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Safe lithium-ion energy storage systems for homes and businesses.

A product certification by TÜV Rheinland creates assurance and trust. This also applies to battery energy storage systems. Our services cover the entire supply chain: from cell production over transport safety to system configuration and factory inspection, all performed by an independent party according to the current guidelines such as the Lithium-Ion Residential Energy Storage Systems Safety Guide and the application guide VDE-AR-E2510-50.

FOR YOU – WE TEST.

We support you in your efforts to make your products fit for the high demands of the market. Therefore, we perform our tests according to the current applicable standards and guidelines such as the Lithium-Ion Residential Energy Storage Systems Safety Guide (SiLF HS 11/2014) and the application guide VDE-AR-E 2510-50. These documents specify the safety objectives for battery storage systems with and without the inclusion of inverters based on rechargeable lithium ion cells (secondary lithium ion cells).

The tests performed by TÜV Rheinland cover both individual components and the entire system.

- **Pre-Check:** review of the documentation for plausibility and completeness
- **Conformity assessment:** based on existing standards and guidelines (SiLF HS 11/2014, VDE-AR-E-2510-50, including EN/IEC 62619)
- **Certification:** TÜV Rheinland standard 2 PfG 2511 (SiLF HS 11/2014, VDE-AR-E-2510-50), factory inspection
- **Grid connection regulations:** compliance with the technical connection regulations for electricity grids in Germany, Europe and the world
- **Technical minimum requirements** for the connection of power generation systems to the low-voltage grid in accordance with VDE-AR-N 4105, including requirements for energy storage systems on the low-voltage grid.
- **Performance:** Verification of the efficiency that ensures the optimal energy yield of a power generation system.
- **Guide for framework requirements for largescale lithium ion storage systems:** Grid services, autarky services, industry services, infrastructure services

WHAT DO WE TEST?

- Electrochemical safety
- Electrical safety
- Mechanical safety
- Functional safety

THE MARK SHOWS THE DIFFERENCE.

If testing is successful, a certificate and the right to use a test mark can be awarded. You can see it at a glance. Our nationally and internationally recognised test mark says more than 1000 words.



THERE ARE MANY GOOD REASONS.

- Safety in the design and development
- Improved market access
- Trust of people and markets
- Competitive advantage thanks to our neutral test mark

FOR YOU – WE MONITOR.

TÜV Rheinland test marks document consistent quality. To ensure this, we carry out an initial inspection as well as repeated checks of your production sites.

SIMPLE. FAST. TRANSPARENT. – AT ANY TIME.

Visit the TÜV Rheinland certificate database at www.certipedia.com and enter the ID shown on the test mark. There you will find the appropriate proof of quality.

AROUND THE WORLD.

Do your products need a “passport”? We will be at your side where you are or want to be successful – in just about any country in the world.

NEW TRENDS, NEW KNOWLEDGE, NEW QUESTIONS.

See for yourself – www.tuv.com

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