

## UN 38.3 TEST REPORT SUMMARY

We herewith confirm that each battery of this type is proved to meet the requirements of applicable tests in the UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, Part III, Sub-Section 38.3.

In the following, lithium battery test summary according to Sub-Section 38.3.5

- (a), (b) Manufacturer: Husqvarna Poland Sp. z.o.o  
Ul. COP-u 6  
39-300 Mielec  
Poland  
Phone: +48 698 935-332  
E-Mail: jakub.podolski@husqvarnagroup.com  
Webpage: www.husqvarnagroup.com
- Customer: Husqvarna AB  
Drottningatan 2  
561-82 Huskvarna  
Sweden  
Phone: +46 8 738 90 00  
Fax: +46 8 738 9450  
E-Mail: contact@husqvarnagroup.com  
Webpage: www.husqvarnagroup.com
- (c) Test laboratory: Batteryuniversity GmbH  
Am Sportplatz 30  
63791 Karlstein am Main  
Germany  
Phone: +49 6188 – 99410-0  
Fax: +49 6188 – 99410-20  
E-Mail: mail@bu-lab.eu  
Webpage: www.bu-lab.eu
- (d) Report reference no.: BU-202200347-B1
- (e) Date of test report: December 12, 2022
- (f) Description of devices under test:
- |                            |  |
|----------------------------|--|
| (i) Type:                  | Lithium ion batteries                              |
| (ii) Mass of battery:      | 1449 g   |
| (iii) Watt-hour rating:    | 216 Wh   |
| (iv) Physical description: | 10S2P INR18650HJ2 LG; rechargeable battery         |
| (v) Model numbers:         | 40-B220X; 970 60 78-01; 970 60 78-02; 970 60 78-03 |
- (g) Performed tests:
- |                             |                |
|-----------------------------|----------------|
| T.1 Altitude simulation:    | Passed         |
| T.2 Thermal test:           | Passed         |
| T.3 Vibration:              | Passed         |
| T.4 Shock:                  | Passed         |
| T.5 External short circuit: | Passed         |
| T.6 Impact/Crush:           | Not applicable |
| T.7 Overcharge:             | Passed         |
| T.8 Forced discharge:       | Not applicable |
- (h) Reference to assembled battery testing requirements: Not applicable
- (i) Applied standard: UN ST/SG/AC.10/11/Rev.7  
Recommendations of the TRANSPORT OF DANGEROUS GOODS, Manual of Tests and Criteria, Part III, section 38.3, Lithium metal and lithium ion batteries

(j) Signature:

December 12, 2022

Klaus Heck, Managing Director

**Lithium cell or battery test summary in accordance with sub-section 38.3 of UN Manual of Tests and Criteria**



**Manufacturer's identification:**

**Name:** ..... : HUSQVARNA AB  
**Address**..... : EMFHR, SE 561 82 HUSKVARNA Jonkopings lan, SWEDEN  
**Phone number**..... : +46 (0)36 364 275  
**Email**..... : daniel.stenholm@husqvarnagroup.com  
**Website** ..... : www. husqvarnagroup.com

**Testing laboratory:**

**Name**..... : UL International Polska sp. z o.o.  
**Address**..... : Równoległa 4, PL-02-235 Warszawa, Poland  
**Phone number**..... : +48223363300  
**Email**..... : info.pl@ul.com  
**Website** ..... : https://poland.ul.com

**Test report number.** ..... : UN-4791391155-A-1  
**Test report date** ..... : 2024-12-13  
**Edition of UN Manual of Tests and Criteria used** ..... : ST/SG/AC.10/11/Rev.8, Manual of Tests and Criteria, Revision 8, Issue Date 11/2023

**Test item:**  cell /  battery /  product  
**Physical description**..... : Small, 10S3P Li-Ion ion secondary battery with plastic housing and protection circuit (equipped with 30 cells type E-One Moli Energy Corp, INR-21700-P50B previously tested under UN 38.3)  
**Chemistry and type** ..... :  lithium metal /  lithium ion  primary /  secondary  
**Mass**..... : 2.85 kg  
**Lithium content (for lithium metal)**..... : N/A  
**Wh rating (for lithium ion)**..... : 540 Wh  
**Cell configuration (X-S/Y-P)** ..... : 10-S/3-P  
**Model / type reference**..... : 40-B540X where X can be a letter or blank, not safety relevant, Type B4-1  
**Ratings**..... : 36VDC, 15Ah

**List of tests conducted and results:** (Pass, Fail, or N/A - not applicable)

**T.1: Altitude simulation** ..... : Pass  
**T.2: Thermal test** ..... : Pass  
**T.3: Vibration** ..... : Pass  
**T.4: Shock** ..... : Pass  
**T.5: External short circuit** ..... : Pass  
**T.6:  Impact /  Crush**..... : N/A (only applicable to cells)  
**T.7: Overcharge**..... : Pass  
**T.8: Forced discharge**..... : N/A (only applicable to cells)

**Remarks** ..... : N/A

**Assembled battery testing** ..... :  UN 38.3.3 (f) /  UN 38.3.3 (g) /  N/A

**Test summary date** ..... : 2024-12-13

<b>Test summary by (name + title + signature)</b> ..... :	Robert Dmitruk Senior Project Engineer	
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<b>Approved by (name + title + signature)</b> ..... :	Michał Barszczak Lead Project Engineer	
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[set]

**Lithium cell or battery test summary in accordance with sub-section 38.3 of UN Manual of Tests and Criteria**



**Manufacturer's identification:**

Name: ..... : HUSQVARNA AB  
Address..... : EMFHR, SE 561 82 HUSKVARNA Jonkopings lan, SWEDEN  
Phone number..... : +46 (0)36 364 275  
Email..... : Therese.Berg@husqvarnagroup.com  
Website ..... : www. husqvarnagroup.com

**Testing laboratory:**

Name..... : UL International Polska sp. z o.o.  
Address..... : Równoległa 4, PL-02-235 Warszawa, Poland  
Phone number..... : +48223363300  
Email..... : info.pl@ul.com  
Website ..... : https://poland.ul.com

Test report number. .... : UN-4791157660.1  
Test report date ..... : 2024-02-26  
Edition of UN Manual of Tests and Criteria used ..... : ST/SG/AC.10/11/Rev.7/Amend.1, Manual of Tests and Criteria, Edition 7, AMD 1, Revision Date 09/17/2021

Test item:  cell /  battery /  product  
Physical description..... : Small, 10S2P Li-Ion ion secondary battery with plastic housing and protection circuit (equipped with 20 cells type E-One, INR-21700-P45B previously tested under UN 38.3)  
Chemistry and type ..... :  lithium metal /  lithium ion  primary /  secondary  
Mass..... : 1947.07g  
Lithium content (for lithium metal)..... : N/A  
Wh rating (for lithium ion)..... : 324 Wh  
Cell configuration (X-S/Y-P) ..... : 10-S/2-P  
Model / type reference..... : 40-B330X where X can be a letter or blank, not safety relevant, Type B3-1  
Ratings..... : 36VDC, 9Ah

List of tests conducted and results: (Pass, Fail, or N/A - not applicable)  
T.1: Altitude simulation ..... : Pass  
T.2: Thermal test ..... : Pass  
T.3: Vibration ..... : Pass  
T.4: Shock ..... : Pass  
T.5: External short circuit ..... : Pass  
T.6:  Impact /  Crush..... : N/A (only applicable to cells)  
T.7: Overcharge..... : Pass  
T.8: Forced discharge..... : N/A (only applicable to cells)  
Remarks ..... : N/A  
Assembled battery testing..... :  UN 38.3.3 (f) /  UN 38.3.3 (g) /  N/A

Test summary date .....	2024-02-26	
Test summary by (name + title + signature).....	Robert Dmitruk Senior Project Engineer	
Approved by (name + title + signature).....	Pawel Ciuba Staff Engineer	

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