

IBUvolt® LFP400

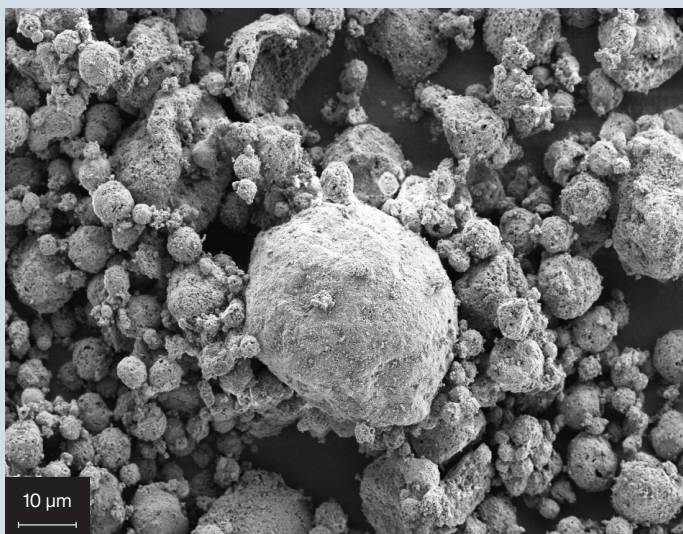
We Produce LFP in Germany
to the Highest Standards.

Europe's Leading LFP Supplier.



10 YEARS
OF EXPERIENCE IN
BATTERY MATERIALS





LFP400

The engineered particle shape results in:

Lower viscosity of electrode slurries

Coating cathodes is easier and can even be done in a 3D printing process.

Better conductivity

The primary particles are connected in a spongy network which improves electric conductivity and accessibility for lithium.

High cycle life

The defined structure results in less chemical and physical degradation during battery cycling.

CHEMICAL & PHYSICAL PROPERTIES

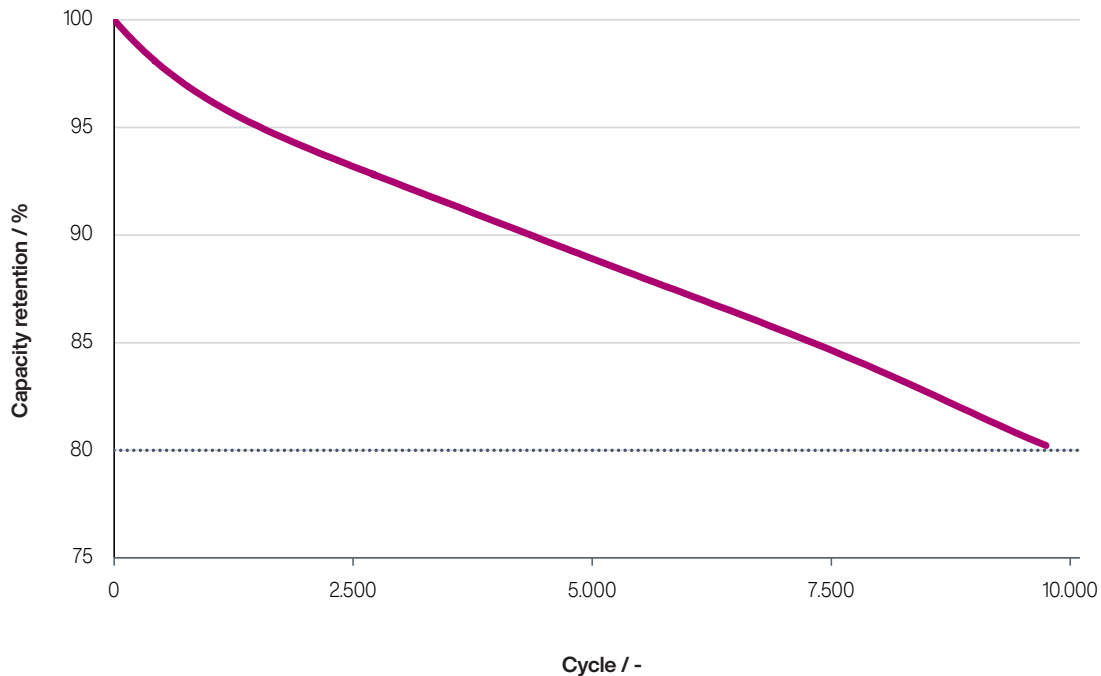
Item	Unit	Specification	Method
Fe	wt.-%	33.0 ± 1.5	ICP-OES
Li		4.4 ± 0.5	ICP-OES
P		18.8 ± 1.0	ICP-OES
C		3.7 ± 0.2	Combustion
PSD, d10	μm	3.0 ± 2	Laser
PSD, d50		11.0 ± 1.5	Laser
PSD, d90		24.0 ± 4.0	Laser
Na	ppm	≤ 400	ICP-OES
K		≤ 100	ICP-OES
Mg		≤ 110	ICP-OES
Ca		≤ 300	ICP-OES
Cr		≤ 100	ICP-OES
Cu		≤ 30	ICP-OES
Zn		≤ 110	ICP-OES
S		≤ 1200	ICP-OES
Moisture H ₂ O	ppm	≤ 800	Coulometric, 200 °C
Magnetic material	ppb	≤ 20	Magnetic balance
Tapped density	g/cm ³	1.2 ± 0.2	Tapped density tester
Specific surface area	m ² /g	22 ± 3	N ₂ Physisorption
pH	-	9 ± 2	5 g in 100 ml water

ELECTROCHEMICAL TESTS

Item	Unit	Specification	Method
Specific 2 nd discharge capacity at 0.1 C*	mAh/g	≥ 149	Coin cells
Coulomb efficiency 1 st cycle	%	≥ 95	Coin cells

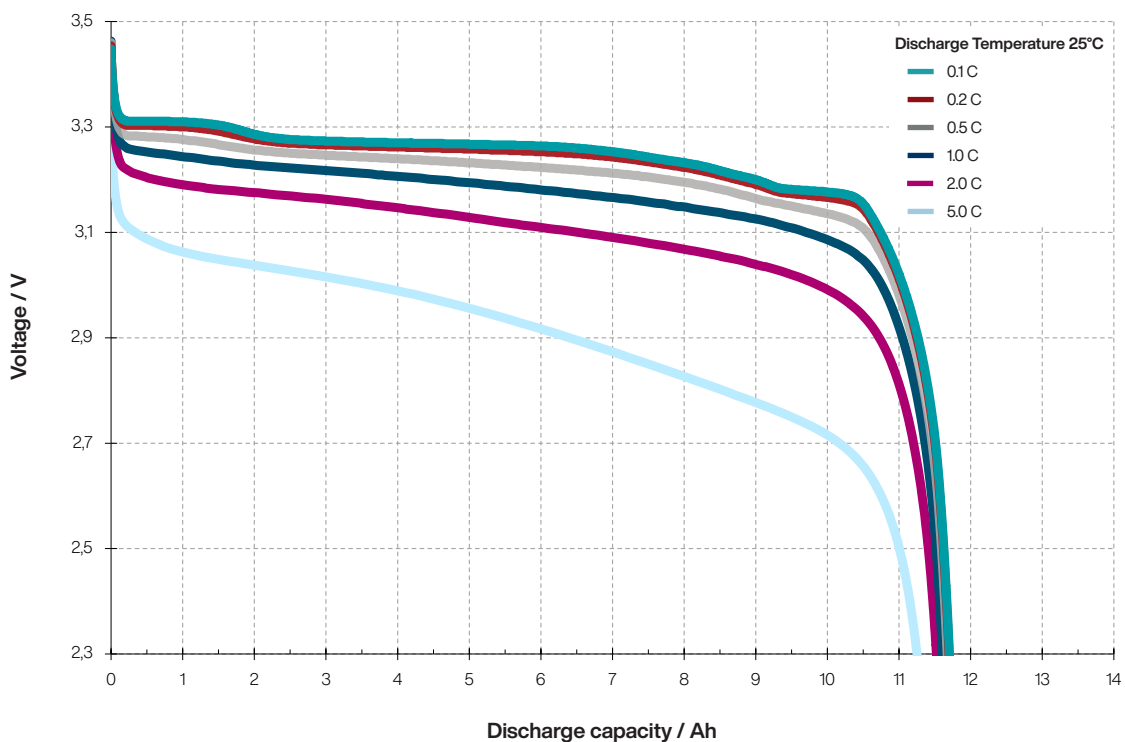
* Half cells, 25 °C, 8 mg/cm², LiPF₆ EC/DMC/DEC, 4.2 - 2.7 V

CYCLE LIFE (CYLINDRICAL CELLS)



Graphite anode, proprietary electrolyte, 80 A charge/discharge, 2.5-3.6 V

RATE PERFORMANCE (CYLINDRICAL CELLS)



C-Rate performance of IBUvolt® LFP400 vs graphite in a 4690 full cell format.
(92% CAM, 3 mAh/cm² loading)



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