

# MP 174565 ise

## Rechargeable Li-ion cell

3.65 V high energy Li-ion cell with high performance and **intrinsic safety**

Saft's MP 174565 ise cell is compatible with applications requiring intrinsic safety, long operating life under cycling conditions and offers excellent performance in temperature environments from -30°C to +60°C.

### Benefits

- Excellent operating lifetime in calendar and cycling with a very stable internal resistance
- High level of safety, compatible with potentially explosive atmospheres
- Long shelf life with extremely low capacity loss in storage
- Easy connection and assembly into batteries
- Smaller environmental footprint than other technologies

### Key features

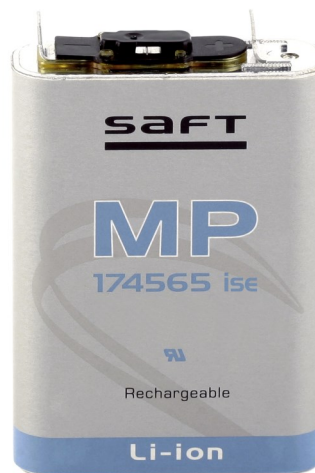
- High energy density (256 Wh/l, and 150 Wh/kg)
- Cycle life of 2300 cycles at 100% DoD at C/2 discharge, C charge
- Aluminium casing
- Hermetically sealed
- Operates in any orientation
- Maintenance free
- No memory effect
- **Manufactured in the EU**

### Designed to meet all major quality, safety and environmental standards

- Safety: UL 1642 and IEC 62133-2:2017
- Transport: UN 3480, UN 38.3
- ATEX<sup>[v]</sup> IEC 60079-11 (10.5.2, 10.5.3 (b)) compatible component
- Quality: ISO 9001  
Saft World Class program
- Environment: ISO 14001, RoHS and REACH compliant

### Typical applications

- Backup for industrial equipment
- Medical devices
- Tracking
- Oil & Gas applications
- Internet of Things
- Wireless Sensor Networks
- Lighting & signalling
- Automotive



### Electrical characteristics

|  |  |
|--|--|
| Typical capacity (at C/5 rate, +25°C, 2.5V cut-off) <sup>[i]</sup> | 4.0 Ah   |
| Nominal voltage  | 3.65 V   |
| Nominal energy   | 14.6 Wh  |
| Recommended maximum discharge current <sup>[ii]</sup>              | Continuous 8 A (~2C rate)<br>Pulse 16 A (~4C rate) |

### Physical characteristics (sleeved cell)

|                                |                       |
|--------------------------------|-----------------------|
| Thickness <sup>[iii]</sup>     | 18.65 mm              |
| Width                          | 45.3 mm               |
| Height (including terminals)   | 68.5 mm               |
| Typical weight                 | 97 g                  |
| Volume (including terminals)   | 0.057 l               |
| IEC cell designation           | INP19/46/69           |
| Saft internal cell designation | INT 174565 ise        |
| Saft part number               | 70373U                |
| Saft model / type reference    | MP 174565 ise GP31347 |

### Operating conditions

|   |  |
|---|--|
| Typical cut-off voltage                           | 2.5 V  |
| Charging method                                   | Constant current/Constant voltage                      |
| Charging voltage                                  | 4.2 ± 0.05 V   |
| Maximum continuous charge current <sup>[iv]</sup> | 4 A (~1C rate)   |
| Operating temperatures                            | Charge -30°C to +60°C<br>Discharge -30°C to +60°C      |
| Storage & transportation temperatures             | Recommended +10°C to +30°C<br>Allowable -40°C to +60°C |

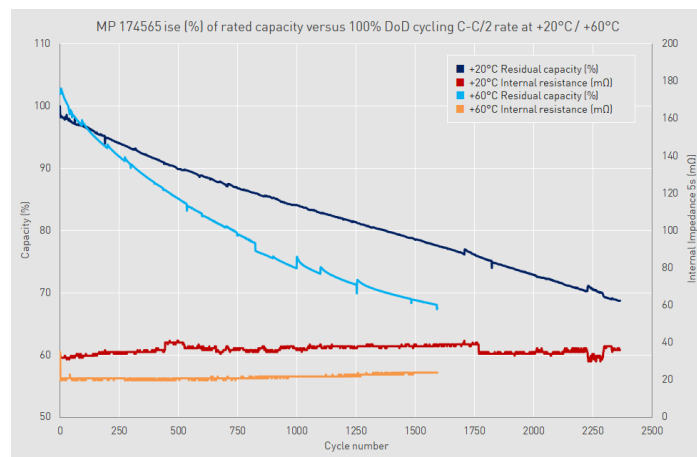
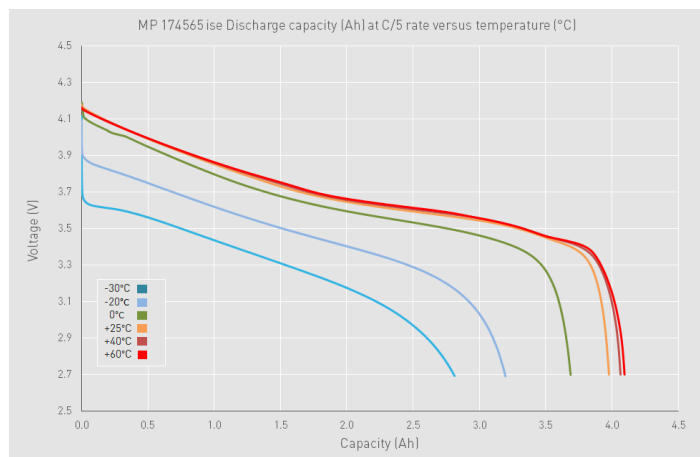
[i] Can vary depending on temperature and discharge rate

[ii] Can vary depending on temperatures. Consult Saft

[iii] At beginning of life, 100% State-of-Charge. May increase with temperature and the cells' calendar life.

[iv] For optimised charging below 0°C and +60°C, consult Saft

[v] Compatible with the temperature classification T4 for an ambient temperature of 60°C. The temperature classification shall be verified during the assessment of the intrinsic safety apparatus in which the cell will be used.



## Battery assembly

- Individual lithium-ion cells need to be mechanically and electrically integrated into battery systems to operate properly.
- The battery system includes electronic devices for performance, thermal and safety management specific to each application.
- Please contact Saft for your specific application requirements.

## Cell surface temperature and spark ignition

- The cell can be compatible with the temperature classification T4 at an ambient temperature of +60°C.
- The temperature classification shall be verified during the assessment of the intrinsic safety apparatus in which the cell will be used.
- The spark ignition risk shall be verified during the assessment of the intrinsic safety apparatus in which the cell will be used.

## Storage

- The storage area should be clean, cool (preferably not exceeding +30°C), dry and ventilated. For long term storage, keep the cell within a 30 ± 15% state of charge

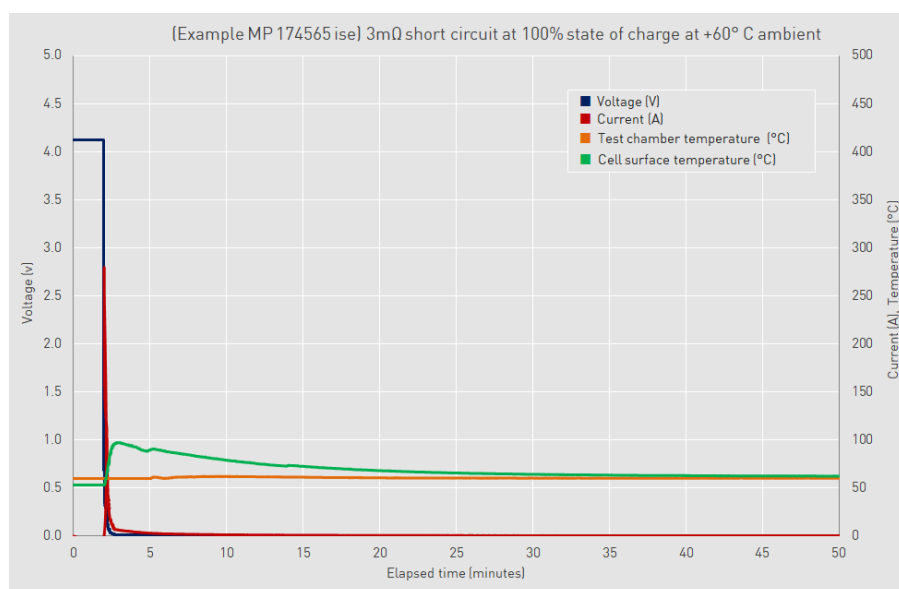
## Warning

- Do not crush, short-circuit, incinerate, dismantle, immerse in any liquid or heat above +60°C
- Observe charging conditions at all times

| Pretest conditions       | Value   |
|--------------------------|---------|
| Test chamber temperature | 60 °C   |
| Cell state of charge     | 100 %   |
| Short circuit resistance | 2.82 mΩ |

| Test data recorded       | Value (max) |
|--------------------------|-------------|
| Maximum current          | 278.6 A     |
| Cell maximum temperature | 112.9 °C    |

| Test results                         | Result                 |
|--------------------------------------|------------------------|
| Temperature >100 °C and ≤135 °C      | Temperature class T4   |
| Externally visible electrolyte ≥24 h | No visible electrolyte |
| Discharge current interruption       | No partial discharge   |
| IECEx ExTR Reference No.             | FR/INE/ExTR18.0022/00  |



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