



Ensure a safer ride

Safety testing for bicycles and e-bikes

Add value.
Inspire trust.

Your challenges

Cycling has become an important mode of sustainable transport nowadays. There is tremendous potential for municipal governments and urban planners to promote bicycle usage, following classic European examples such as Copenhagen and Amsterdam. Non-polluting and inexpensive, cycling is also good for the user's health and increases the quality of living.

The market for electric bikes (e-bikes) has seen significant growth in recent years. With advancements in battery technology and heightened awareness of environmental sustainability, e-bikes have become increasingly popular across the globe. Consumers are drawn to the convenience and efficiency of electric bikes, offering an eco-friendly alternative to traditional modes of transportation.

The promotion of cycling as a sustainable mode of transport is expected to increase the demand for safe riding equipment. At the same time, manufacturers are under a lot of pressure due to the increasing labor and material costs.

How can we help you?

As a reliable partner of the bicycle industry, TÜV SÜD provides safety and quality solutions. We ensure that the non-power and power components used in bicycles and electric bikes receive unparalleled market acceptance and support from regulatory authorities. We provide testing and certification which can benefit the whole industry chain to ensure compliance in quality and safety aspects, and attain global market acceptance. Globally, our services contribute to elevating the competitive advantage of our customers.

Why choose TÜV SÜD?

- Benefit from our comprehensive expertise in the field
- Testing capabilities covering a wide range of consumer products
- Our global network of technical experts to support you
- State-of-the-art testing laboratories for meeting all applicable standards and regulations



Standards

- Bicycles, bicycles for young children or electrical power cycle**

Area	Description	Standards
Europe	Cycles - Safety requirements for bicycles - Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles	EN ISO 4210-2:2015
	Safety requirements for bicycles for young children	EN ISO 8098:2014
	BMX bicycles - Safety requirements and test methods	EN 16054:2012
	Electrically power assisted cycles - EPAC Bicycles	EN 15194:2009+A1:2011
America	Requirements for bicycles	16 CFR 1512
	Tricycles Safety Requirements	ANSI Z 315.1:2012
Australia	Pedal bicycles-Safety requirements	AS/NZS 1927:210
	Electrically power assisted cycles - EPAC Bicycles	EN 15194:2009+A1:2011
Others	Safety requirement for bicycles	GB 3565-2005
	Safety requirements for children's bicycles	GB 14746-2005
	Safety requirements for children's tricycles	GB 14747-2006
	Cycles - Safety requirements for bicycles - Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles	ISO 4210-2:2015
	Safety requirements for bicycles for young children	ISO 8098:2014

- Accessories**

Area	Description	Standards
Europe	Bicycles. Accessories for bicycles. Luggage carriers	EN 14872:2006
	Child use and care articles - Child seats for cycles - Safety requirements and test methods	EN 14344:2004
	Cycles - Cycle trailer - Safety requirements and test methods	EN 15918:2011

Area	Description	Standards
American	Standard specification and test method for rear mounted bicycle child carriers	ASTM F1625-00 (2008)
	Bicycle frame for condition 0	ASTM F2843-10a
	Bicycle frame for condition 1	ASTM F2802-09
	Bicycle frame for condition 2	ASTM F2868-10
	Bicycle frame for condition 3	ASTM F2614-09(2014)
	Front fork for condition1	ASTM F2899-11
	Front fork for condition 3	ASTM F2274-11
Australia	Child carrier seats	AS/NZS 4287:1995
Others	Luggage carriers for bicycles - Concepts, classification and testing	ISO 11243:1994
	Cycle chain – Characteristics and test methods	ISO 9633:2001
	Bells for bicycle and mopeds technical specification	ISO 7636:1984
	Bicycle tyres and rims - Part 1: Tyre designations and dimensions	ISO 5775-1:2014
	Bicycle tyres and rims - Part 2: specification for bicycle rims	ISO 5775-2:1996
	Cycle - luggage carrier	GB 22790:2008
	Safety requirements and test methods of child seats on cycle for import and export	GB 23160:2008

- **Sports products**

Description	Standards
Roller sports equipment - Kick scooters - Safety requirements and test methods	EN 14619:2015
Roller sports equipment - Skateboards - Safety requirements and tests methods	EN 13613:2009
Standard Consumer Safety Specification for Non-Powered Scooters	ASTM F2264-14
Roller sports equipment - Inline-skates - Safety requirements and test methods	EN 13843:2009
Roller sports equipment - roller skates - Safety requirements and test methods	EN 13899:2003
Roller skates	GB 20096:2006



Our services

Chemical analysis

- Lead paint / lead metal analysis
- Phalate toxicity analysis
- PAHS analysis
- Asbestos analysis

Physical and performance testing

- Strength test
- Design assessment
- Road performance test
- Braking performance test
- Component durability test
- Adaptability test
- Tailor-made program test

Your business benefits

- **Save money** – Through greater productivity and lower turnover, reducing reworking and increasing efficiency.
- **Reduce risks** – By ensuring compliance of your bicycles and e-bikes with the applicable international standards and requirements.
- **Enhance your reputation** – with an internationally recognized certificate from TÜV SÜD that demonstrates your commitment to quality and safety.
- **Gain competitive advantage** – Demonstrate product safety and give your customers confidence in your product.

Electronic and electrical safety testing

- Electric circuit
- Batteries safety test (UN 38.3, EN 62133)
- Battery charger (EN 60335-2-29)
- Electric cables and connections (EN 60335-1, IEC 60364-5-52:2001)
- Power cables and conduits
- Moisture resistance (IPX4)
- Power management
- Maximum speed for which the electric motor gives assistance
- Maximum power measurement (EN 60034-1)

Electromagnetic compatibility testing

- Emission
- Immunity
- Battery charger (EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3)

Related services

TÜV SÜD provides the following related services:

- Certification of electrical and electronic products
- Pre-shipment inspection
- Factory inspection
- Global market access
- Chemical analysis and testing



Add value. Inspire trust.

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Through more than 26,000 employees across over 1,000 locations, the company adds value to customers and partners by enabling market access and managing risks. By anticipating technological developments and facilitating change, TÜV SÜD inspires trust in a physical and digital world to create a safer and more sustainable future.

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