

Mechanical testing for construction products

Guarantee the structural resistance and durability of construction products with mechanical characterization tests.



Manufacturers of new construction products must evaluate structural resistance and durability after multiple load, stress and fatigue cycles caused by external load conditions. The new products must be tested to prove they comply with the intended conditions of use as well as with the applicable legislation of each country (EN, ASTM, EHE, CTE, PG-3, among others).

Our solution

Applus+ Laboratories offers a mechanical testing service adapted to each construction product based on its use and applicable regulations.

Our service covers:

- Comprehensive management of validation programs
- Mechanical simulation
- Test plan development
- Material instrumentation
- Design, calculation and manufacturing of test tooling
- Remote client monitoring
- Data post-processing and test report issuing
- Consultancy service for the study of pathologies and definition of causes that have led to deterioration
- Managing the certifications for innovative construction products: ETA, EAD, CE Marking, among others.

We have a versatile laboratory capable of modeling the test, making it specific to your product's requirements. Our facilities allow us to design and conduct tests for static and dynamic loads (up to 1,500 tons) applicable among others to the following products:

- Concrete, mortars, precasts, additives: Mechanical resistance, hardness and wear.
- Steel and prestressing cables: Static and fatigue resistance, hardness.
- Wood (structural, cladding and boards): Resistance to flexion, compression, traction and shearing, elasticity modulus.
- Bricklaying and ceramic products: Resistance to compression, flexion and shearing of parts and masonry.
- Glass and screens: Resistance to impact, puncture, flexion.
- Enclosures: Windows, curtain walls, shutters, awnings, interior and exterior doors, hardware: Resistance of the final product and components according to their use, fatigue, impact resistance, resistance to wind loads, resistance to maneuver.
- Thermal insulation: Compression resistance, traction resistance, flexion, shearing.
- Sheets and panels: Resistance to shearing, flexion, crumpling, impact.
- Suspended ceilings and profiles: Resistance to flexion, resistance to impact

Applus+ has been working with the construction industry for over 100 years with a proven track record and prestige. We participate in Europe's main technical and regulatory forums for the development of new standards, so we can provide you with the most detailed knowledge and support to develop your products.

Applus+ has the notifications and recognitions needed to issue compliance certificates to gain access to the major international markets:

- CE marking (European Union)
- UL (America)
- CCC and CQC (China)
- Gost-R (Russia)
- Other international certifications (Saudi Arabia, Algeria, Egypt, Qatar, Dubai, Kuwait, among others)

Benefits

- Applus+, one stop shop for your product characterization.
- Identify your product technical specifications for users and works managers.
- Ensure products useful life according to its functions and using conditions