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Lithium battery test summary and supplier inquiry

In accordance with sub-section 38.3 of manual of tests and criteria

Description	
Name / Description of battery	40102 AQPAK 1S1P
Name / Description of the cells inside the battery	INR18650-35E3
Type of battery	Lithium ion battery
Model numbers	40102 AQPAK 1S1P

Manufacturer of battery	
Name	FSM AG
Address	Erich-Rieder-Straße 2, 79199 Kirchzarten, Germany
Phone	+49 7661 98550
Email	info@fsm.ag
Website	www.fsm.ag

Manufacturer of the equipment (if the battery is contained in equipment)	
Name	STORZ & BICKEL GmbH & Co. KG
Address	In Grubenäcker 5-9, 78532 Tuttlingen, Germany
Phone	+49 7461 9697070
Email	info@storz-bickel.com
Website	www.storz-bickel.com

Test laboratory of battery	
Name	SAMSUNG SDI Safety Center
Address	467, Beonyeong-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do, Korea
Phone	+82-41-560-3114
Email	sdimaster@samsung.com
Website	www.samsungsdi.com

Description	
Unique test report identification number	SDI-UN-180214-01
Date of test report	2018/02/14
Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto	UN Manual of Tests and Criteria, Part III, Section 38.3, Lithium metal and lithium ion batteries (UN ST/SG/AC.10/11/Rev.6)

Description of battery

Parameters	
Mass in gram (g)	50 g
Indicate watt-hour rating (Wh)	12,2 Wh

Physical description of battery
Single cell in a white shrinking tube with two external connectors.

Tests and results

List of tests conducted and results	N/A	pass	fail
T1 – Altitude simulation	☐	☒	☐
T2 – Thermal Test	☐	☒	☐
T3 – Vibration	☐	☒	☐
T4 – Shock	☐	☒	☐
T5 – External Short Circuit	☐	☒	☐
T6 – Impact – for cylindrical cells having a diameter of at least 18 mm	☐	☒	☐
T6 – Crush – for prismatic cells, pouch cells, button cells and cylindrical cells having a diameter of less than 18 mm	☒	☐	☐
T7 - Overcharge	☒	☐	☐
T8 – Forced Discharge, only valid for cells	☐	☒	☐

UN 38.3 Test Confirmation for the cells inside the battery		
When no separate document for the cells is provided, this confirms that the cells inside the battery have successfully passed the UN 38.3 test. In this case, under checkpoint above the T6 and T8 must be marked as „passed“ and here „Cell UN 38.3 Test confirmed“ needs to be ticked.	☒ Cell UN 38.3 Test confirmed	☐ Cell UN 38.3 Test not confirmed

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Additional supplier inquiry

Quality management system for manufacturing batteries	Yes	No
Does the manufacturer of the battery manufacture the products based on a documented quality management system according to transport regulations?	☒	☐

Is the following parameter exceeded?	Yes	No
Lithium ion battery: more than 100 Wh	☐	☒

When checkpoint above has been ticked "Yes", the following checkpoints need to be answered.	N/A	Yes	No
Does each battery incorporates a safety venting device or is designed to preclude a violent rupture under normal conditions of carriage?		☐	☐
Is each battery equipped with an effective means of preventing external short circuits?		☐	☐
Is each battery containing cells or series of cells connected in parallel equipped with effective means as necessary to prevent dangerous reverse current flow (e.g. diodes, fuses, etc.)?	☐	☐	☐

Only in air transport: State of Charge (SoC) für UN 3480 Lithium ion batteries and lithium polymer batteries	N/A	Yes	No
State of Charge (SoC) max. 30 %	☐	☒	☐

Kirchzarten, 13.02.2020

Place and date of issue

Franziska Fritz, Project Manager

Name and signature of authorized person