

Building Enclosure and Fenestration testing

Determining the durability, water penetration, water tightness and resistance characteristics of building enclosures and fenestration assemblies



Building enclosures and fenestration assemblies protect users from external conditions. These construction products cover a wide range of functions that should be evaluated before they are marketed, to ensure their suitability for the foreseen use and their compliance with current legislation. To do so, the manufacturers look for testing labs able to evaluate all the test parameters applicable to their products.

Our solution

Applus+ Laboratories performs the full characterization of exterior and interior building enclosures, windows, doors and hardware. Our multidisciplinary laboratories allow us to test a wide range of parameters:

- Fire resistance
- Reaction to fire
- Water and air tightness
- Wind resistance
- Thermal insulation
- Aging and weathering
- Acoustic insulation
- Structural Resistance and durability
- Physical and chemical behavior
- Protection and safety of use
- Resistance to burglary
- Electrical safety
- Electromagnetic compatibility

Our service covers

- Comprehensive management and execution of the validation test plan
- Simulations
- Test tooling design and manufacturing
- Data post-processing and test report issuing
- Product improvement consultancy
- Range extension studies (evaluation of the behavior of other components not tested)
- Managing the certifications for innovative construction products: ETA, EAD, CE Marking, among others.

We perform the tests under the international standards applicable to various industries: ISO, IMO, ASTM, UL, CEN, NF, UNE, IEC and ASTM.

We are experts in testing all types of products for building enclosures and fenestration.

Vertical enclosures:

- Windows and doors (interior and exterior)
- Screens and partitions
- Curtain walls
- Sandwich panels
- Walls made of ceramic materials
- Drywall
- Prefabrications
- Insulating materials (thermal, acoustic, etc.)
- Components (hinges, locking elements, etc.)

Horizontal enclosures:

- Slabs and their components (joists, beams, etc.)
- False Ceilings and roofs
- Flooring
- Coverings (textiles, plastics, wood, etc.)

Applus+ has more than 100 years of experience in the construction industry, with leading laboratories in Europe. We participate in Europe's main technical and regulatory forums (CEN) for the development of new standards, to provide you with the most detailed knowledge and support for developing your products.

Benefits

- A single contact to perform characterization testing and factory production control audits



- Greater control over your product and manufacturing process
- Greater accuracy and uniformity of your products' technical properties for users and construction site managers.
- Access to international certifications for worldwide marketing