

UL 9540A 4th Edition Unit Level AHJ Checklist



Gas Measurements:

1. The total hydrocarbon (THC) gas volume was measured and recorded for both the pre-flaming period and after start of flaming during the test using flame ionization detection (FID).
2. The total volume of carbon monoxide (CO) and carbon dioxide (CO₂) gases were measured using non-dispersive infrared spectroscopy (NDIR) and recorded for both the pre-flaming period and after initiation of flaming during the test.
3. The volume of hydrogen (H₂) was measured using a solid state hydrogen sensor during the pre-flaming period and after initiation of flaming during the test.
4. Smoke release rate measured with white light source and photo detector for the duration of the test was provided.

Yes No

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Supporting Documentation:

8. Profiles showing the temperatures of initiating cells and nearby cells within the initiating module, modules in the initiating unit are provided.
9. Profiles showing that temperatures on target units do not exceed the cell vent temperature are provided.
10. Profiles showing heat flux measurements are provided showing that they do not exceed 1.3 kW/m² at the egress path for non-residential applications and outdoor ground mounted residential applications.
11. Profile showing the heat release rate (Chemical & Convective heat release rate) versus time data for non-residential applications was provided.
12. The report provided photos taken during the test to show the progress of the initiating thermal runaway as well as diagrams and photos to show the test layout.

Yes No

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UL Resources:

Access additional information online at the below links:

UL 9540A test method: <https://www.ul.com/offerings/ul-9540a-test-method>

Energy storage testing and certification: <https://www.ul.com/offerings/energy-storage-system-testing-and-certification>

UL Field Evaluations (FE): <https://www.ul.com/offerings/field-evaluations>

Code authority resources: <https://code-authorities.ul.com/about/technical-resources/application-guides/>

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