



Choose certainty.
Add value.

eSafety concept

Adopt a holistic approach to ensuring the safety and quality of electric vehicles

Your challenges

To meet the growing demand for hybrid electric vehicles (HEV) and battery electric vehicles (BEV), automotive original equipment manufacturers (OEMs) and suppliers around the world are exploring new territory in electric powertrain technology. Due to the new components and testing procedures involved in electric powertrains, automotive developers need strong technical support to ensure that their designs are safe, meet international regulatory standards and fulfil customer requirements. The technologies involved in electric powertrains should be safeguarded in terms of electrical, mechanical, chemical and functional safety.

What is the eSafety concept?

The eSafety concept is the holistic support for fulfilment of safety requirements in terms of type approval and liability. It takes into account all safety aspects of

electrical vehicle development such as electrical, mechanical, chemical and functional safety.

Why is the eSafety concept important for your business?

The eSafety concept helps manufacturers and system developers to test and evaluate components, systems and whole vehicle concepts early in the development phase and throughout the entire product cycle. Detecting safety issues early in the product lifecycle will help avoid expensive revisions and rework.

How can we help you?

TÜV SÜD has extensive expertise in mobility solutions. We provide the full scope of services to help you meet the safety requirements of electric vehicles. Our solutions can be customised based on the needs of our customers and their focus markets.



Our eSafety services

TÜV SÜD offers the following services under the eSafety concept.

■ Knowledge services

Our experts provide you with knowledge services on standard research, identification and fulfilment of state-of-the-art requirements that impact product liability. We also support you on hazard analysis, risk assessment and functional safety concepts.

■ Testing

TÜV SÜD's testing services cover testing of components, systems and whole vehicles. We conduct a full range of testing for electrical, functional, chemical and mechanical safety to support the development of safe and reliable electric vehicles.

■ Certification

We are accredited to provide certification for homologation and type approval (prototypes, preseries and series vehicles).

■ Training

TÜV SÜD supports you with the development of safety guidelines and training in functional safety, electrical safety and high-voltage systems.

Your business benefits

- **Save time and money** – with experts who assist you throughout your entire development process and prevent the threat of costly and time-consuming rework.

- **Benefit from a single-source provider** – for all your e-Mobility needs through the entire value chain, from development to homologation.
- **Stay ahead of e-Mobility developments** – with experts who are at the forefront of the industry and participate in key standards committees.
- **Gain customer confidence** – by leveraging on TÜV SÜD's reputation as the preferred automotive technical service provider with a globally recognised certification mark.
- **Maintain a competitive advantage** – with experts who help you to achieve a faster time to market.

Why choose TÜV SÜD?

TÜV SÜD is committed to sustainable mobility and the development of alternative energy vehicles. Our e-Mobility experts are trained in German engineering excellence and have worked with the world's top automotive OEMs and suppliers to develop safe electric vehicles that meet international safety standards and consumer requirements. We apply our extensive knowledge and multidisciplinary expertise of the automotive industry, functional safety and high-voltage systems to help you to achieve the optimal design for your electric vehicle concepts.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East and Asia. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- Functional safety services related to ISO 26262
- Testing and certification of charging infrastructures
- Battery testing
- High voltage and electrical safety training
- TÜV SÜD e-Car Cycle