

DECLARATION DE CONFORMITE CEEU DECLARATION OF CONFORMITY

Raison social / Company name O2feel E-bike

Adresse / Adress 137 Allée de l'ecopark

59118

WAMBRECHIES FRANCE

Déclare que le modèle décrit ci-après / hereby declares that the following model :

nom commercial / commercial name: iVog City Boost 6.1

- Dénomination générique / generic denomination : Vélo à assistance électrique / Electric Power Assisted Cycle
- Marque / brand : O2feel e-bike
- Fonction / function : Se déplacer à l'aide d'une assistance électrique / To move with electric assist
- Description technique / description of the machinery : **Moteur Central 250W, batterie lithium-ion 36V 02feel /central motor 250W, lithium-ion battery 02feel**

Est conforme à toutes les dispositions de la :

Directive 2006/42 CE du Parlement européen et du Conseil du 17 mai 2006 relative aux machines, et modifiant la Directive 95/16/CE

Is in accordance with all the stipulations of the:

Directive 2006/42 CE of the European Parliament and of the Council of 17 may 2006 on machinery and amending Directive 95/16/EC

Et est conforme à toutes les dispositions des directives suivantes :

Directive 2014/30/UE du Parlement européen et du Conseil du 26 février 2014 relative à l'harmonisation des législations des Etats membres concernant la compatibilité électromagnétique

And is in accordance with all the stipulations of those directives:

Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility

Et aux normes harmonisées suivantes / and the following harmonized standards :

EN 15194:2017, Numéro de document : ES07/21/1250-1

Et aux normes suivantes / and the following standards:

ISO 11243:2016, Numero de document : ES05/21-0852 - ES05-21-0853

GREGOIRE BRUNET (CEO) EST AUTORISÉ À CONSTITUER LE DOSSIER TECHNIQUE :

Tampon de la société

Signature Grégoire Brunet

O2FEEL

137 Allée de l'Ecopark 59118 Wambrechies FRANCE contact@o2feel.com 0366191970 Siren : 520441841

Fait à / Done at : LILLE le / the 16 / 01 / 2023

TEST REPORT OF CLASSIFICATION FOR DANGEROUS GOODS – LITHIUM METAL AND LITHIUM ION BATTERIES

Report ID: 20190106J00535

Sample Name: Rechargeable Li-ion Battery Pack

Model/Type: OF-3612L/36V 12Ah 432Wh

Applicant: Wuxi Doctor Power Technology

Co., LTD



CQC Intime Testing Technology Co.,Ltd

Report ID: 20190106J00535 Page 1of 31

TEST REPORT

Report ID: 20190106J00535

Test Unit: CQC Intime Testing Technology Co., Ltd

Address: East Taihu Technology and Finance City, No.1368 Wuzhong Dadao Rd., Wuzhong Economic

Development Zone, Suzhou, Jiangsu.

Testing location/procedure: East Taihu Technology and Finance City, No.1368 Wuzhong Dadao Rd.,

Wuzhong Economic Development Zone, Suzhou, Jiangsu.

Applicant's name: Wuxi Doctor Power Technology Co., LTD

Address: No. 99 Furong Middle Three Road, Xishan Economic Development Zone, Wuxi City, Jiangsu

Sample Name: Rechargeable Li-ion Battery Pack Trade Mark: O2feel

Model/Type: OF-3612L Ratings: 36V 12Ah 432Wh

Manufacturer: Suzhou Debo new energy Co.,LTD

Address: 2F, Building D, Science and technology park, East ChangAn Road, Wujiang, Suzhou, Jiangsu,

P.R.China

Standard Specification: UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and

Criteria, ST/SG/AC.10/11/, sub-section 38.3. Rev.6

Test Procedure: — Non-standard Test Method: —

Test Item: Altitude Simulation, Thermal Test, Vibration, Shock, External Short Circuit, Impact, Overcharge,

Force Discharge

Date of receipt of test item: 2019.01.09

Finished Date: 2019.02.11

Conclusion: The Submitted Sample(s) Meet the Requirement of the Standard.

Testing Conditions: Temperature: $25.0^{\circ}\text{C} \sim 25.3^{\circ}\text{C}$ Relative Humidity: $53.7\% \sim 65.5\%$

Engineer: Hou Fengwen Signature: Date: 2019.02.11

Auditor: Liu Rong Signature: Date: 2019.02.11 Seal of CQC IT

Date of issue:

Approver: Zhao Runsheng Signature: Date: 2019.02.11

Remark: (1) P: Test object does meet the requirement. (2) F: Test object does not meet the requirement.

(3) N/A: Test case does not apply to the test object. (4) ---: Test case does not conduct

Battery Critical Component List

No	Name	Model/Type	Manufacturer	Remarks
1	BMS		Suzhou Chaoli electronic technology Co., LTD	
2	Cell	LR21700SA	Lishen	
3	Intercell tabs	N6	Kunshan Jinzimu Technology Co., Ltd	
4	Plastics cases and Lids		Kunshan Shanshan plastic scienc-technology Co., LTD	
5	Fuse			
6				
7				
8				
9				
10				

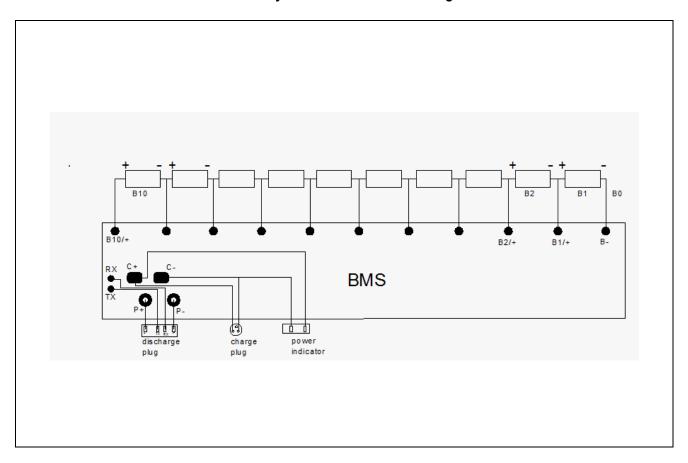
Cell Main Chemical Composition

No	Name	Component	Manufacturer	Remarks
1	Cathode material	NCM		
2	Anode material	Graphite		
3	Conductive agent	Graphite		
4	Binder	Cathode:PVDF Anode:CMC		
5	Seperator	PE+ceramic layer		
6	Electrolyte	LiPF6+DMC+EMC+EC		
7	-			
8	-		-	
9	-		-	
10				

The Table of Battery Fundamental Parameters

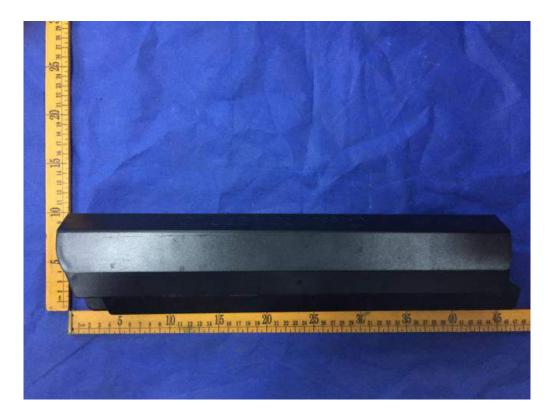
Item	Rated Performance	Item	Rated Performance
Nominal capacity (Ah)	12	Nominal voltage(V)	36
Rated power(Wh)	432	Limited charge voltage(V)	42.5
Charge current(A)	3	Maximum continous charging current (A)	5
End charge current(mA)	80	Discharge current(A)	15
Cut-off voltage (V)	27.5	Cell numbers	30
Maximum discharge current(A)	19	Type of cellt(mm)	CylindricalΦ≥18
Permutation of cell	10S3P	Capacity of cell(Ah)	4.0

The Battery Electrical Connection Diagram





Sample photograph-2





Sample photograph-4





Sample photograph-6





Sample photograph-8





Sample photograph-10



TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.1 Altitude	Battery at first cycle in fully charged state. Test batteries shall be stored at a pressure of 11.6 kPa or less for at least six hours at ambient temperature (20 ± 5 °C).	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage, Mass loss limit 0.1%.	Group1 Group2 Group3 Group4	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage. No mass loss. Test data is shown in Annex 1.	Р
simulation	Battery after 50 cycles in fully charged state. Test batteries shall be stored at a pressure of 11.6 kPa or less for at least six hours at ambient temperature (20 ± 5°C).		Group5 Group6 Group7 Group8		Р

^{*}When mass loss does not exceed the limited value, it shall be considered as "no mass loss".

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.2	Battery at first cycle in fully charged state. Test batteries are to be stored for at least six hours at a test temperature equal to 75±2°C, followed by storage for at least6 hours at a test temperature equal to -40±2°C. The maximum time interval between test temperature extremes is 30 minutes. This procedure is to be repeated 10 times, after which all test batteries are to be stored for 24 hours at ambient temperature (20±5°C).	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage, Mass loss limit 0.1%.	Group1 Group2 Group3 Group4	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage. No mass loss. Test data is shown in Annex 2.	P
Thermal test	Battery after 50 cycles in fully charged state. Test batteries are to be stored for at least six hours at a test temperature equal to 75±2°C, followed by storage for at least 6 hours at a test temperature equal to - 40±2°C. The maximum time interval between test temperature extremes is 30 minutes. This procedure is to be repeated 10 times, after which all test batteries are to be stored for 24 hours at ambient temperature (20±5°C).		Group5 Group6 Group7 Group8		P

^{*}When mass loss does not exceed the limited value, it shall be considered as "no mass loss".

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.3 Vibration	Battery at first cycle in fully charged state. Batteries are firmly secured to the platform of the vibration machine without distorting the cells. 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. The logarithmic frequency sweep is as follows: from 7 Hz a peak acceleration of 1 gn is maintained until18 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 gn occurs (approximately 50 Hz). A peak acceleration of 2 gn is then maintained until the frequency is increased to 200 Hz.	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage, Mass loss limit 0.1%.	Group1 Group2 Group3 Group4	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage No mass loss. Test data is shown in Annex 3.	P

^{*}When mass loss does not exceed the limited value, it shall be considered as "no mass loss".

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.3 Vibration	Battery after 50 cycles in fully charged state. Batteries are firmly secured to the platform of the vibration machine without distorting the cells. 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. The logarithmic frequency sweep is as follows: from 7 Hz a peak acceleration of 1 gn is maintained until18 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 gn occurs (approximately 50 Hz). A peak acceleration of 2 gn is then maintained until the frequency is increased to 200 Hz.	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage, Mass loss limit 0.1%.	Group5 Group6 Group7 Group8	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage No mass loss Test data is shown in Annex 3.	P

^{*}When mass loss does not exceed the limited value, it shall be considered as "no mass loss".

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.4 Shock	Battery at first cycle in fully charged state. Test batteries shall be secured to the testing machine by means of a rigid mount which will support all mounting surfaces of each test battery. Small batteries shall be subjected to a half-sine shock of peak acceleration of 150 g n (or Acceleration(g n) = \(\frac{100850}{mass} \), which is smaller) and pulse duration of 6 milliseconds, large batteries shall be subjected to a half-sine of peak acceleration(g n) = \(\frac{30000}{mass} \), which is smaller) and pulse duration of Each 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 battery for a total of 18 shocks.	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage, Mass loss limit 0.1%.	Group1 Group2 Group3 Group4	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage. No mass loss . Test data is shown in Annex 4.	P

^{*}When mass loss does not exceed the limited value, it shall be considered as "no mass loss".

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.4 Shock	Battery after 50 cycles in fully charged state. Test batteries shall be secured to the testing machine by means of a rigid mount which will support all mounting surfaces of each test battery. Small batteries shall be subjected to a half-sine shock of peak acceleration of 150 g n (or Acceleration(g n) = \[\begin{align*} \text{100850} \\ \text{mass} \end{align*}, which is smaller) and pulse duration of 6 milliseconds, large batteries shall be subjected to a half-sine of peak acceleration(g n) = \[\begin{align*} \text{30000} \\ \text{mass} \end{align*}, which is smaller) and pulse duration of Each 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 battery for a total of 18 shocks.	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage, Mass loss limit 0.1%.	Group5 Group6 Group7 Group8	No leakage No venting No disassembly No rupture No fire The open circuit voltage of each test battery after testing is not less than 90% of its voltage. No mass loss . Test data is shown in Annex 4.	P

^{*}When mass loss does not exceed the limited value, it shall be considered as "no mass loss".

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.5 External short circuit	Battery at first cycle in fully charged state. The cell or battery to be tested shall be temperature stabilized so that its external case temperature reaches 57±4°C and then the cell or battery shall be subjected to a short circuit condition with a total external resistance of less than 0.1 ohm at 57±4°C. 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. The battery must be observed for a further six hours for the test to be concluded.	External temperature does not exceed 170°C. No disassembly No rupture No fire	Group1 Group2 Group3 Group4	External temperature does not exceed 170°C. No disassembly No rupture No fire Test data is shown in Annex 5.	P

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.5 External short circuit	Battery after 50 cycles in fully charged state. The cell or battery to be tested shall be temperature stabilized so that its external case temperature reaches 57±4°Cand then the cell or battery shall be subjected to a short circuit condition with a total external resistance of less than 0.1 ohm at 57±4°C. 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. The battery must be observed for a further six hours for the test to be concluded.	External temperature does not exceed 170°C. No disassembly No rupture No fire	Group5 Group6 Group7 Group8	External temperature does not exceed 170°C. No disassembly No rupture No fire Test data is shown in Annex 5.	Р

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

section 38.3	Test item	Specification	Sample	Test results	Pass/Fail
Clause		Opecification	ID	restresuits	Conclu-sion
38.3.4.6 Impact	Cell at first cycle at 50% of the design rated capacity. The sample cell or component cell is to be placed on a flat smooth surface. A 15.8 mm ± 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 ± 0.1 kg mass is to be dropped from a height of 61 ± 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. 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 ± 0.1mm diameter curved surface lying across the centre of the test sample. Each sample is to be subjected to only a single impact. The battery must be observed for a further six hours for the test to be concluded.	External temperature does not exceed 170°C. No disassembly No fire	1# 2# 45	External temperature does not exceed 170°C. No disassembly No fire Test data is shown in Annex 6.	P

^{*:} Component Cells Of Battery.

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.7 Overcharge	Battery at first cycle in fully discharged state. The charge current shall be the twice the manufactures recommended maximum continuous charge current. The minimum voltage of the test shall be follows: (a) When the manufactures 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 manufactures recommended charge voltage is more than 18V, the minimum voltage of the battery or 22V. (b) When the maximum 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. The test sample shall be observed for a further 7 days.	No disassembly No fire	Group9 Group10 Group11 Group12	No disassembly No fire Test data is shown in Annex 7	P

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu- sion
38.3.4.7 Overcharge	Battery after 50 cycles in fully charged state. The charge current shall be the twice the manufactures recommended maximum continuous charge current. The minimum voltage of the test shall be follows: (c) When the manufactures 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. (d) When the manufactures 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. The test sample shall be observed for a further 7 days.	No disassembly No fire	Group13 Group14 Group15 Group16	No disassembly No fire Test data is shown in Annex 7	Р

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.8 Forced discharge	Battery at first cycle in fully discharged state. 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). The test sample shall be observed for a further 7 days.	No disassembly No fire	6#-15#	No disassembly No fire Test data is shown in Annex 8	P

^{*:} Component Cells Of Battery.

TEST REPORT

Test results

UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3

Clause	Test item	Specification	Sample ID	Test results	Pass/Fail Conclu-sion
38.3.4.8 Forced discharge	Battery after 50 cycles in fully charged state. 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). The test sample shall be observed for a further 7 days.	No disassembly No fire	16#-25#	No disassembly No fire Test data is shown in Annex 8	P

^{*:} Component Cells Of Battery.

TEST REPORT

List of Test Equipment

No	Test Equipment	Equipment Model	Equipment No	Expiry Date of Calibration	Remarks (√)
1	Low Pressure Chamber	315Z	ITCS1206013	2019-04-26	√
2	Thermal Shock Chambers	KWGDS61	ITCB16001	2019-04-13	√
3	Vibration Tester	HV-300-D-25	ITCEN07007	2019-08-19	√
4	Vibration Tester System	DL-8000-80	ITCE11009	2019-04-13	
5	Battery Shock Tester	IS350	ITCB180207	2019-03-05	√
6	High Temperature Explosion- proof Chamber	BE-101-512A	ITCB16005	2019-08-19	V
7	Battery Impact Tester	H-FZ-500	ITCEN07009	2019-04-13	√
8	Battery Crush Tester	GX-5067-C	ITCB16006	2019-08-19	
9	Electric Vehicle Battery Tester	BNT100-0100ME	ITCB13010	2019-05-03	
10	Electric Vehicle Battery Tester	BNT100-0100ME	ITCB13011	2019-05-03	\checkmark
11	High Temperature Explosion- proof Chamber	BE-101-512A	ITCB16004	2019-08-19	V
12	Smart Battety Test System	CTE-MCT-1806D- DC20V8A	ITCB13003	2019-08-12	V
13	High-precision battery tester	CT-4004-5V100A- NFA	ITCB15004	2019-05-03	
14	High Temperature Explosion- proof Chamber	SPHH-101	ITCS06031	2019-04-18	V
15	Battery internal resistance tester	BT3563	ITCB14001	2019-08-19	V
16	Temperature Recorder	MV2020	ITCS111001	2019-04-13	√
17	Digital Multicenter	FLUKE177	ITCS06060-3	2019-04-18	√
18	Electronic Scale	JX-A30002	ITCB170602	2019-04-13	
19	Electronic Scale	ACS-JS	ITCB180419	2019-04-18	√
			-		
		-		-	

Report ID: 20190106J00535 Page 23of 31

CQC Intime Testing Technology Co., Ltd

TEST REPORT

Annex 1. Altitude Simulation

No	Battery Condition	Before Test OCV ₁ (V)	Before Test M ₁ (g)	After Test OCV ₂ (V)	After Test M ₂ (V)	OCV ₂ / OCV ₁ (%)	Mass Loss (M ₂ -M ₁)/ M ₁ (%)	Remarks
Group 1	First cycle fully charged	41.43	2932.00	41.42	2932.00	99.98%	0.000%	
Group 2	First cycle fully charged	41.37	2934.00	41.36	2932.50	99.98%	0.051%	
Group 3	First cycle fully charged	41.51	2929.00	41.50	2929.00	99.98%	0.000%	
Group 4	First cycle fully charged	41.36	2932.00	41.35	2932.00	99.98%	0.000%	
Group 5	After 50 cycles fully charged	41.44	2931.50	41.43	2931.00	99.98%	0.017%	
Group 6	After 50 cycles fully charged	41.45	2933.00	41.44	2933.00	99.98%	0.000%	
Group 7	After 50 cycles fully charged	41.38	2933.50	41.37	2933.00	99.98%	0.017%	
Group 8	After 50 cycles fully charged	41.50	2934.50	41.49	2934.50	99.98%	0.000%	
		-				-		
		-				-		
		-						
		-						
	-	-				1		
	-							
	-							
	-							

Remarks:

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

Report ID: 20190106J00535 Page 24of 31

CQC Intime Testing Technology Co., Ltd

TEST REPORT

Annex 2. Thermal Test

No	Battery Condition	Before Test OCV ₁ (V)	Before Test M ₁ (g)	After Test OCV ₂ (V)	After Test M ₂ (V)	OCV ₂ / OCV ₁ (%)	Mass Loss (M ₂ -M ₁)/ M ₁ (%)	Remarks
Group 1	First cycle fully charged	41.42	2932.00	40.65	2930.00	98.14%	0.068%	
Group 2	First cycle fully charged	41.36	2932.50	40.71	2930.50	98.43%	0.068%	
Group 3	First cycle fully charged	41.50	2929.00	40.38	2926.50	97.30%	0.085%	
Group 4	First cycle fully charged	41.35	2932.00	40.66	2929.50	98.33%	0.085%	
Group 5	After 50 cycles fully charged	41.43	2931.00	41.43	2929.00	100.00%	0.068%	
Group 6	After 50 cycles fully charged	41.44	2933.00	41.44	2931.50	100.00%	0.051%	
Group 7	After 50 cycles fully charged	41.37	2933.00	41.37	2931.00	100.00%	0.068%	
Group 8	After 50 cycles fully charged	41.49	2934.50	41.49	2932.00	100.00%	0.085%	
		-	-			-	-	
		-	-			-	-	
		-	-				-	

Remarks:

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

Report ID: 20190106J00535 Page 25of 31

CQC Intime Testing Technology Co., Ltd

TEST REPORT

Annex 3. Vibration

No	Battery Condition	Before Test OCV ₁ (V)	Before Test M ₁ (g)	After Test OCV ₂ (V)	After Test M ₂ (V)	OCV ₂ / OCV ₁ (%)	Mass Loss (M ₂ -M ₁)/ M ₁ (%)	Remarks
Group 1	First cycle fully charged	40.65	2930.00	40.64	2929.50	99.98%	0.017%	
Group 2	First cycle fully charged	40.71	2930.50	40.71	2930.50	100.00%	0.000%	
Group 3	First cycle fully charged	40.38	2926.50	40.38	2926.50	100.00%	0.000%	
Group 4	First cycle fully charged	40.66	2929.50	40.65	2929.50	99.98%	0.000%	
Group 5	After 50 cycles fully charged	41.43	2929.00	41.43	2929.00	100.00%	0.000%	
Group 6	After 50 cycles fully charged	41.44	2931.50	41.43	2931.50	99.98%	0.000%	
Group 7	After 50 cycles fully charged	41.37	2931.00	41.37	2931.00	100.00%	0.000%	
Group 8	After 50 cycles fully charged	41.49	2932.00	41.48	2931.50	99.98%	0.017%	
		-						
		-						
		-						
	-	-						

Remarks:

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

Report ID: 20190106J00535 Page 26of 31

CQC Intime Testing Technology Co., Ltd

TEST REPORT

Annex 4. Shock

No	Battery Condition	Before Test OCV ₁ (V)	Before Test M ₁ (g)	After Test OCV ₂ (V)	After Test M ₂ (V)	OCV ₂ / OCV ₁ (%)	Mass Loss (M ₂ -M ₁)/ M ₁ (%)	Remarks
Group 1	First cycle fully charged	40.64	2929.50	40.64	2929.50	100.00%	0.000%	
Group 2	First cycle fully charged	40.71	2930.50	40.71	2930.50	100.00%	0.000%	
Group 3	First cycle fully charged	40.38	2926.50	40.38	2926.00	100.00%	0.017%	
Group 4	First cycle fully charged	40.65	2929.50	40.64	2929.50	99.98%	0.000%	
Group 5	After 50 cycles fully charged	41.43	2929.00	41.43	2929.00	100.00%	0.000%	
Group 6	After 50 cycles fully charged	41.43	2931.50	41.43	2931.50	100.00%	0.000%	
Group 7	After 50 cycles fully charged	41.37	2931.00	41.37	2931.00	100.00%	0.000%	
Group 8	After 50 cycles fully charged	41.48	2931.50	41.48	2931.00	100.00%	0.017%	
		-						
		-				-		
		-						
	-	-				-		

Remarks:

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

Page 27of 31

TEST REPORT

Annex 5. External Short Circuit

No	Battery Condition	Voltage (V)	Initial Temperature (°C)	Max Temperature (°C)	Remarks
Group 1	First cycle fully charged	40.64	57.1	57.3	
Group 2	First cycle fully charged	40.71	57.1	57.4	
Group 3	First cycle fully charged	40.38	57.1	57.4	
Group 4	First cycle fully charged	40.64	57.0	57.4	
Group 5	After 50 cycles fully charged	41.43	57.1	57.5	
Group 6	After 50 cycles fully charged	41.43	57.1	57.4	
Group 7	After 50 cycles fully charged	41.37	57.1	57.4	
Group 8	After 50 cycles fully charged	41.48	57.0	57.5	
					-

Remarks:

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

TEST REPORT

Annex 6. Impact

No	Battery Condition	Voltage (V)	Initial Temperature (°C)	Max Temperature (°C)	Remarks
1	First cycle in 50% rated capacity	3.688	25.0	88.5	
2	First cycle in 50% rated capacity	3.652	25.0	80.2	
3	First cycle in 50% rated capacity	3.689	25.0	79.8	
4	First cycle in 50% rated capacity	3.688	25.0	77.6	
5	First cycle in 50% rated capacity	3.685	25.1	80.5	

Remarks:

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

TEST REPORT

Annex 7. Overcharge

No	Battery Condition	Voltage (V)	Initial Temperature (°C)	Max Temperature (°C)	Remarks
Group 9	First cycle fully charged	41.42	25.1	25.4	
Group 10	First cycle fully charged	41.41	25.1	25.5	
Group 11	First cycle fully charged	41.50	25.1	25.6	
Group 12	First cycle fully charged	41.45	25.1	25.6	
Group 13	After 50 cycles fully charged	41.51	25.1	25.4	
Group 14	After 50 cycles fully charged	41.43	25.1	25.5	
Group 15	After 50 cycles fully charged	41.39	25.1	25.6	
Group 16	After 50 cycles fully charged	41.42	25.1	25.4	

Remarks.

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

Report ID: 20190106J00535 Page 30of 31

CQC Intime Testing Technology Co., Ltd

TEST REPORT

Annex 8. Force Discharge

No	Battery Condition	Voltage (V)	Initial Temperature (°C)	Max Temperature (°C)	Remarks
6#	First cycle in fully charged	3.401	25.2	41.9	
7#	First cycle in fully charged	3.391	25.2	40.5	
8#	First cycle in fully charged	3.393	25.1	40.2	
9#	First cycle in fully charged	3.383	25.1	35.6	
10#	First cycle in fully charged	3.399	25.1	40.2	
11#	First cycle in fully charged	3.392	25.1	39.5	
12#	First cycle in fully charged	3.394	25.1	42.5	
13#	First cycle in fully charged	3.399	25.1	42.7	
14#	First cycle in fully charged	3.392	25.2	41.3	
15#	First cycle in fully charged	3.402	25.2	38.6	

Remarks:

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

Report ID: 20190106J00535 Page 31 of 31

CQC Intime Testing Technology Co., Ltd

TEST REPORT

Annex 8. Force Discharge

No	Battery Condition	Voltage (V)	Initial Temperature (°C)	Max Temperature (°C)	Remarks
16#	After 50 cycles in fully charged	3.395	25.2	37.9	
17#	After 50 cycles in fully charged	3.389	25.2	41.2	
18#	After 50 cycles in fully charged	3.398	25.2	40.5	
19#	After 50 cycles in fully charged	3.396	25.1	42.3	
20#	After 50 cycles in fully charged	3.391	25.2	41.9	
21#	After 50 cycles in fully charged	3.386	25.1	41.5	
22#	After 50 cycles in fully charged	3.395	25.1	42.3	
23#	After 50 cycles in fully charged	3.391	25.1	43.5	
24#	After 50 cycles in fully charged	3.402	25.1	39.2	
25#	After 50 cycles in fully charged	3.387	25.1	37.9	

Remarks

NL: No leakage NV: No Venting ND: No Disassembly NR: No Rupture NF: No Fire

LK: Leakage VNT: Venting DSM: Disassembly RUP: Rupture FR: Fire

Unless otherwise stated , $\,$ All of the above tests were conducted at 20 \pm 5 $^{\circ}\text{C}$.

——End——

Statement

- 1. Don't copy the report partly, if you don't obtain the laboratory allows you to do that, unless you copy the whole report.
 - 2. The test report is only valid to the samples which have been tested.
- 3. You can bring forward written appeal to the laboratory in ten days after you receive the report if you have objection to the test result.
- 4. The laboratory will deal with samples with itself if client don't take away samples in sixty days after client receive test report.
- 5. This report only as a reference for client, can't be considered as a basis for litigation, arbitration and so on.

Test Unit: CQC Intime Testing Technology Co., Ltd

Headquarters Address: Wuzhong Scientific and Technology Park, No.1368

Wuzhong Dadao Road, Wuzhong Economic Development Zone, Suzhou, China.

Postal code: 215104 Phone: 0512-- 66303623

Fax: 0512—66303625 E-mail: cqc_jszlb@126.com

Xukou Laboratory: Caofeng Road No.236, Xukou Town, Suzhou

Cixi Office: Room 1020, Floor 10, North Tower, Central Building, 19 Shuinan

Road, Cixi Town, Zhejiang

Phone: 0574-63895313

Shenzhen Office: Floor 13A, Zhongyang Xigu Building, 139 Xinzhou 11th Street,

Futian District, Shenzhen

Phone: 0755-82889188-8118

Guangzhou Office: Room 902, Floor 9, Xiaocong Science Park, 266 Chigang

West Road, Haizhu District, Guangzhou

Phone/Fax: 020-84147422