

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 |
| 3.6V 1.5Ah Li-Ion Battery Pack (model # EY9L10) for Panasonic cordless power tool |

| | |
|--|---|
| 2. Manufacturer of cell / battery | |
| Name | Panasonic Corporation |
| Address | 1006 Kadoma Oaza Kadoma-shi, Osaka 571-8501, Japan |
| Phone | +81 6 6908 1121 |
| Email | - |
| Website | https://www.panasonic.com/jp/home.html |

| | |
|---|---|
| 3. Test laboratory of cell / battery | |
| Name | Sanyo Electric Co., Ltd. |
| Address | 2-1-61 Shiromi, Chuou-ku, Osaka 540-6226, Japan |
| Phone | +81 6 6991 1181 |
| Email | - |
| Website | https://www.panasonic.com/jp/corporate/profile/group-companies/sanyo.html |

| | | | |
|--|----------|---------------------|------------|
| 4. ID-number and date | | | |
| Unique test report identification number | E1623269 | Date of test report | 18-11-2016 |

DESCRIPTION OF CELL / BATTERY

| | | | |
|---|------------------------|-----------------------|-----------------------|
| 5. Mark the type of cell/battery with an "•" | | | |
| <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): | | |
| Lithium ion: Indicate watt-hour rating (Wh): | | 5.4 |
| 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) |
| 3.6V 1.5Ah Li-Ion Battery Pack |

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|---|
| 7. Physical description of cell / battery |
| 3.6V 1.5Ah Li-Ion Battery Pack (model # EY9L10) for Panasonic cordless power tool |

| |
|------------------|
| 8. Model numbers |
| EY9L10 |

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 | |
| UN Recommendations on the Transport of Dangerous Goods (21st edition) Article # 2.9.4 Lithium Batteries (a) "Cells and batteries manufactured according to a type meeting the requirements of sub-section 38.3 of the Manual of Tests and Criteria, Revision 3, Amendment 1 or any subsequent revision" | N/A |

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| 11. Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto |
| UN38.3 Revision 5A1 |



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| |
|---|
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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 checked="" 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 type="radio"/> | | |
| 18.b) Number of enclosed cells (other than button cells)/batteries per equipment | | | | | | |
| 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 | <input checked="" type="radio"/> | YES | NO | <input type="radio"/> |
| 18.d) Confirmation that the equipment when transported by air fulfills the defined air transport standards for electromagnetic radiation according to DO-160 | <input checked="" type="radio"/> | N/A | <input type="radio"/> | YES | NO | <input type="radio"/> |

| | | |
|--------------------------------|---------------------------------------|--|
| 19. Place, Date | 20. Title, Surname, First name | 21. Company stamp and signature |
| Ottobrunn/Germany 21-1-2020 | General Manager Nedachi, Kunihiro | |

Panasonic Electric Works Europe AG
Rudolf-Diesel-Ring 2 • 83607 Holzkirchen • Germany
Tel. +49 (0) 80 24-6 48-0 • Fax +49 (0) 80 24-6 48-111

