

Fire Resistance Testing for Glazing Systems

We can optimise the fire resistance testing plans for your glazing systems.

Glazing systems are an increasingly common feature in contemporary architecture. Glazing systems which form an enclosure and glazed fire-resistant doors must ensure that people and property are protected in the case of fire.

Manufacturers of glazing systems are often faced with the challenge of testing large families of products which, due to their composition and configuration, may be subject to different testing and certification standards. In order to understand the market access requirements for each product, Applus+ Laboratories puts at your disposal a team of experts in testing and certification standards for glazing systems.



Applus+ offers a comprehensive fire resistance testing service for glazing systems.

Our methodology:

Our team of engineers studies each project to determine the optimal testing plan:

- Study of families of products to be tested according to their type and the conditions of access to the target markets.
- Assessment of the number of test samples and design of the optimal testing plan.
- Carrying out tests and issuing the corresponding reports.

- Issuance of an EXAP report where required for the extended application of fire resistance test results.

Our fire resistance laboratories:

We have specialized and versatile equipment, that allows us to carry out the complete range of fire resistance tests required for your product. We have eight furnaces in vertical and horizontal configurations up to four metres wide and five metres high. Our laboratories are accredited (ISO/IEC 17025) to test products according to the following set of standards:

- **BS 476-21:** Fire tests on building elements and structures – Methods for the determination of fire resistance of load-bearing elements of construction.
- **BS 476-22:** Fire tests on building elements and structures – Methods for the determination of fire resistance of non-load-bearing elements of construction.
- **EN 1364-1:** Fire resistance tests for non-load-bearing elements. Part 1: Walls.
- **EN 1364-2:** Fire resistance tests for non-load-bearing elements. Part 2: Ceilings.
- **EN 1364-3:** Fire resistance tests for non-load-bearing elements. Part 3: Curtain walling. Full configuration (complete assembly).
- **EN 1364-4:** Fire resistance tests for non-load-bearing elements. Part 4: Curtain walling. Part configuration.
- **EN 1365-2:** Fire resistance tests for load-bearing elements. Part 2: Floors and roofs.
- **EN 1634-1:** Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Part 1: fire resistance tests for door and shutter assemblies and openable windows.
- **EN 15269-5:** Extended application of results from fire resistance and/or smoke control tests for door, shutter and openable window assemblies, including their elements of building hardware. Part 5: Fire resistance of hinged and pivoted metal-framed glazed door sets and metal-framed openable windows.
- **EN 15254-4:** Extended application of results from fire resistance tests. Non-load-bearing walls. Part 4: Glazed constructions.

We have over 25 years of experience in the fire sector. We are members of EGOLF and ASFP, and our experts are involved in the major technical and regulatory forums (CEN, ISO, etc.) for the development of standards.

Supplementary tests:

Other than fire resistance tests, we also can offer the following supplementary tests:

- **Wind load tests**
- **Air and water permeability tests** (for samples up to 4 m high in facades up to 9 m high)
- **Vandalism resistance tests**

Certification for glazing systems:

- **CE Marking** (external glazed doors):

Applus+ Laboratories is a Notified Body (number 0370) for undertaking tests and the whole CE Marking process for external glazed doors.

- **Applus+ Fire Safety Certification**

To enable manufacturers of fire protection products to access global markets, Applus+ Laboratories has created the A+ Fire Safety certification. This is our own, voluntary mark, supported by a certification system, which allows all types of systems to be certified according to the relevant testing standards.

The Applus+ Fire Safety certification is a solution for manufacturers of interior glazed doors. Once the standard UNE-EN 14351-2 has been harmonized, doors with the Applus+ Fire Safety mark will be able to receive the CE Marking directly.

Advantages of the A+ Fire Safety mark:

- It allows all tests and studies carried out on a product to be summarised in one report so that the range of the product's characteristics can be presented in an organized way.
- It is a mark that is backed by an internationally recognized laboratory.
- It is a certification scheme that is accredited by ENAC-ILAC (12/C-PR054).