High Temperature Series

Nickel-Cadmium

VNT Cs

The new VNT series benefits from innovative PNE (plastic-bonded nickel electrode) technology, a new positive electrode offering improved energy density.

The VNT Cs is specially designed to accept a permanent charge in high temperature environment such as emergency lighting equipment (minimum of 4 years up to + 40°C as required by the IEC 61951-1 standard).

To meet customers' requirements, Saft provides custom-designed and standard battery packs.

For your battery design and system needs, please contact Saft's engineers.

Applications

- Emergency lighting
- Professional lighting
- Memory back-up systems
- Security devices

Main advantages

- Good charge efficiency at high temperatures
- Permanent charge
- Good storage retention
- Long life duration

Technology

- Plastic-bonded positive electrode
- Plastic-bonded negative electrode

Electrical characteristics	
Nominal voltage (V)	1.2
Typical capacity (mAh)*	1650
IEC minimum capacity (mAh)*	1600
IEC designation	KRMT 23/43
Impedance at 1000 Hz (m Ω)	8

* Charge 16 h at C/10, discharge at C/5.

Dimensions	
Diameter (mm)	22.0 + 0.15/- 0.05
Height (mm)	41.9 ± 0.3
Top projection (mm)	0.8 ± 0.2
Top flat area diameter (mm)	9.0 min
Weight (g)	45

Dimensions are given for bare cells.

Charge conditions			
Rate	Time (h)	Temp. (°C)	Charge current (mA)
Standard*	16	+ 15 to + 40	160
Permanent**		+ 15 to + 40	80
Trickle**		+ 15 to + 40	40 to 53

* End of charge cut-off is requested: timer, coulomb meter, or dT°C / dt
** follows full charge

Maximum discharge current	
Continuous (A) at + 20 °C	5.2
Peak (A) at + 20 °C*	40

* Peak duration: 0.3 second - final discharge voltage 0.65 volt/cell.

Temperature range in discharge

- 20 °C to + 70 ° C

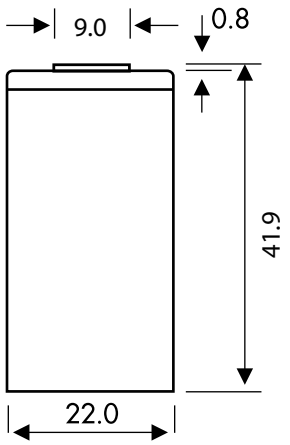
Storage

Recommended: + 5 °C to + 25 °C
Relative humidity: 65 ± 5 %

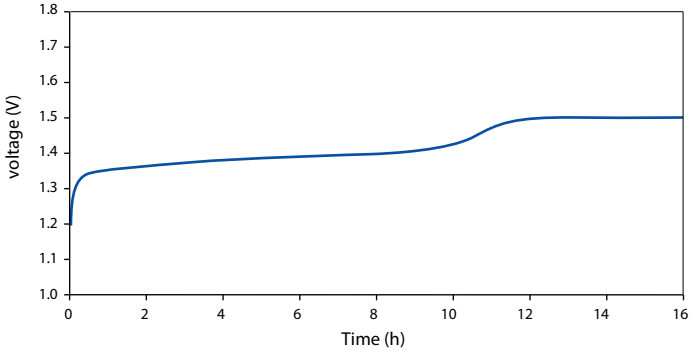
Typical performances

For graphs shown, C is the IEC capacity.

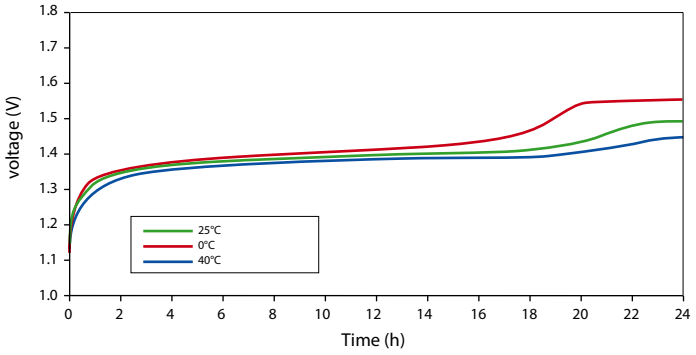
Dimensions are in mm.



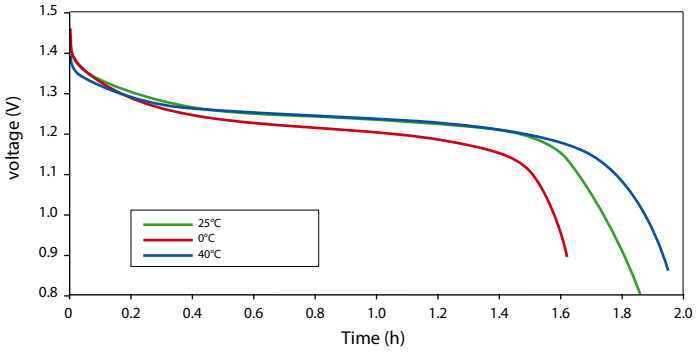
Charge 16h at C/10 at room temperature



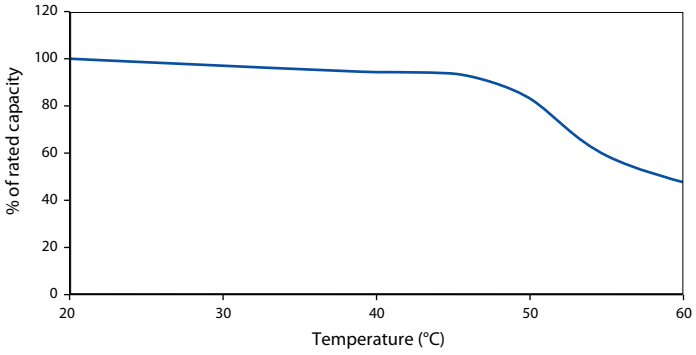
Charge 24h at C/20 at different temperatures



Discharge at C/2 at different temperatures, after charge 24h at C/20 and rest 1h



Charge efficiency after charge at C/20 and discharge at C/5 at different temperatures



Data are given for single cells. Please consult Saft for any use of this cell in other conditions than those given in this data sheet.