

# STANDARD SERIES

Nickel-Cadmium

## VRE 1/3 AA

Engineered for cycling applications  
Saft's VRE 1/3 AA cell ideally suits for a wide range of applications.

In addition, the VRE 1/3 AA is well-adapted for applications requiring a permanent charge (C/20) at temperatures of up to +35°C.

Moreover, it offers a high level of reliability and an excellent cost/performance ratio.

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

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

### Applications

- Professional electronics
- Cordless communication systems
- Home appliances
- Radio controls and toys

### Main advantages

- High energy series giving a higher operating time
- Good storage retention
- Quick and fast charge
- Cycling application

### Technology

- Sintered positive electrode
- Plastic bonded negative electrode

### Temperature range in discharge

-20°C to +60°C

### Storage

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

**Data are given for single cell.**

**Please consult Saft for utilization of cell outside this specification.**



### Electrical characteristics

|                                   |       |
|-----------------------------------|-------|
| Nominal voltage (V)               | 1.2   |
| IEC typical capacity (mAh) at C/5 | 145   |
| IEC minimum capacity (mAh) at C/5 | 130   |
| IEC designation                   | 15/18 |
| Impedance at 1000 Hz (mΩ)         | 48    |

### Dimensions

|                             |      |
|-----------------------------|------|
| Diameter (mm)               | 13.6 |
| Height (mm)                 | 16.8 |
| Top projection (mm)         | 0.91 |
| Top flat area diameter (mm) | 6.2  |
| Weight (g)                  | 7    |

Dimensions are given for bare cells

### Charge conditions

| Rate      | Time (h) | Temp. (°C) | Charge current (mA) |
|-----------|----------|------------|---------------------|
| Fast      | ~1       | +10 to +45 | 130                 |
| Quick     | 3 to 4   | +5 to +40  | 40                  |
| Standard  | 16       | 0 to +50   | 13                  |
| Trickle * |          | -20 to +50 | 5.2                 |

End of charge cut-off is requested: -dV or dT°C/dt

\* Trickle charge follows quick or fast charge

The maximum battery temperature recommended during charge is +45°C

### Maximum discharge current

|                         |      |
|-------------------------|------|
| Continuous (A) at +20°C | 0.36 |
|-------------------------|------|

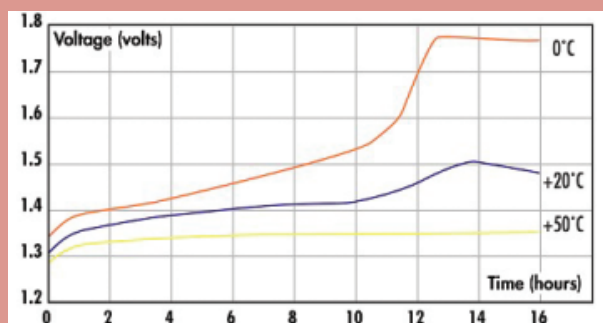


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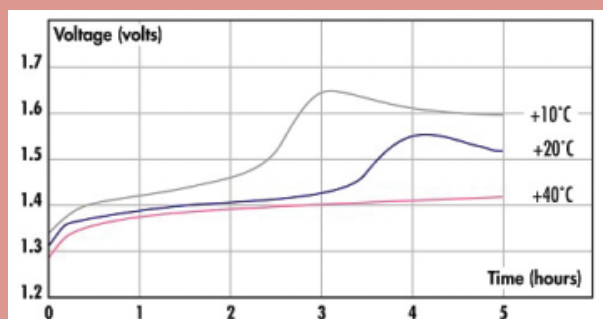
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VRE 1/3 AA

## Voltage in normal charge (current 0.1 C)

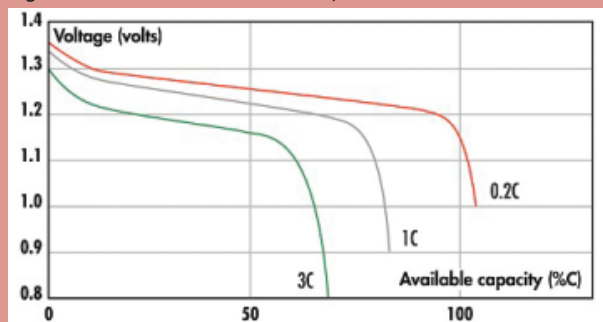


## Voltage in fast charge (current 0.3 C)

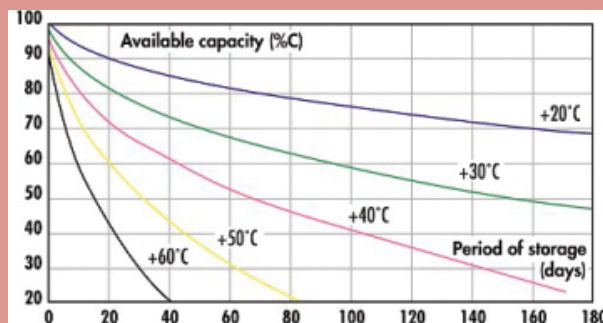


## Voltage in discharge at +20°C

(after charge 0.1 C x 16 hours at +20°C)



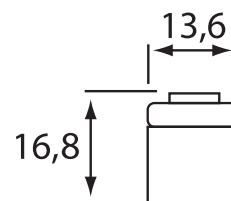
## Charge retention (between +20°C and +60°C)



## Typical performances

For graphs shown, C is the IEC<sub>5</sub> capacity.

Dimensions are in mm.



## SAFT

### Rechargeable Battery systems

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