

PL-081.1

LITHIUM CELL/BATTERY TEST SUMMARY AND SUPPLIER INQUIRY

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

N/A = Not Applicable

| | |
|----------------------------------|--|
| 1. Name of cell / battery | |
| Cylindrical Lithium ion Cell | |

| | |
|--|--|
| 2. Manufacturer of cell / battery | |
| Name | Shenzhen Zhuoneng New Energy Corporation Limited |
| Address | Block A2, A3, A4 (2/3/4 floor), A5, No. 6 Fuping middle road, Pingdi Street, Longgan |
| Phone | 0755-84072583 |
| Email | renzheng@szznp.com |
| Website | www.szznp.com |

| | |
|---|---|
| 3. Test laboratory of cell / battery | |
| Name | Pony Testing Group Shenzhen Co., Ltd. |
| Address | 1/F., Building A2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Communit |
| Phone | 86-755-26050909 |
| Email | cst@ponytest.com |
| Website | www.ponytest.com |

| | | | |
|--|------------------|---------------------|------------|
| 4. ID-number and date | | | |
| Unique test report identification number | MLIXWHFB12716721 | Date of test report | 2017-05-08 |

DESCRIPTION OF CELL / BATTERY

| | | | |
|---|------------------------|-----------------------|-----------------------|
| 5. Mark the type of cell/battery with an "•" | | | |
| <input checked="" type="radio"/> | Lithium ion cell | Lithium metal cell | <input type="radio"/> |
| <input type="radio"/> | Lithium ion battery | Lithium metal battery | <input type="radio"/> |
| <input type="radio"/> | Lithium hybrid battery | | |

| | | |
|---|-------------|----------------|
| 6. Parameters | Cell | Battery |
| Mass in gram (g): | 43.5 | |
| Lithium ion: Indicate watt-hour rating (Wh): | 8.14 | |
| Lithium metal: Indicate lithium metal content in gram (g): | | |
| Lithium hybrid: Indicate lithium metal content in gram (g) and watt-hour rating (Wh): | | g Wh |



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Name of cell/battery (taken from field 1)

Cylindrical Lithium ion Cell

7. Physical description of cell / battery

Blue Cylindrical

8. Model numbers

SZNS18650-2200

TESTS AND RESULTS

| 9. List of tests conducted and results - Mark N/A, pass or fail with an "●" | N/A | pass | fail |
|---|-----------------------|----------------------------------|-----------------------|
| T1 - Altitude simulation | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| T2 - Thermal Test | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| T3 - Vibration | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| T4 - Shock | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| T5 - External Short Circuit | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| T6 - Impact / Crush | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| T7 - Overcharge | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| T8 - Forced Discharge | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

10. Reference to assembled battery testing requirements

N/A

11. Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto

ST/SG/AC.10/11/Rev.6

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Name of cell/battery (taken from field 1)

Cylindrical Lithium ion Cell

ADDITIONAL SUPPLIER INQUIRY

| | | | | |
|--|----------------------------------|-----|----|-----------------------|
| 12. Quality management system for manufacturing cells / batteries Does the manufacturer of the cell/battery manufacture the products based on a documented quality management system according to transport regulations? | <input checked="" type="radio"/> | YES | NO | <input type="radio"/> |
|--|----------------------------------|-----|----|-----------------------|

| | | | | |
|--|-----------------------|-----|----|----------------------------------|
| 13. Are the following parameters exceeded? Lithium ion cell: more than 20 Wh Lithium ion battery: more than 100 Wh Lithium metal cell: more than 1 g Lithium Lithium metal battery: more than 2 g Lithium Lithium hybrid Battery: more than 1,5 g Lithium and/or more than 10 Wh | <input type="radio"/> | YES | NO | <input checked="" type="radio"/> |
|--|-----------------------|-----|----|----------------------------------|

Check point 14 – 16 need to be answered when 13 has been ticked "YES":


| | | | | |
|---|-----------------------|-----|-----|-----------------------|
| 14. Does each cell / battery incorporates a safety venting device or is designed to preclude a violent rupture under normal conditions of carriage? | <input type="radio"/> | YES | NO | <input type="radio"/> |
| 15. Is each cell / battery equipped with an effective means of preventing external short circuits? | <input type="radio"/> | YES | NO | <input type="radio"/> |
| 16. 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.)? | <input type="radio"/> | N/A | YES | NO |

17. Only in air transport: State of Charge (SoC) for UN 3480 Lithium ion cells/batteries and lithium polymer cells/batteries

| | | | | |
|---------------------------------|-----------------------|-----|----|-----------------------|
| State of Charge (SoC) max. 30 % | <input type="radio"/> | YES | NO | <input type="radio"/> |
|---------------------------------|-----------------------|-----|----|-----------------------|

CELLS/BATTERIES INSTALLED IN EQUIPMENT

| | | | | |
|---|------------------------------|-----|----------------------------------|----------------------------------|
| 18. Check point 18 needs to be answered when the cells / batteries are installed in articles: | | | | |
| 18.a) Only button cells enclosed? | <input type="radio"/> | YES | NO | <input checked="" type="radio"/> |
| 18.b) Number of enclosed cells (other than button cells)/batteries per equipment | | | | |
| 1 | Enclosed cells per equipment | | Enclosed batteries per equipment | |
| When the equipment is intentionally active/switched on during transport e.g. data loggers: | | | | |
| 18.c) Confirmation that no dangerous amount of heat is emitted from the equipment | <input type="radio"/> | N/A | YES | NO |
| 18.d) Confirmation that the equipment when transported by air fulfills the defined air transport standards for electromagnetic radiation according to DO-160 | <input type="radio"/> | N/A | YES | NO |

| | | |
|------------------------|---------------------------------------|---|
| 19. Place, Date | 20. Title, Surname, First name | 21. Company stamp and signature |
| Yancheng 2020.2.15 | Manager, Jack Jiang |  |