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TC-6228

TEST REPORT	
Test Report No.....:	ULR-TC622824000000577F
Date of report issue.....:	07/05/2024
Total number of pages.....:	22
Testing Laboratory.....:	Intertek India Private Limited
Address.....:	E-26, Block B1, Mohan Co-Operative Industrial Area, Mathura Road, New Delhi -110044, India
Location of Performance of Testing.:	E-26, Block B1, Mohan Co-Operative Industrial Area, Mathura Road, New Delhi -110044, India
Customer / Applicant's name.....:	NAVYUG NAMDHARI ECO DRIVE PRIVATE LIMITED
Address.....:	PLOT NO.C-186A, PHASE-VI, Focal Point, Ludhiana, Punjab,141010
Discipline.....:	Electrical
Product Group.....:	Cells and Batteries
Test specification:	
Standard(s).....:	UN 38.3 (ST/SG/AC.10/11/Rev.7): 2019
Non-standard test method.....:	N/A
Test Report Form Number.....:	LFT-APAC-IN-OP-10t
Version.....:	19 Mar 2024
Test item description.....:	Rechargeable Li-ion Battery
Trademark.....:	INNE
Manufacturer.....:	STEFEN ELECTRIC PRIVATE LIMITED
Model/Type reference.....:	SB360968A15
Ratings.....:	36V, Rated Capacity: 9.68Ah, Typical Capacity: 10.2Ah
Tested by (Name + Signature+ Function).....:	Vineet Singh (Senior Engineer)
Reviewed & Authorized by (Name + Signature + Function)..... :	Ansar Rizwi (Asst. Manager)
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Test Report No.: ULR-TC622824000000577F

General product information: Rechargeable Li-ion Battery

Model No:	SB360968A15
Nominal Voltage & Rated Capacity	36V, 9.68Ah (10S 4P)
Typical Capacity	36V, 10.2Ah
Charging Voltage	42V @4.2V/cell
Lower Cut off Voltage	30V
Energy Density	348.48Wh (Rated Energy)
Cont. Charge Current Rating	2A @ 0~45°C max.
Cont. Discharge Current Rating	3 ~ 4A
BMS protection at charging current	7 ± 1A @ 2sec
BMS protection at Discharging current	42 ± 4A @ 2Sec
BMS protection at Charging Voltage	42.5 ± 0.5V
BMS protection at Discharging Voltage	28 ± 2V
Max Continuous Discharge Current	12A (upto 10 sec.)
Storage Temperature	10 to 35 deg C
Operating Temperature	Charging : 0 to 45 deg C
	Discharging : -10 to 50 deg C
BMS Features	
Over Charge Protection	42V ± 0.5V
Over Discharge Protection	28V ± 0.5V(BMS level)
Short Circuit Protection	Yes (by BMS)
Over Current Protection	20A (for 1.5 sec)
O/P Wires	1.5Sq. mm Silicone wires for Power Output Terminals.
Over Temperature Protection	Yes (For Discharge @65degC and charge @55degC) By 1 Temp. Sensors
Reverse Polarity Protection	Yes
CAN comm.	NA

Testing:	
Date of receipt of test sample(s).....:	17.04.2024
Condition of sample on receipt	Physically Good
Sample Identification no(s).....:	D26240417-002-017
Sample Serial no(s).....:	--
Date(s) of performance of test(s).....:	18.04.2024 to 07.05.2024
Laboratory conditions:	
Ambient Temperature.....:	20±5°C
Relative Humidity.....:	45 to 75 % Rh
General remarks (if any):	
<p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.</p> <p>Intertek is responsible only for reporting measured value (results). Rest information is reported as provided by customer.</p>	
Remarks (if any): The results tabulated in this report are representative of the actual test sample(s) submitted for this report only.	

➤ **Test Item:**

<input checked="" type="checkbox"/> T1. Altitude Simulation	<input checked="" type="checkbox"/> T5. External Short Circuit
<input checked="" type="checkbox"/> T2. Thermal Test	<input type="checkbox"/> T6. Impact <input type="checkbox"/> Crush
<input checked="" type="checkbox"/> T3. Vibration	<input checked="" type="checkbox"/> T7. Overcharge
<input checked="" type="checkbox"/> T4. Shock	<input type="checkbox"/> T8. Forced Discharge

➤ **Test Method:**

Tests T.1 to T.5 shall be conducted in sequence on the same cell or battery. Tests T.6 and T.8 shall be conducted using not otherwise tested cells or batteries. Test T.7 may be conducted using undamaged batteries previously used in Tests T.1 to T.5 for purpose of testing on cycled batteries.

➤ **Specification Section T1 to T5 & T7:**

Ist Cycle Charged Samples (T1 to T5) & T7	25 th Cycle Charged Samples (T1 to T5) & T7
D26240417-002	D26240417-010
D26240417-003	D26240417-011
D26240417-004	D26240417-012
D26240417-005	D26240417-013
D26240417-006	D26240417-014
D26240417-007	D26240417-015
D26240417-008	D26240417-016
D26240417-009	D26240417-017

➤ **Result Summary:**

The Tested sample meets the test requirement. See below breakout for test performed.

Specification Section	Test Description	Results
T1	Altitude Simulation	Pass
T2	Thermal Test	Pass
T3	Vibration	Pass
T4	Shock	Pass
T5	External Short Circuit	Pass
T7	Overcharge	Pass

Sr. No.	Equipment ID	Equipment Description	Calibration Due Date
1	ETL-BAT-001	Pneumatic Shock and Bump Testing Machine	Verified Before Use
2	ETL-BAT-004	Accelerometer shock measurement	31.06.2024
3	ETL-BAT-006	Vibration Test System	Verified Before Use
4	ETL-BAT-008	ICP type accelero-meter	27.02.2025
5	ETL-BAT-018	Altitude Simulation System	15.08.2024
6	ETL-BAT-019	Bunker	Verified Before Use
7	ETL-BAT-022	True Rms Multimeter	22.07.2024
8	ETL-BAT-029	Stopwatch	21.05.2024
9	ETL-BAT-070	Humidity/Baro/Temp.Data Recorder	18.07.2024
10	ETL-LED-0335	Climatic chamber	11.02.2025
11	ETL-BAT-032	Weighing Balance	17.07.2024
12	ETL-LED-0027	Data logger with module	06.06.2024
13	ETL-BAT-054	Regenerative Battery Pack Test System	07.08.2024
14	ETL-BAT-012-016	Programmable DC Power Supply	07.08.2024
15	ETL-BAT-068	External Short circuit Enclosure	Verified Before Use

38.3.1	Purpose		—								
38.3.2	Scope.....	See below	—								
38.3.2.1	Lithium cells or batteries type	The EUT is battery pack type	P								
	(a) A change of more than 0.1 g or 20% by mass (b) A change would materially affect the test results shall be considered a new type and shall be subjected to the required tests.		N/A								
	If a lithium cell or battery type does not meet one or more of the test requirements, steps shall be taken to correct the deficiency or deficiencies that caused the failure before such cell or battery type is retested.		N/A								
38.3.2.2	Definitions.....	The EUT is 2.5kg approx.	—								
	Mass loss limit <table border="1"><thead><tr><th>Mass M of cell or battery</th><th>Mass loss limit</th></tr></thead><tbody><tr><td>M < 1 g</td><td>0.5 %</td></tr><tr><td>1 g ≤ M ≤ 75 g</td><td>0.2 %</td></tr><tr><td>M > 75 g</td><td>0.1 %</td></tr></tbody></table>	Mass M of cell or battery	Mass loss limit	M < 1 g	0.5 %	1 g ≤ M ≤ 75 g	0.2 %	M > 75 g	0.1 %		—
Mass M of cell or battery	Mass loss limit										
M < 1 g	0.5 %										
1 g ≤ M ≤ 75 g	0.2 %										
M > 75 g	0.1 %										
38.3.3	Number and condition of cells and batteries of each type to be tested	See below	—								
	When batteries that have passed all applicable tests are electrically connected to form a battery assembly in which the aggregate lithium content of all anodes, when fully charged, is more than 500 g, or in the case of a lithium ion battery, with a Watt-hour rating of more than 6200 Watt-hours, that battery assembly does not need to be tested if it is equipped with a system capable of monitoring the battery assembly and preventing short circuits, or over discharge between the batteries in the assembly and any overheat or overcharge of the battery assembly.	The EUT is not such battery	N/A								
38.3.4.1	Test 1: Altitude simulation	See below	P								
38.3.4.1.1	Purpose: This test simulates air transport under low-pressure conditions.....	11.6kPa	—								
38.3.4.1.2	Test procedure: Test cells and batteries shall be stored at a pressure of 11.6 kPa or less for at least six hours at ambient temperature (20 ± 5 °C).....	23.9°C	—								
38.3.4.1.3	Requirement: Cells and batteries meet this requirement if there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.	The EUT meets the requirement (See appended table T1)	P								

38.3.4.2	Test 2: Thermal test	See below	P
38.3.4.2.1	Purpose: This test assesses cell and battery seal integrity and internal electrical connections. The test is conducted using rapid and extreme temperature changes.....		—
38.3.4.2.2	Test procedure: Test cells and batteries are to be stored for at least six hours at a test temperature equal to $72 \pm 2^{\circ}\text{C}$, followed by storage for at least six hours at a test temperature equal to $-40 \pm 2^{\circ}\text{C}$. The maximum time interval between test temperature extremes is 30 minutes. This procedure is to be repeated until 10 total cycles are complete, after which all test cells and batteries are to be stored for 24 hours at ambient temperature ($20 \pm 5^{\circ}\text{C}$). For large cells and batteries, the duration of exposure to the test temperature extremes should be at least 12 hours.....		—
38.3.4.2.3	Requirement: Cells and batteries meet this requirement if there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.	The EUT meets the requirement (See appended table T2)	P

38.3.4.3	Test 3: Vibration	See below	P
38.3.4.3.1	Purpose: This test simulates vibration during transport.....		—
38.3.4.3.2	<p>Test procedure:</p> <p>Cells and batteries are firmly secured to the platform of the vibration machine without distorting the cells in such a manner as to faithfully transmit the vibration. The vibration shall be a sinusoidal waveform with a logarithmic sweep between 7 Hz and 200 Hz and back to 7 Hz traversed in 15 minutes. This cycle shall be repeated 12 times for a total of 3 hours for each of three mutually perpendicular mounting positions of the cell. One of the directions of vibration must be perpendicular to the terminal face.</p> <p>The logarithmic frequency sweep shall differ for cells and batteries with a gross mass of not more than 12 kg (cells and small batteries), and for batteries with a gross mass of more than 12 kg (large batteries).</p> <p>For cells and small batteries: from 7 Hz a peak acceleration of 1 g_n is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm (1.6 mm total excursion) and the frequency increased until a peak acceleration of 8 g_n occurs (approximately 50 Hz). A peak acceleration of 8 g_n is then maintained until the frequency is increased to 200 Hz.</p> <p>For large batteries: from 7 Hz to a peak acceleration of 1 g_n is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm (1.6 mm total excursion) and the frequency increased until a peak acceleration of 2 g_n occurs (approximately 25 Hz). A peak acceleration of 2 g_n is then maintained until the frequency is increased to 200 Hz.....</p>		—
38.3.4.3.3	<p>Requirement:</p> <p>Cells and batteries meet this requirement if there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire during the test and after the test and if the open circuit voltage of each test cell or battery directly after testing in its third perpendicular mounting position is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.</p>	The EUT meets the requirement (See appended table T3)	P

38.3.4.4	Test 4: Shock	See below	P
38.3.4.4.1	Purpose This test simulates possible impacts during transport.....		—
38.3.4.4.2	Test procedure: Test cells and batteries shall be secured to the testing machine by means of a rigid mount which will support all mounting surfaces of each test battery. Each cell shall be subjected to a half-sine shock of peak acceleration of 150 g _n and pulse duration of 6 milliseconds. Alternatively, large cells may be subjected to a half-sine shock of peak acceleration of 50 g _n and pulse duration of 11 milliseconds. Each battery shall be subjected to a half-sine shock of peak acceleration depending on the mass of the battery. The pulse duration shall be 6 milliseconds for small batteries and 11 milliseconds for large batteries. Each cell or battery shall be subjected to three shocks in the positive direction followed by three shocks in the negative direction of three mutually perpendicular mounting positions of the cell or battery for a total of 18 shocks.....		—
38.3.4.4.3	Requirement: Cells and batteries meet this requirement if there is no mass loss, no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.	The EUT meets the requirement (See appended table T4)	P

38.3.4.5	Test 5: External short circuit	See below	P
38.3.4.5.1	Purpose: This test simulates an external short circuit.....		—
38.3.4.5.2	Test procedure: The cell or battery to be tested shall be heated for a period of time necessary to reach a homogeneous stabilized temperature of 57 ± 4 °C, measured on the external case. This period of time depends on the size and design of the cell or battery and should be assessed and documented. If this assessment is not feasible, the exposure time shall be at least 6 hours for small cells and small batteries, and 12 hours for large cells and batteries. Then the cell or battery at 57 ± 4 °C shall be subjected to one short circuit condition with a total external resistance of less than 0.1 ohm. This short circuit condition is continued for at least one hour after the cell or battery external case temperature has returned to 57 ± 4 °C or in the case of the large batteries, has decreased by half of the maximum temperature increase observed during the test and remains below that value		—
38.3.4.5.3	Requirement: Cells and batteries meet this requirement if their external temperature does not exceed 170 °C and there is no disassembly, no rupture and no fire during the test and within six hours after the test.	The EUT meets the requirement (See appended table T5)	P

38.3.4.6	Test 6: Impact / Crush	The EUT is a battery type	N/A
38.3.4.6.1	<p>Purpose:</p> <p>These tests simulate mechanical abuse from an impact or crush that may result in an internal short circuit.....</p>		—
38.3.4.6.2	<p>Test procedure:</p> <p>Impact (applicable to cylindrical cells not less than 18.0 mm in diameter)</p> <p>The sample cell or component cell is to be placed on a flat smooth surface. A 15.8 mm \pm 0.1mm diameter, at least 6 cm long, or the longest dimension of the cell, whichever is greater, Type 316 stainless steel bar is to be placed across the centre of the sample. A 9.1 kg \pm 0.1 kg mass is to be dropped from a height of 61 \pm 2.5 cm at the intersection of the bar and sample in a controlled manner using a near frictionless, vertical sliding track or channel with minimal drag on the falling mass. The vertical track or channel used to guide the falling mass shall be oriented 90 degrees from the horizontal supporting surface.</p> <p>The test sample is to be impacted with its longitudinal axis parallel to the flat surface and perpendicular to the longitudinal axis of the 15.8 mm \pm 0.1mm diameter curved surface lying across the centre of the test sample. Each sample is to be subjected to only a single impact.</p>		—

38.3.4 6.3	<p>Test procedure:</p> <p>Crush (applicable to prismatic, pouch, coin/button cells and cylindrical cells less than 18 mm in diameter)</p> <p>A cell or component cell is to be crushed between two flat surfaces. The crushing is to be gradual with a speed of approximately 1.5 cm/s at the first point of contact. The crushing is to be continued until the first of the three options below is reached.</p> <p>(a) The applied force reaches 13 kN \pm 0.78 kN; Example: The force shall be applied by a hydraulic ram with a 32 mm diameter piston until a pressure of 17 MPa is reached on the hydraulic ram.</p> <p>(b) The voltage of the cell drops by at least 100 mV; or</p> <p>(c) The cell is deformed by 50% or more of its original thickness.</p> <p>Once the maximum pressure has been obtained, the voltage drops by 100 mV or more, or the cell is deformed by at least 50% of its original thickness, the pressure shall be released.</p> <p>A prismatic or pouch cell shall be crushed by applying the force to the widest side. A button/coin cell shall be crushed by applying the force on its flat surfaces. For cylindrical cells, the crush force shall be applied perpendicular to the longitudinal axis.</p> <p>Each test cell or component cell is to be subjected to one crush only. The test sample shall be observed for a further 6 h. The test shall be conducted using test cells or component cells that have not previously been subjected to other tests.....</p>		N/A
38.3.4 6.4	<p>Requirement:</p> <p>Cells and component cells meet this requirement if their external temperature does not exceed 170 °C and there is no disassembly and no fire during the test and within six hours after this test.</p>		N/A

38.3.4.7	Test 7: Overcharge	See Below	P
38.3.4.7.1	Purpose: This test evaluates the ability of a rechargeable battery or a single cell rechargeable battery to withstand an overcharge condition.....		—
38.3.4.7.2	Test procedure The charge current shall be twice the manufacturer's recommended maximum continuous charge current. The minimum voltage of the test shall be as follows: (a) When the manufacturer's recommended charge voltage is not more than 18V, the minimum voltage of the test shall be the lesser of two times the maximum charge voltage of the battery or 22V. (b) When the manufacturer's recommended charge voltage is more than 18V, the minimum voltage of the test shall be 1.2 times the maximum charge voltage. Tests are to be conducted at ambient temperature. The duration of the test shall be 24 hours.....		—
38.3.4.7.3	Requirement: Rechargeable batteries meet this requirement if there is no disassembly and no fire during the test and within seven days after the test.	The EUT meets the requirement (See appended table T7)	P

38.3.4.8	Test 8: Forced discharge	The EUT is a battery type	N/A
38.3.4.8.1	Purpose: This test evaluates the ability of a primary or a rechargeable cell to withstand a forced discharge condition.....		—
38.3.4.8.2	Test procedure: Each cell shall be forced discharged at ambient temperature by connecting it in series with a 12V D.C. power supply at an initial current equal to the maximum discharge current specified by the manufacturer. The specified discharge current is to be obtained by connecting a resistive load of the appropriate size and rating in series with the test cell. Each cell shall be forced discharged for a time interval (in hours) equal to its rated capacity divided by the initial test current (in ampere).		—
38.3.4.8.3	Requirement: Primary or rechargeable cells meet this requirement if there is no disassembly and no fire during the test and within seven days after the test.		N/A

Table T1: Altitude simulation							P
Sample ID / Model No.	Voltage Pre-Test [VDC]	Voltage after Test [VDC]	% Change (<10%)	Weight Pre Test [g] or [kg]	Weight after Test [g] or [kg]	% Change (<0.1%)	Observation1)
1 Cycle Charged Sample							
D26240417-002	41.63	41.62	No	2.456	2.456	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-003	41.58	41.58	No	2.477	2.477	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-004	41.71	41.70	No	2.478	2.478	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-005	41.88	41.87	No	2.474	2.474	No	NL, NV, ND, NR, NF, NM, NVL
25th Cycle Charged Sample							
D26240417-010	41.56	41.56	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-011	41.79	41.78	No	2.466	2.466	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-012	41.62	41.62	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-013	41.86	41.87	No	2.443	2.443	No	NL, NV, ND, NR, NF, NM, NVL
Note: 1) Requirements: NL, NV, ND, NR, NF, NM, NVL NL: No leakage, NV: No venting, ND: No disassembly, NR: No rupture, NF: No fire, NM: No mass loss, NT: No excessive temperature rise, NVL: No Voltage Loss							

Table T2: Thermal Test							P
Sample ID / Model No.	Voltage Pre-Test [VDC]	Voltage after Test [VDC]	% Change (<10%)	Weight Pre Test [g] or [kg]	Weight after Test [g] or [kg]	% Change (<0.1%)	Observation1)
1 Cycle Charged Sample							
D26240417-002	41.62	41.32	No	2.456	2.456	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-003	41.58	41.18	No	2.477	2.477	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-004	41.70	41.41	No	2.478	2.478	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-005	41.87	41.58	No	2.474	2.474	No	NL, NV, ND, NR, NF, NM, NVL
25th Cycle Charged Sample							
D26240417-010	41.56	41.22	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-011	41.78	41.49	No	2.466	2.466	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-012	41.62	41.35	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-013	41.87	41.55	No	2.443	2.443	No	NL, NV, ND, NR, NF, NM, NVL
Note: 1) Requirements: NL, NV, ND, NR, NF, NM, NVL NL: No leakage, NV: No venting, ND: No disassembly, NR: No rupture, NF: No fire, NM: No mass loss, NT: No excessive temperature rise, NVL: No Voltage Loss							

Table T3: Vibration Test							P
Sample ID / Model No.	Voltage Pre-Test [VDC]	Voltage after Test [VDC]	% Change (<10%)	Weight Pre Test [g] or [kg]	Weight after Test [g] or [kg]	% Change (<0.1%)	Observation1)
1 Cycle Charged Sample							
D26240417-002	41.32	41.31	No	2.456	2.456	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-003	41.18	41.18	No	2.477	2.477	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-004	41.41	41.40	No	2.478	2.478	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-005	41.58	41.57	No	2.474	2.474	No	NL, NV, ND, NR, NF, NM, NVL
25th Cycle Charged Sample							
D26240417-010	41.22	41.21	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-011	41.49	41.49	No	2.466	2.466	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-012	41.35	41.35	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-013	41.55	41.54	No	2.443	2.443	No	NL, NV, ND, NR, NF, NM, NVL
Note: 1) Requirements: NL, NV, ND, NR, NF, NM, NVL NL: No leakage, NV: No venting, ND: No disassembly, NR: No rupture, NF: No fire, NM: No mass loss, NT: No excessive temperature rise, NVL: No Voltage Loss							

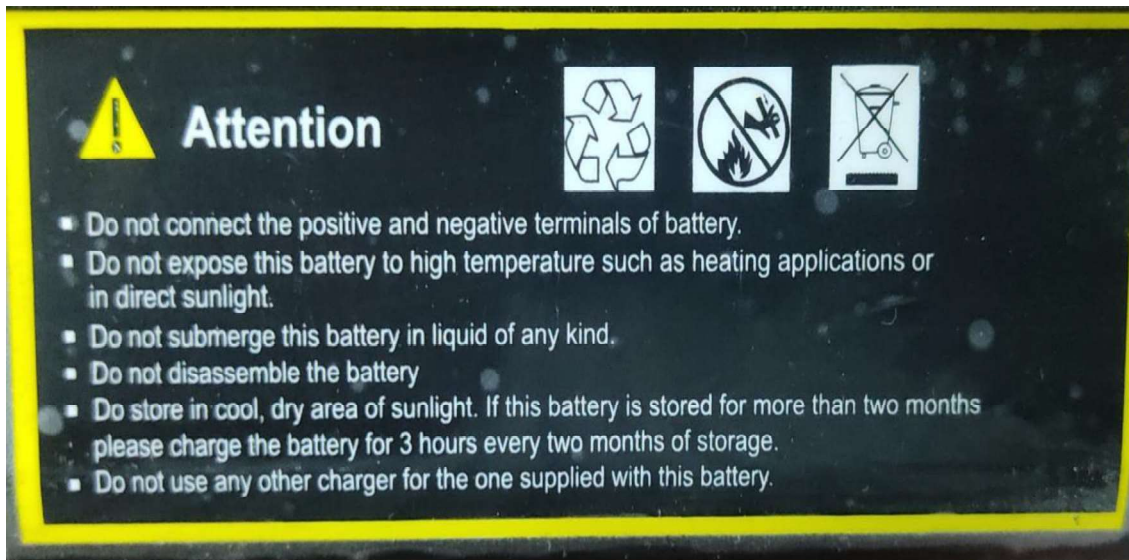
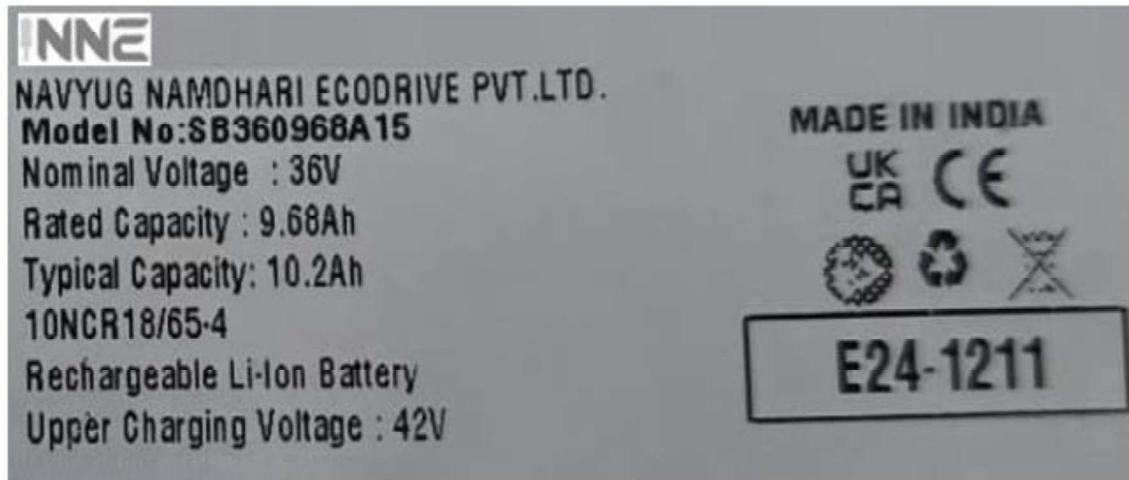
Table T4: Shock Test							P
Sample ID / Model No.	Voltage Pre-Test [VDC]	Voltage after Test [VDC]	% Change (<10%)	Weight Pre Test [g] or [kg]	Weight after Test [g] or [kg]	% Change (<0.1%)	Observation1)
1 Cycle Charged Sample							
D26240417-002	41.31	41.31	No	2.456	2.456	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-003	41.18	41.18	No	2.477	2.477	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-004	41.40	41.40	No	2.478	2.478	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-005	41.57	41.56	No	2.474	2.474	No	NL, NV, ND, NR, NF, NM, NVL
25th Cycle Charged Sample							
D26240417-010	41.21	41.21	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-011	41.49	41.49	No	2.466	2.466	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-012	41.35	41.34	No	2.473	2.473	No	NL, NV, ND, NR, NF, NM, NVL
D26240417-013	41.54	41.54	No	2.443	2.443	No	NL, NV, ND, NR, NF, NM, NVL
Note: 1) Requirements: NL, NV, ND, NR, NF, NM, NVL NL: No leakage, NV: No venting, ND: No disassembly, NR: No rupture, NF: No fire, NM: No mass loss, NT: No excessive temperature rise, NVL: No Voltage Loss							

Table T5: External Short circuits test			P
Sample ID / Model No.	Measure external resistance (mΩ)	External case temperature (°C)	Observation ¹⁾
1 Cycle Charged Sample			
D26240417-002	83.3	57.2	NT, ND, NR, NF
D26240417-003	81.3	57.4	NT, ND, NR, NF
D26240417-004	82.6	57.2	NT, ND, NR, NF
D26240417-005	82.9	57.3	NT, ND, NR, NF
25th Cycle Charged Sample			
D26240417-010	82.2	57.4	NT, ND, NR, NF
D26240417-011	83.3	57.3	NT, ND, NR, NF
D26240417-012	81.7	57.2	NT, ND, NR, NF
D26240417-013	82.1	57.3	NT, ND, NR, NF
Note: 1) Requirement: NT, ND, NR, NF NL: No leakage, NV: No venting, ND: No disassembly, NR: No rupture, NF: No fire, NM: No mass loss, NT: No excessive temperature rise.			

Table T-7: Overcharge			P
Test Voltage	50.4		
Test Current	14A		
Test duration	24h		
Sample ID / Model No.	OCV before test	OCV after test	Observation ¹⁾
1 Cycle Charged Sample			
D26240417-006	41.55	41.55	ND, NF
D26240417-007	41.48	41.48	ND, NF
D26240417-008	41.43	41.43	ND, NF
D26240417-009	41.52	41.52	ND, NF
25th Cycle Charged Sample			
D26240417-014	41.50	41.50	ND, NF
D26240417-015	41.48	41.48	ND, NF
D26240417-016	41.62	41.62	ND, NF
D26240417-017	41.58	41.58	ND, NF
Note: 1) Requirements: ND, NF NL: No leakage, NV: No venting, ND: No disassembly, NR: No rupture, NF: No fire, NM: No mass loss, NT: No excessive temperature rise			

Photos of Samples and Label

Marking Label:



EUT Photographs



Sample View 1



Sample View 2

***** END OF TEST REPORT *****