

# LITHIUM CELL 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/Description of cell</b>   |
| Conrad energy CR123 Fotobatterie CR-123A Lithium 1400 mAh 3 V, Nr. 1900664 |

|                                |   |
|--------------------------------|---|
| <b>2. Manufacturer of cell</b> |   |
| Name                           | CEI Conrad Electronic International (HK) Limited                    |
| Address                        | 18 Flr, Tower 2, Nina Tower, No. 8 Yeung UK Road, Tsuen Wan, NT, HK |
| Phone                          | (852) 2559 6328   |
| Email                          | hindratno.setiadharm@cei-hk.com                                     |
| Website                        | www.cei-hk.com  |

|  |  |
|--|--|
| <b>2a. Manufacturer of the equipment (if the cell is contained in equipment)</b> |  |
| Name   |  |
| Address  |  |
| Phone  |  |
| Email  |  |
| Website  |  |

|                                   |  |
|-----------------------------------|--|
| <b>3. Test laboratory of cell</b> |  |
| Name                              | Shanghai Research Institute of Chemical Industry Testing Co., Ltd. |
| Address                           | No. 345 East Yunling Road, Putuo, Shanghai, China 200062           |
| Phone                             | 86-2131765555  |
| Email                             | battery@ghs.cn   |
| Website                           | www.ghs.cn   |

|  |            |                     |            |
|--|------------|---------------------|------------|
| <b>4. ID-number and date</b>             |            |                     |            |
| Unique test report identification number | 1120030659 | Date of test report | 2020-04-28 |

## DESCRIPTION OF CELL

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

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|   |
|---|
| Name/Description of cell (taken from field 1) |
| Conrad energy CR123 Fotobatteri               |

|  |      |
|--|------|
| <b>6. Parameters</b>                                       | Cell |
| Mass in gram (g):  | 16.3 |
| Lithium ion: Indicate watt-hour rating (Wh):               |      |
| Lithium metal: Indicate lithium metal content in gram (g): | 0.56 |

|  |
|--|
| <b>7. Physical description of cell</b> |
| Lithium battery                        |

|                         |
|-------------------------|
| <b>8. Model numbers</b> |
| CR123A                  |

## TESTS AND RESULTS

| 9. List of tests conducted and results<br>- 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 - for cylindrical cells having a diameter of at least 18 mm  | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> |
| T6 - Crush - for prismatic cells, pouch cells, button cells and cylindrical cells having a diameter of less than 18 mm | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> |
| T7 - Overcharge  | <input checked="" type="radio"/> | <input 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"/> |

|   |
|---|
| <b>10. Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto</b>  |
| Section 38.3 of the Sixth edition amendment 1 of the Recommendations of the transport of Dangerous Goods, Manual of Test and Criteria (ST/SG/AC.10/11/Rev.6/Amend.1/Section 38.3) |



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| Conrad energy CR123 Fotobatteri               |

## ADDITIONAL SUPPLIER INQUIRY

|  |                                  |     |    |                       |
|--|----------------------------------|-----|----|-----------------------|
| <b>11. Quality management system for manufacturing cells</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"/> |
|--|----------------------------------|-----|----|-----------------------|

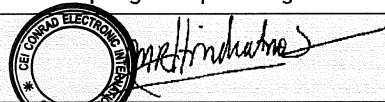
|   |                       |     |    |                                  |
|---|-----------------------|-----|----|----------------------------------|
| <b>12. Are the following parameters exceeded?</b><br>Lithium ion cell: more than 20 Wh<br>Lithium metal cell: more than 1 g Lithium | <input type="radio"/> | YES | NO | <input checked="" type="radio"/> |
|---|-----------------------|-----|----|----------------------------------|

|  |                        |     |    |                           |
|--|------------------------|-----|----|---------------------------|
| <b>Check point 13 – 15 need to be answered when 12 has been ticked "YES":</b>  |                        |     |    |                           |
| <b>13.</b> Does each cell 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>14.</b> Is each cell equipped with an effective means of preventing external short circuits?  | <input type="radio"/>  | YES | NO | <input type="radio"/>     |
| <b>15.</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.) | Not relevant for cells |     |    | N/A <input type="radio"/> |

|   |                                  |     |                       |     |    |                       |
|---|----------------------------------|-----|-----------------------|-----|----|-----------------------|
| <b>16. Only in air transport: State of Charge (SoC) for UN 3480 Lithium ion cells and lithium polymer cells</b> |                                  |     |                       |     |    |                       |
| State of Charge (SoC) max. 30 %   | <input checked="" type="radio"/> | N/A | <input type="radio"/> | YES | NO | <input type="radio"/> |

## CELLS INSTALLED IN EQUIPMENT

|   |                       |     |                       |                       |    |                       |
|---|-----------------------|-----|-----------------------|-----------------------|----|-----------------------|
| <b>17. Check point 17 needs to be answered when the cells are installed in articles:</b>  |                       |     |                       |                       |    |                       |
| <b>17.a)</b> Only button cells enclosed?  | <input type="radio"/> | YES | NO                    | <input type="radio"/> |    |                       |
| <b>17.b)</b> Number of enclosed cells (other than button cells) per equipment   |                       |     |                       |                       |    |                       |
| When the equipment is intentionally active/switched on during transport e.g. data loggers:  |                       |     |                       |                       |    |                       |
| <b>17.c)</b> Confirmation that no dangerous amount of heat is emitted from the equipment  | <input type="radio"/> | N/A | <input type="radio"/> | YES                   | NO | <input type="radio"/> |
| <b>17.d)</b> 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 | <input type="radio"/> | YES                   | NO | <input type="radio"/> |

|                              |  |  |
|------------------------------|--|--|
| <b>18. Place, Date</b>       | <b>19. Title, Surname, First name</b>    | <b>20. Company stamp and signature</b>   |
| Hong Kong<br>August 05, 2021 | Mr. Setiadharna, Hindratno<br>QA Manager |  |

