

Rechargeable lithium-ion battery

SAI 2800

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
- Compatible with Saft and other military chargers
- 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
The tactical field charger EcMC² and the workshop charger EcMC² 350

Main applications

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

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

Mechanical characteristics

Height (max)	129 mm (5.08 in)
Diameter (max)	35.5 mm (1.40 in)
Typical weight	265 g (9.35 oz)

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	- 50°C to +60°C (-58°F to +140°F)

References

High Temperature	MIL-STD 810E, 501.3 (+60°C)
Low Temperature	MIL-STD 810E, 502.3 (-20°C)
Vibration	MIL-STD 810C, 514.4
Shock	MIL-STD 810E, 516.4
Salt Fog	MIL-STD 810E, 507.3
Immersion	MIL-STD 810E, 507.3
Aero transportability	MIL-STD 810E, 500.3

Compliance with military specification

* Consult Saft for optimized charging below 0°C



SAI 2800

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

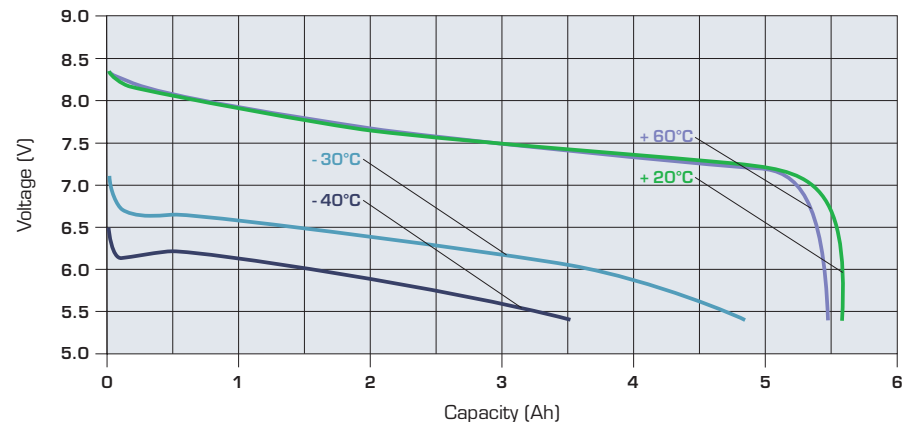
Transportation and storage

- 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

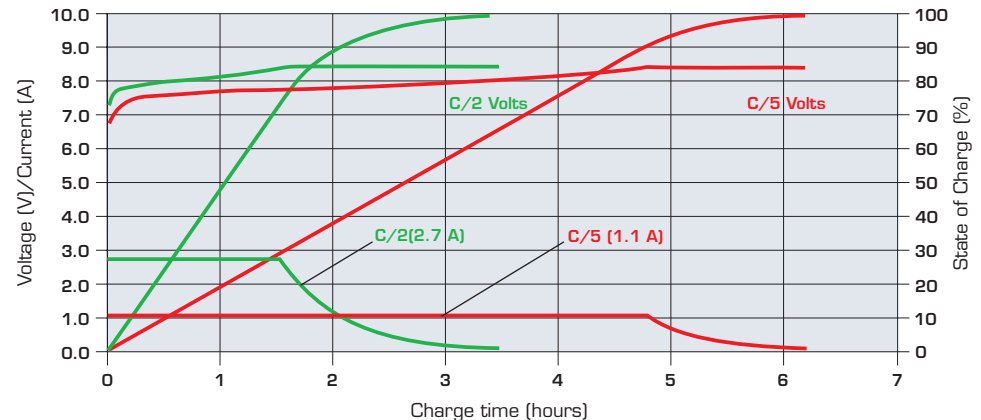
Protection circuit

- 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

Specialty Battery Group

12, rue Sadi Carnot
93170 Bagnolet - France
Tel.: +33 (0)1 49 93 19 18
Fax: +33 (0)1 49 93 19 69

313, Crescent Street
Valdese, NC 28690 - USA
Tel.: +1 (828) 874 41 11
Fax: +1 (828) 879 39 81

www.saftbatteries.com

Doc. N° 54061-2-1107

Information in this document is subject to change without notice and becomes contractual only after written confirmation by Saft.

Published by the Communications Department.

Photo credit: Saft.

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

Produced by Arthur Associates Limited. Printed in the UK.



SAFT