Saft’s M 52 HR cell is ideally suited for applications requiring high discharge, continuous or pulse power with stable voltage under high discharge 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

**Electrical characteristics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity (at 200 mA, + 20°C, 2.0 V cut-off)</td>
<td>4.8 Ah</td>
</tr>
<tr>
<td>Open circuit voltage (at + 20°C)</td>
<td>3.2 V</td>
</tr>
<tr>
<td>Nominal voltage (under 1 mA at + 20°C)</td>
<td>3.0 V</td>
</tr>
<tr>
<td>Nominal energy (at 200 mA, + 20°C, 2.0 V cut-off)</td>
<td>14 Wh</td>
</tr>
<tr>
<td>Pulse capacity</td>
<td>up to 5.0 A</td>
</tr>
<tr>
<td>Recommended maximum continuous discharge current</td>
<td>2.0 A</td>
</tr>
</tbody>
</table>

**Operating conditions**

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

**Physical characteristics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter (max)</td>
<td>26.2 mm (1.03 in)</td>
</tr>
<tr>
<td>Height for the tabbed version (max)</td>
<td>51.5 mm (2.03 in)</td>
</tr>
<tr>
<td>Height for the version with +/- end caps (max)</td>
<td>52.5 mm (2.07 in)</td>
</tr>
<tr>
<td>Typical weight</td>
<td>59 g</td>
</tr>
<tr>
<td>Li metal content</td>
<td>approx. 1.6 g</td>
</tr>
</tbody>
</table>

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

1. + tab (radial tab on positive terminal): 4142270403
2. C tab (radial tabs on positive & negative tabs): 4142270203
3. Z tab (radial tabs on positive & negative tabs): 4142270703
4. +/- end caps (incl. PTC): 4142277103

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.

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Mid-discharge voltage vs. current at various temperatures

Discharge curves at 800 mA at various temperatures

Capacity vs. current at various temperatures

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Saft
12, rue Sadi Carnot
93170 Bagnolet - France
Tel.: +33 1 49 93 19 18
Fax.: +33 1 49 93 19 64
www.saftbatteries.com

Friemann & Wolf Batterietechnik GmbH
Industriestr. 22,
63654 Büdingen - Germany
Tel.: +49 (0) 6042 954 0
Fax.: +49 (0) 6042 954 190

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