Saft’s M 19 HR cell is ideally suited for applications requiring high discharge, continuous or pulse power with stable voltage in -40°C/+72°C environment.

Benefits
- High drain / high pulse capability
- High voltage response, stable during most of the lifetime of the application even after long dormant periods
- High capacity at high current and low temperature
- Low self-discharge compatible with long operating life (less than 1% after 1 year of storage at +20°C)
- Superior resistance to corrosion
- Low magnetic signature

Key features
- Spiral construction
- Hermetic construction with glass-to-metal seal
- Stainless steel container
- Integrated safety vent
- Non-corrosive electrolyte
- Non-pressurized at room temperature
- Restricted for transport (Class 9)
- Made in Germany

Designed to meet all major quality, safety and environmental standards
- Safety: UL 1642 [File MH 61234]
- IEC 60086-4
- Transport: UN 3090 and UN 3091
- Military: V096915 part 2 and part 154
- Quality: ISO 9001, Saft World Class Continuous program
- Environment: ISO 14001

Typical applications
- Radio communications
- Alarms and security systems
- ELTs, EPIRBs
- Tracking systems
- M2M communication
- Medical devices

### Electrical characteristics

<table>
<thead>
<tr>
<th>(Typical values relative to cells stored up to one year at +30°C max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity [at 500 mA, +20°C, 2.0 V cut-off]</td>
</tr>
<tr>
<td>Open circuit voltage [at +20°C]</td>
</tr>
<tr>
<td>Nominal voltage [under 1 mA at +20°C]</td>
</tr>
<tr>
<td>Nominal energy [at 500 mA, +20°C, 2.0 V cut-off]</td>
</tr>
<tr>
<td>Pulse capacity</td>
</tr>
<tr>
<td>Recommended maximum continuous discharge current</td>
</tr>
</tbody>
</table>

### Operating conditions

<table>
<thead>
<tr>
<th>Operating temperature range [b]</th>
<th>-40°C / +72°C [-40°F / +161°F]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage temperatures Recommended</td>
<td>+30°C (+86°F) max</td>
</tr>
<tr>
<td>Allowable</td>
<td>-55°C to +85°C (-67°F / 185°F)</td>
</tr>
</tbody>
</table>

### Physical characteristics

<table>
<thead>
<tr>
<th>Diameter (max)</th>
<th>33.5 mm [1.32 in]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height for the tabbed version (max)</td>
<td>58.5 mm [2.30 in]</td>
</tr>
<tr>
<td>Height for the version with +/- end caps (max)</td>
<td>59.5 mm [2.34 in]</td>
</tr>
<tr>
<td>Typical weight</td>
<td>107 g</td>
</tr>
<tr>
<td>Li metal content</td>
<td>approx. 3.3 g</td>
</tr>
</tbody>
</table>

[a]: Dependent upon current drain, temperature and cut-off.
[b]: Dependent upon pulse characteristics, temperature, cell history and application. Higher rates are available under certain circumstances
[c]: To maintain cell heating within safe limits. Battery packs may imply lower level of maximum current and may request specific thermal protection. Consult Saft.
[d]: Operating temperatures up to +85°C can be achieved. Consult Saft.
[e]: Long time storage at high temperature may affect performances. Consult Saft.
Termination & part numbers

- 1. + tab (radial tab on positive terminal): 4142250403
- 2. C tab (radial tabs on positive & negative terminals) 4142250203
- 3. Z tab (radial tabs on positive & negative terminals): 4142250703
- 4. +/- end caps (incl. PTC): 4142257103
- Other configuration available on request

Storage

- The storage area should be clean, cool (preferably not exceeding + 30°C), dry and ventilated.

Warning

- Fire, explosion and burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above + 100°C (+ 212°F), incinerate, or expose contents to water.
- Do not solder directly to the cell (use tabbed cell versions instead).
- Do not obstruct venting mechanism.