (under 1.1 A 5.4 V cut-off)	5.4 Ah
Nominal energy	40 Wh

### Mechanical characteristics

Height (max)	129 mm (5.08 in)
Diameter (max)	35.5 mm (1.40 in)
Typical weight	265 g (9.35 oz)
Volume (max)	128 cm <sup>3</sup> (7.81 cu. in)

### Operating conditions

Charge method	Constant Current/Constant Voltage
Max. recommended charge current	2.7 A at 20°C
Charge temperature range*	-20°C to +60°C (-4°F to +140°F)
Time at 20°C	3 to 4 hours under C/2 (2.7 A) constant
Max. recommended continuous discharge current	4 A at 20°C
Pulse discharge current	up to 10 A
Discharge cut-off voltage	5.4 V
Discharge temperature range	-40°C to +60°C (-40°F to +140°F)
Operating temperature range	-25°C to +60°C (-13°F to +140°F)
NSN	6140 14 559 7056
Part number	08034L

\* For optimised charging below 0°C, +60°C and discharging at -40°C, consult Saft.



**saft**

# 2 VL 34570

## Technology

- Graphite-based negative electrode
- Lithium Cobalt oxide-based positive electrode
- Electrolyte: organic solvents
- Built-in redundant safety protections
- Battery assembled from two cylindrical VL 34570 cells in series with 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
- Shrapnel penetration

## When handling Saft VL batteries:

- Do not solder directly to battery terminals
- Do not disassemble
- Do not remove the protection circuit
- Do not incinerate

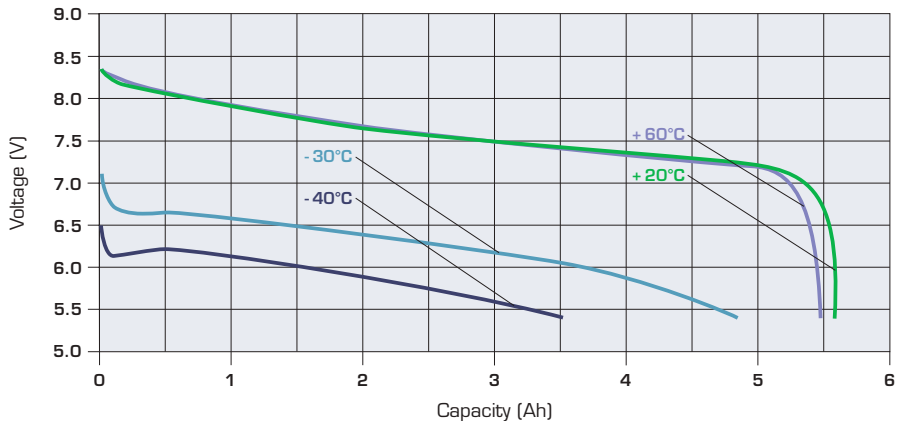
## Transportation and storage

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

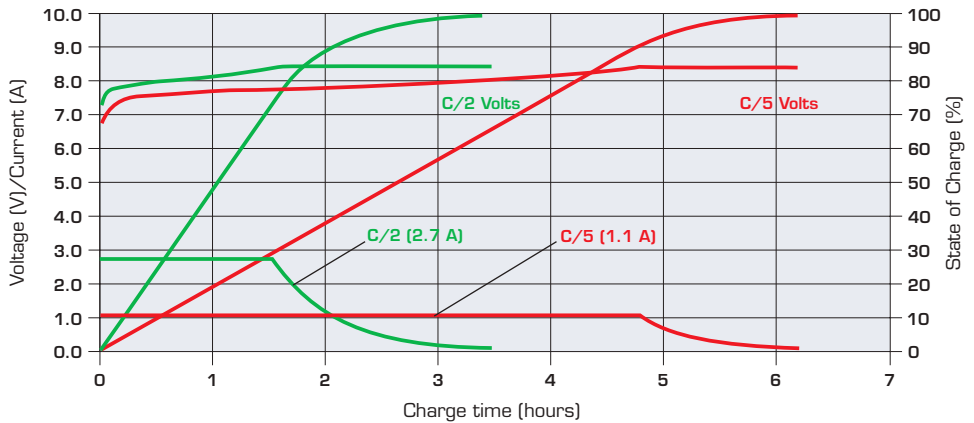
## Protection circuit

- Protection against over voltage (*resettable*)
- Protection against under voltage (*resettable*)
- Protection against over current during discharge
- End of discharge equalising
- Internal thermistor for temperature detection

Typical discharge profiles (1.1 A - C/5 rate) at various temperatures



Charge characteristics at +20°C (C/2 and C/5 rates)



## Saft

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Doc. N° 54080-2-0710

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Published by the Communications Department.

Photo credit: Saft.

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

Produced in the UK by Arthur Associates Limited.



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