

PL-2 un38-3

# 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

|                                  |  |
|----------------------------------|--|
| <b>1. Name of cell / battery</b> |  |
| Cylindrical Lithium ion Battery  |  |

|  |   |
|--|---|
| <b>2. Manufacturer of cell / battery</b> |   |
| Name                                     | Far East First New Energy Co., Ltd.   |
| Address                                  | No.39, Jingfa Road, Economic and Technological Development Zone, 336000 Yic |
| Phone                                    | 86 15972725535  |
| Email                                    | 850629@qq.com   |
| Website                                  | www.firstbattery.com  |

|   |  |
|---|--|
| <b>3. Test laboratory of cell / battery</b> |  |
| Name  | Shenzhen NTEK Testing Technology Co., Ltd.               |
| Address                                     | NO. 345 EAST YUNLING ROAD, PUTUR, SHANGHAI, CHINA 200062 |
| Phone                                       | 86-755-6115 6558   |
| Email                                       | ntek@ntek.org.cn   |
| Website                                     | www.ntek.org.cn  |

|  |                 |                     |          |
|--|-----------------|---------------------|----------|
| <b>4. ID-number and date</b>             |                 |                     |          |
| Unique test report identification number | S19010202104001 | Date of test report | 2019-1-9 |

## DESCRIPTION OF CELL / BATTERY

|   |                        |                       |                       |
|---|------------------------|-----------------------|-----------------------|
| <b>5. Mark the type of cell/battery with an "•"</b> |                        |                       |                       |
| <input type="radio"/>                               | Lithium ion cell       | Lithium metal cell    | <input type="radio"/> |
| <input checked="" 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):   | 45.5 | 91      |
| Lithium ion: Indicate watt-hour rating (Wh):  | 9    | 18      |
| Lithium metal: Indicate lithium metal content in gram (g):                            |      |         |
| Lithium hybrid: Indicate lithium metal content in gram (g) and watt-hour rating (Wh): |      | g<br>Wh |



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Name of cell/battery (taken from field 1)

Cylindrical Lithium ion Battery

**7. Physical description of cell / battery**

Purple Cylindrical

**8. Model numbers**

FST 18650-2500mAh

## 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**



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## ADDITIONAL SUPPLIER INQUIRY

|  |                                  |     |    |                       |
|--|----------------------------------|-----|----|-----------------------|
| <b>12. Quality management system for manufacturing cells / batteries</b><br>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"/> |
|--|----------------------------------|-----|----|-----------------------|

|  |                       |     |    |                                  |
|--|-----------------------|-----|----|----------------------------------|
| <b>13. Are the following parameters exceeded?</b><br>Lithium ion cell: more than 20 Wh<br>Lithium ion battery: more than 100 Wh<br>Lithium metal cell: more than 1 g Lithium<br>Lithium metal battery: more than 2 g Lithium<br>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":


|   |                       |     |     |                       |
|---|-----------------------|-----|-----|-----------------------|
| <b>14.</b> 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"/> |
| <b>15.</b> Is each cell / battery equipped with an effective means of preventing external short circuits?   | <input type="radio"/> | YES | NO  | <input type="radio"/> |
| <b>16.</b> 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

|   |                              |                                  |                                  |                                  |
|---|------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>18. Check point 18 needs to be answered when the cells / batteries are installed in articles:</b>  |                              |                                  |                                  |                                  |
| <b>18.a) Only button cells enclosed?</b>  | <input type="radio"/>        | YES                              | NO                               | <input checked="" type="radio"/> |
| <b>18.b) Number of enclosed cells (other than button cells)/batteries per equipment</b>   |                              |                                  |                                  |                                  |
| 2   | Enclosed cells per equipment | Enclosed batteries per equipment | 1                                |                                  |
| When the equipment is intentionally active/switched on during transport e.g. data loggers:  |                              |                                  |                                  |                                  |
| <b>18.c) Confirmation that no dangerous amount of heat is emitted from the equipment</b>  | <input type="radio"/>        | N/A                              | <input checked="" type="radio"/> | YES                              |
| <b>18.d) Confirmation that the equipment when transported by air fulfills the defined air transport standards for electromagnetic radiation according to DO-160</b> | <input type="radio"/>        | N/A                              | <input type="radio"/>            | YES                              |

|                        |                                       |   |
|------------------------|---------------------------------------|---|
| <b>19. Place, Date</b> | <b>20. Title, Surname, First name</b> | <b>21. Company stamp and signature</b>  |
| Yincheng<br>2020.2.15  | Manager, Jack Jiang                   |  |