

# Battery Pack Testing and Homologation

Wide capabilities for environmental tests on battery packs at the development stage. Compliance testing and homologation services against ECE R100 and R136 regulations (Battery Safety), UN DOT 38.3 standard (Battery Transportation), and OEM standards.



## Testing Capabilities for Battery Packs:

Applus+ Laboratories partners with OEMs and battery manufacturers to test battery packs' safety and reliability in environmental conditions. Our network of labs combines different testing capabilities at battery module and battery pack level, to test customer specifications at the development stage. We also offer compliance testing services for key standards and regulations.

### **Vibrations and Environmental Testing:**

We have a best-in-class test system with a large shaker (200 kN vibration, 400 kN shock) coupling with a large climatic chamber of 11 m<sup>3</sup>, ready to test battery packs up to 2 m for 1.6 m at temperatures from -50 °C to 120 °C. This large climatic chamber is EUCAR 6 rated (safety protections) for battery testing and can also work as stand-alone equipment to conduct thermal tests.

Our labs are equipped with several smaller climatic chambers (-70 °C to 180 °C) and shakers (with climatic chamber), as well as other testing capabilities for battery testing such as:

- Altitude chambers
- Thermal shock chambers
- Salt spray corrosion
- Battery cyclers



- Short circuit

### **Fire Testing:**

Applus+ Laboratories has dedicated facilities to test fire resistance and thermal runaway on batteries at cell, module and pack level.

### **Mechanical shock testing:**

We can also handle all the tests related to mechanical shock and integrity as well as battery abuse.

## **Battery Pack Testing and Homologation Services:**

- Development Tests
- Compliance Tests for UN DOT 38.3 standard
- Compliance Tests for ECE R100 and R136 regulations
- Compliance Tests for OEM standards based on 19453-6:2020
- Battery Pack homologation (with Applus+ IDIADA as a technical service)