

Fire Safety Qualification for Facade Systems



Facade systems are key elements in the building and rehabilitation of infrastructures, especially skyscrapers. Their main function is the thermal insulation of the household, reverting in considerable savings in the acclimatization efforts. However, facade systems are also one of the highest risk elements in terms of fire safety.

For that reason, and before they are installed in a building, manufacturers and distributors of facade systems must test the characteristics of permeability, acoustics, transmittance, mechanics, and reaction and resistance to fire of each individual component as well as the totality of the facade system, according to the regulations of the target market.

European Regulations

The certification of facade systems is carried out according to the European Technical Assessment (ETA) regulations. Upon obtaining this voluntary certification, manufacturers will also obtain the CE marking of their products.

International Regulations

Manufacturers and distributors of facade systems can test and/or certify particular capabilities according to international regulations from different countries:

- **Mechanics and durability:** ETAG 004 and EAD 090062-00-0404 (ETAG 034)
- **Acoustics:** EN 10140-2
- **Permeability:** EN 12153, EN 12155, and EN 12179
- **Reaction to fire:** EN 13501-1, ASTM D1929, AS 5113, NFPA 285, and BS 9414 (Fire performance of external cladding systems. The application of results from BS 8414-1 and BS 8414-2 tests) with BR 135 classification

- **Resistance to fire:** EN 1364-3, EN 1364-4, ASTM E119, UL 263, EN 1366-3, EN 1366-4, and TGD 19

Our methodology

Our experts will study and identify the optimal route towards the certification of the manufacturer's facade systems. Applus+ offers testing and certification services on the capabilities of the facade systems and their individual components, including:

- Testing of fire propagation in facades: we offer real-scale testing according to the specifications of BS 8414
- Testing of thermal insulation systems: we offer testing for ETICS/EIFS facade systems

Our laboratories

We have the capabilities and equipment to carry out the tests required by your products. Applus+ Laboratories has facilities with two test benches designed to test real-scale facade systems (up to 9 metres):

- Test bench attached to a concrete structure
- Test bench anchored to a metal structure to simulate a ventilated facade.

We have more than 25 years of experience working in the fire safety sector. We are members of EGOLF, ASFP, and our experts take active part in the main technological forums and work groups (like the ISO/TC 92/SC 1 Fire Initiation and Growth committee) for the development of standards.

Certification of facade systems

Applus+ Laboratories is a notified body by the European Union (NB 0370) for the CE marking of individual components for the facade system. We also certify the totality of the system by way of intermediaries from the European Organisation for Technical Assessment (EOTA) testing under the specifications of the ETA.