

## Lithium Ion Battery Test Summary

LITHIUM CELLS OR BATTERIES TEST SUMMARY IN ACCORDANCE WITH  
SUB-SECTION 38.3 OF UN MANUAL OF TESTS AND CRITERIA

Product Manufacturer: MAFELL AG  
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Lithium Ion cells and Mafell Lithium-Ion-batteries Li-Power and LiHD have been successfully tested and comply with UN Model Regulation, Manual of Test and Criteria, Part III subsection 38.3

Performed tests			Results	
			Cells	Batteries
38.3.4.1	T1	Altitude Simulation	Pass	Pass
38.3.4.2	T2	Thermal Test	Pass	Pass
38.3.4.3	T3	Vibration	Pass	Pass
38.3.4.4	T4	Shock	Pass	Pass
38.3.4.5	T5	External Short Circuit	Pass	Pass
38.3.4.6	T6	Impact / Crush	Pass	Not applicable
38.3.4.7	T7	Overcharge	Not applicable	Pass
38.3.4.8	T8	Forced Discharge	Pass	Not applicable

The UN38.3 tests were performed at least by one of the following test houses and were tested to UN Manual Test and Criteria Revision 3 Amendment 1 or subsequent revisions or amendments.

<p>TÜV Rheinland InterCert Kft. Termék üzletág Villamos laboratórium Beke u. 41-43 H-1135 Budapest, Hungary</p> <p>Telephone: +36-1-461-1100 E-Mail: <a href="mailto:tuv@hu.tuv.com">tuv@hu.tuv.com</a> Web: <a href="http://www.tuv.hu">www.tuv.hu</a></p>	<p>Samsung SDI Safety Center 467, Beonyeong-ro Seobuk-gu, Cheonan-si Chungcheongnam-do, Korea</p> <p>Telephone: +82-41-560-3114 E-Mail: <a href="mailto:sdimaster@samsung.com">sdimaster@samsung.com</a> Web: <a href="http://www.samsungsdi.com">www.samsungsdi.com</a></p>
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## Product Test Information – Cells

Model	Physical Description	Weight	Rating	Testreport	
Number		[kg]	[Wh]	number	date
Samsung INR21700-40T	Li-ion cylindrical cell	0,067	14,4	SDI-UN-170306-01	2017-03-06
Samsung INR21700-30T	Li-ion cylindrical cell	0,070	10,8	SDI-UN-170331-01	2017-03-31
Samsung INR18650-20R	Li-ion cylindrical cell	0,045	7,2	SDI-UN-150630-03	2015-06-30

## Product Test Information – Batteries

Model	Physical Description	Weight	Rating	Testreport	
number		[kg]	[Wh]	number	date
Mafell Nr. 094442/094444 CAS 637362000 Base 316045190	Li-Ion, 10,8V - 2,0 Ah 3S1P, Li-Power	0,195	21,6	28249539 001	2019-04-07
Mafell Nr. 094443/094445 CAS 637363000 Base 321000270	Li-Ion, 10,8V - 4,0 Ah 3S2P, Li-Power	0,381	43,2	28246992 001	2018-09-21
Mafell Nr. 094499/094500 CAS 637306000 Base 321001190	Li-Ion, 18V - 4,0 Ah 5S1P, LiHD	0,583	72,0	28246518 001	2018-09-17
Mafell Nr. 094502/094503 CAS 637374000 Base 321001180	Li-Ion, 18V - 5,5 Ah 5S2P, LiHD	0,983	99,0	28246519 001	2018-09-11
Mafell Nr. 094497/094498 CAS 637304000 Base 321001170	Li-Ion, 18V – 8,0 Ah 5S2P, LiHD	0,976	144,0	28246520 001	2017-12-05

Name	Title	Signature
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