

## LITHIUM BATTERIES TEST SUMMARY

IN ACCORDANCE WITH SUB-SECTION 38.3 OF UN MANUAL OF TESTS AND CRITERIA

1	Product Manufacturer	Robert Bosch Power Tools GmbH Max-Lang-Straße 40-46 70771 Leinfelden-Echterdingen Germany +49-711-400-40990 kontakt@bosch.de www.bosch-pt.com
2	Model	Bosch Battery Pack GBA 18V
3	Voltage rating	18V
4	Ah rating	1.3 Ah / 1.5Ah / 2.0Ah / 2.5Ah 2.6Ah / 3.0Ah / 4.0Ah 5.0Ah /5.5Ah 6.0Ah / 6.3Ah / 7.0Ah 8.0Ah 12.0Ah
5	Wh rating	23.4Wh / 27.0 Wh / 36.0 Wh / 45.0 Wh 46.8 Wh / 54.0 Wh 72.0 Wh / 90.0 Wh / 99.0Wh 108.0Wh / 113.4Wh / 126.0Wh / 144.0Wh 216.0Wh


This model of Lithium ion batteries have been successfully tested and comply with the UN Model Regulations, Manual of Test and Criteria, Part III, subsection 38.3

PERFORMED TESTS		RESULTS
38.3.4.1 T1	Altitude Simulation	Passed
38.3.4.2 T2	Thermal Test	Passed
38.3.4.3 T3	Vibration	Passed
38.3.4.4 T4	Shock	Passed
38.3.4.5 T5	External Short Circuit	Passed
38.3.4.7 T7	Overcharge	Passed

(Note that tests T6 and T8 are not applicable to batteries.)

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The UN 38.3 tests were performed 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.

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<p>SGS Germany GmbH          Hofmannstr. 50          81379 München          Germany          +49 (0) 89 1250 406 4513          sgs.germany@sgs.com          www.sgsgroup.de</p>	<p>SLG Prüf und Zertifizierungs GmbH          Burgstädter Str. 20          09232 Hartmannsdorf          Germany          +49 (0 ) 3722 73230          service@slg.de.com          www.slg.de.com</p>
<p>SAMSUNG SDI CO LTD          467 BEONYEONG-RO SEOBUK-GU          CHEONAN-SI,          CHUNGHEONGNAM-DO 31086          KOREA          +82-41-560-3114          sdimaster@samsung.com          www.samsungsdi.com</p>	<p>VDE Prüf und Zertifizierungsinstitut GmbH          Goethering 43          63067 Offenbach / Main          Germany          +49 (0) 69 8306-0          vde-institut@vde.com          www.vde.com</p>
<p>Tüv Rheinland InterCert Kft.          Váci ut 48/A-B          1132 Budapest          Hungary          +36 1461 1100          tuv@hu.tuv.com          www.tuv.hu</p>	<p>Dynamis Batterien GmbH          Brühlstr. 15          78465 Dettingen / Konstanz          Germany          +049 (0) 7533 936690          info@dynamis-batterien.de          www.dynamis-batterien.de</p>
<p>SGS Malaysia Sdn. Bhd.          PLO 581, Jalan MIEL 2, Kawasan MIEL Pasir          Gudang Fasa 4          Pasir Gudang, Johor, 81700          Malaysia          +6(07) 2511 684          sgs.malaysia@sgs.com          www.sgs.com</p>	



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

Model numbers	Physical Description	Battery weight (kg)	Wh rating	Test report number	Test report date	Applicable UN Numbers acc. to UN Model Regulations	Delivered at max. 30% State of Charge
GBA 18V 1.3 Ah	Detachable slide in lithium-ion accumulator	0,328 0,336 0,323	23.4	D1HQ0003 70711 1151-11-MM-11-PP001_1	18.01.2011 06.07.2011 21.10.2011	UN3480/ UN3481	yes
GBA 18V 1.5 Ah BAT610 BAT610G BAT611	Detachable slide in lithium-ion accumulator	0,335 0,330 0,324 0,329 0,347 0,333	27.0	UN_T1-T5 und T7_MR_L_18V_L_G3_1Ah5_SDI15R_1st_P rePilot 90711 1087-12-MM-12-PP001 7191118958-EEC15 7191186692 - EEC18 7191179565 - EEC18 7191221970-EEC19	01.09.2010  06.07.2011 27.07.2012 12.08.2015 16.03.2018 23.07.2018 24.10.2019	UN3480/ UN3481	Yes
GBA 18V 2.0 Ah BAT612 B20V20	Detachable slide in lithium-ion accumulator	0,530 0,351 0,349 0,332 0,354  0,359 0,343 0,342 0,355 0,338 0,354 0,337 0,346	36.0	UN_014_19 1156-12-MM-MM-13-PP001 1157-12-MM-13-PP001 1102-13-MM-13-PP001 7191110841-EEC15-03_18V 2.0Ah (RX135) Test Report 7191129259-EEC16 7191138517-EEC16 7191195781 - EEC18 7191185676 - EEC18 CRSSFTY/00001(AD1)/20 28253332 001 CRSSFTY/00002/20 CRSSFTY/00013/20	01.09.2014 07.01.2013 08.01.2013 09.09.2013 15.04.2015  28.01.2016 22.06.2016 12.11.2018 13.07.2018 29.05.2020 25.06.2020 19.06.2020 31.07.2020	UN3480/ UN3481	Yes
GBA 18V 2.5 Ah	Detachable slide in lithium-ion accumulator	0,547	45.0	7191122247-EEC15	03.11.2015	UN3480/ UN3481	Yes
GBA 18V 2.6 Ah	Detachable slide in lithium-ion accumulator	0,580 0,590	46.8	22042011 110711	20.04.2011 07.07.2011	UN3480/ UN3481	Yes
GBA 18V 3.0 Ah	Detachable slide in lithium-ion accumulator	0,542 0,596 0,598 0,590 0,591 0,360 0,570	54.0	7191133214-EEC16 7191182265 - EEC18 1169-10-MM-11-PP002 UN_T1-T5 T7_MR_XL_18V_3Ah0_SDI15Q_G2_SCM 7191156955 - EEC17 7191141107-EEC16 CRSSFTY/00017/20	29.03.2016 11.10.2018 19.01.2011 31.10.2010 06.04.2017 22.06.2016 27.11.2020	UN3480/ UN3481	Yes



GBA 18V 4.0 Ah GBA18V40	Detachable slide in lithium-ion accumulator or	0,797	72.0	7191140894 - EEC16	12.07.2016	UN3480/ UN3481	yes
		0,797		7191125542-EEC15	30.09.2015		
		0,609		1170-12-MM-13-PP001	14.01.2013		
		0,600		7191121396-EEC15	28.09.2015		
		0,612		1104-13-MM-13-PP001	11.09.2013		
		0,623		7191129263-EEC16	28.01.2016		
		0,611		UN_014_17	29.07.2014		
		0,618		7191109813-EEC15	15.04.2015		
		0,600		7191145395 - EEC16	19.08.2016		
		0,600		7191145984 - EEC16	05.10.2016		
		0,620		7191146196 - EEC16	14.10.2016		
		0,527		7191205584 - EEC19	28.01.2019		
		0,537		UN_TR 28246834 001	10.10.2018		
		0,602		7191198628 - EEC18	19.10.2018		
		0,603		28253238 001	25.06.2020		
		0,593		CRSSFTY/00016/20	09.10.2020		
		0,600		CRSSFTY/00018/20	09.12.2020		
0,537	HU21Z8L0 001	14.04.2021					
0,533	CPSFTY/00008/21	19.03.2021					
0,603	HU21U493 001	29.09.2021					
0,533	CPSFTY/00018/21	09.09.2021					
0,537	HU21Z8L0 002	24.08.2021					
0,530	2021-40451-BESS-1-Rev.1	30.08.2021					
GBA 18V 5.0 Ah	Detachable slide in lithium-ion accumulator or	0,623	90.0	7191145588-EEC16	30.08.2016	UN3480/ UN3481	Yes
		0,630		7191145985 - EEC16	06.10.2016		
		0,626		UN_014_15	18.06.2014		
		0,620		UN_T1-T5 T7_MR XL 18V 5Ah0 SCM	21.11.2013		
		0,626		Sanyo NSX 133 PgP CW43_2013	30.03.2016		
		0,632		7191133829-EEC16	24.06.2019		
		0,667		7191212277 - EEC19	23.06.2020		
		0,605		28253283 001	23.09.2020		
0,667	CRSSFTY/00015/20	23.09.2020					
0,607	HU21M43X 001	04.03.2021					
0,607	CPSFTY/00015/21	26.07.2021					
GBA 18V 5.5 Ah	Detachable slide in lithium-ion accumulator or	0,900	99.0	28252834 001	06.05.2020	UN3480/ UN3481	Yes
		0,900		HU21XL0Z 001	26.10.2021		
GBA 18V 6.0 Ah	Detachable slide in lithium-ion accumulator or	0,830	108.0	7191145489 - EEC16	18.08.2016	UN3480/ UN3481	Yes
		0,628		7191091638_EEC14	12.08.2014		
		0,634		7191143768-EEC16	22.09.2016		
		0,638		7191187518 - EEC18	04.09.2018		
0,629	7191200830 - EEC18	29.11.2019					
GBA 18V 6.3 Ah GBA18V63	Detachable slide in lithium-ion accumulator or	0,803	113.4	7191136781-EEC16	13.05.2016	UN3480/ UN3481	Yes

GBA 18V 7.0 Ah	Detachable slide in lithium-ion accumulator	0,833	126.0	TR 28238951 001	09.06.2017	UN3480/ UN3481	Yes
GBA 18V 8.0 Ah GBA18V80	Detachable slide in lithium-ion accumulator	0,990 0,986 0,986 0,962 0,990	144.0	259732-TL7-2 28247959 002 HU212FFJ 002 CPSFTY/00021/21 2021-40462-BESS-1	14.03.2019 26.03.2019 08.11.2021 09.09.2021 26.08.2021	UN3480/ UN3481	Yes
GBA 18V 12.0 Ah GBA18V120	Detachable slide in lithium-ion accumulator	1,380 1,370	216.0	259043-TL7-1 CRSSFTY/00007/21	12.02.2019 08.03.2021	UN3480/ UN3481	Yes

All lithium batteries and cells shown in before-mentioned table were designed and manufactured in accordance with Section 2.9.4 of the UN Recommendations on the Transport of Dangerous Goods.