



TECHNICAL SPECIFICATION –

SAFE CHARGING OF LITHIUM-ION BATTERIES

SPECIFICATION REQUIREMENT

Lithium-ion batteries shall be charged and/or stored in a fire containment system meeting the following requirements:



FUNCTIONAL REQUIREMENTS

- Containment of thermal runaway events
- No flame propagation outside enclosure
- External surface temperature below 100°C
- Integrated automatic fire suppression
- Closed compartment design



TEST VERIFICATION

- Full-scale testing with 100% State of Charge batteries
- Automatic activation of aerosol suppression system
- Demonstrated fire containment



COMPLIANCE OBJECTIVE

Ensure safe handling, storage, and charging of lithium-ion batteries in line with modern fire safety expectations.

KIWA REFERENCE:



“No flames or sparks were observed outside the cabinet.” (Kiwa Test Report, 2025, p.16)



“The temperature on the outside... did not exceed 100°C.” (Kiwa Test Report, 2025, p.19)



“Activation Aerosol Generators within 5 seconds” (Kiwa Test Report, 2025, p.11)



“The test was performed with 95–100% charged cells...” (Kiwa Test Report, 2025, p.13)