# Test Report

# For

# ANSI/CAN/UL9540A

# Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems

# [Unit Level]

| | |
|---|---|
| **Report Number:** | **CQES240900088201** |
| **Date of issue:** | **2024-09-29** |
| **Total number of pages:** | **40** |
| **Test object / Model:** | **Lithi2-16** |
| **Applicant's name:** | **Zhuhai Ruixu Electronic Technology Co., Ltd.** |
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## [Summary of Test results]

Cell Level Test
Cell model: CB75
Report No.: CN234568001

| | |
|---|---|
| Cell Design: | CB75 |
| Thermal Runaway Methodology: | External heating |
| Cell Surface Temperature at Gas venting: | 127.9 °C |
| Cell Surface Temperature at Thermal Runaway: | 179.8 °C |
| Gas Composition: | Mainly Hydrocarbon, $H_2$, CO, $CO_2$ |
| Lower Flammability Limit: | 7.7 Vol% at 24 °C,<br>7.1 Vol% at 127.9 °C |
| Burning Velocity: | 0.688 m/s |
| Pmax: | 0.798 MPa |
| Thermal Runaway was Induced in the Cell or not: | Induced |
| Cell Vent Gas is Flammable or not in Air: | Flammable |

Module Level Test
Module model: N/A
Report No: N/A

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|---|---|
| Module Design: | N/A |
| Thermal Runaway Methodology: | N/A |
| External Flaming: | N/A |
| Locations of Flame Venting: | N/A |
| Flying Debris: | N/A |
| Peak Smoke Release Rate: | N/A |
| Gas Generation and Composition: | N/A |
| Thermal Runaway are Contained by the Module Design or not: | N/A |
| Cell Vent Gas is Flammable or not: | N/A |
| Other Description: | N/A |
| Test Video file: | N/A |

Unit Level Test
Unit model: Lithi2-16
Report No: CQES240900088201

| | |
|---|---|
| Unit Design: | Lithi2-16 |
| Thermal Runaway Methodology: | External heating using thin film |
| External Flaming: | No external flaming observed |
| Locations of Flame Venting: | No flame extension observed |
| Flying Debris: | No flying debris observed |
| Explosion or not: | No explosion observed |
| Max. Surface Temperature of Module in Target BESS Unit: | 34.7 °C |
| Max. Temperature Rise on Wall Surfaces: | 23.8 °C |
| Thermal Runaway are Contained by the Unit Design or not: | Contained by the Unit Design |
| Cell Vent Gas is Flammable or not: | Flammable |
| Heat Flux in the Center of Egress: | N/A |
| Cheesecloth Indicator Flaming or not: | No flaming or carbonizing |
| Test Video File: | Archived by Applicant |

Remark:
This report only evaluated unit level test which is listed inside the dotted box.