FIRE SAFETY OF FAÇADES

OUR DIFFERENTIAL VALUE:

TECNALIA’s Fire Safety Laboratory offers a wide range of services that enable to assess façade systems and their components in terms of fire performance: external spread of fire, reaction to fire and fire resistance.

- More than 40,000 m² of laboratories with cutting-edge facilities.
- Bespoke studies and tests.
- Multidisciplinary teams with extensive knowledge and experience.
- Capacity to address needs and complex problems thanks to the transversality between our areas and the skills of our technicians.
- More than 3,000 customers all over the world trust in the experience and knowledge of our technicians.
- International recognition of our reports.
- Complementarity in terms of R&D and Innovation.

WE SUPPORT COMPANIES ON FIRE PERFORMANCE DURING THE PRODUCT DEVELOPMENT PROCESS. WE OFFER EXPERTISE AND TESTING SERVICES FOR APPROVAL TESTING AND FIRE SAFETY ASSESSMENT. WE SPEED UP THE INTRODUCTION OF NEW INNOVATIVE PRODUCTS AND SYSTEMS ON THE MARKET.

MORE THAN 25 YEARS OF EXPERIENCE IN FIRE PROTECTION.

COMPREHENSIVE RANGE OF SERVICES ON FAÇADES.

ACCREDITED LABORATORIES.

MULTIDISCIPLINARY TEAMS.
We provide services to:

- Manufacturers and distributors of façade systems and their components.
- Construction companies and developers.
- Specialist consultants on façades.
- Engineering and architectural firms.
- Research centres or business R&D units.
- Facility managers, building managers.

Ventilated façade systems with external cladding, i.e. composite panels, HPL laminates, ceramic panels, natural stone, terracotta, polymer concrete, metal trays, etc.

External Thermal Insulation Composite Systems (ETICS) with continuous mortar coatings, ceramic elements or other types of finish.

Curtain walls and façades with glazed components.

Self-supporting metal framing systems for complete façade cladding (Light Steel Framing).

Veture kits.

Coatings applied on load-bearing walls.

Cladding based on sandwich panels.

Thermal insulation installed on façades.
In order to support the growing need for testing capabilities, TECNALIA has constructed an additional state-of-the-art testing fire hall where large-scale tests on façades are undertaken.

With these facilities set in Azpeitia, TECNALIA expands the services offered by the Fire Safety Laboratory to assess the fire performance of building materials and façade systems.

These large-scale tests are designed to analyse the spread of fire on the internal and external side of the cladding, the spread at critical points (wall-slab connection and window/door-façade connection) and the mechanical performance of components (material collapse/fall off).

The quality of TECNALIA testing services is underpinned by the **ENAC accreditation** to the international standard ISO/IEC 17025. Accreditation is an essential requirement of TECNALIA’s business as it demonstrates integrity and impartiality to our customers.
TECNALIA offers a comprehensive range of fire safety services to an international market. The facilities are adaptable to a wide selection of testing needs to meet industry standards and other regulations:

- **Large-scale fire performance of external cladding systems**
  - BS 8414-1
    “Fire performance of external cladding systems. Part 1: Test method for non-load bearing external cladding systems applied to the masonry face of a building”.
  - BS 8414-2
    “Fire performance of external cladding systems. Part 2: Test method for non-loadbearing external cladding systems fixed to and supported by a structural steel frame”.

- **Other standards**
  - BR 135
    “Fire Performance of External Thermal Insulation for Walls of Multistorey Buildings”.
  - AS 5113
    “Classification of external walls of buildings based on reaction to fire performance”.
  - LPS 1581
    “Requirements and tests for LPCB approval of non load bearing external cladding systems applied to the masonry face of a building”.
  - LPS 1582
    “Requirements and tests for LPCB approval of non-load bearing external cladding systems fixed to and supported by a structural steel frame”.
  - ISO 13785-1
    “Reaction to fire for facades. Part 1: Intermediate-scale test”.
  - ISO 13785-2
    “Reaction to fire for facades. Part 2: Large-scale test”.
  - NFPA 285
    “Standard fire test method for evaluation of fire propagation characteristics of exterior non-load-bearing wall assemblies containing combustible components”.
  - CAN ULC S134
    “Standard method of fire test of exterior wall assemblies.”
TECNALIA has facilities where it carries out Fire Resistance and Reaction to Fire tests to European and international standards and/or on request.

Reaction to fire (development of materials and products)

ISO 5660-1
"Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (Cone Calorimeter Method) and smoke production rate (Dynamic Measurement)."

Fire resistance

EN 1364-1
"Fire resistance tests for non-load bearing elements - Part 1: Walls."

EN 1365-1
"Fire resistance tests for loadbearing elements - Part 1: Walls."

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."
BESPOKE TESTS

In collaboration with SUESKOLA, a training centre for Preventing and Extinguishing Fires, TECNALIA offers the possibility of carrying out tests tailored to the customer’s needs and on samples that are larger than standard for a laboratory.

It also takes part in pre-regulatory processes and defining test methods for innovative products and solutions.

ACCREDITATIONS AND ACKNOWLEDGEMENTS:

- Laboratory accredited by ENAC according to UNE-EN ISO/IEC 17025:2005 for the Building Sector with Accreditation No. 4/LE024.
- Notified Body Number 1292 for the Construction Products Regulation.
- Authorised Body for the issue of European Technical Assessments (ETAs) for Construction Products.
- Member of EOTA (European Organisation for Technical Assessment).
- Member of the Fire Safety expert group within the Ministry of Development.
- Member of EGOLF (European Group of Organisations for Fire Testing, Inspection and Certification).
- Member of ASEFAVE (Spanish Association of Manufacturers of Light Façades and Windows).
- Laboratory recognised by the International Maritime Organisation (IMO) for the performance of Reaction to Fire and Fire Resistance Tests (PEF 2010) (FTP 2010).
- Recognition of fire protection activities by Dubai Civil Defence.
- Member of the CEN/TC127 Standardisation Committee.
TECNALIA IS AN APPLIED RESEARCH AND TECHNOLOGICAL DEVELOPMENT CENTRE

We transform technology into wealth to obtain beneficial visible results for companies, society, our environment and in short, for people.

MISSION

We transform technology into GDP

SERVICE OFFER

Advanced technological services specialised in the evaluation and diagnosis of products, processes and materials.

R&D and innovation projects for the development of new products and processes or for the improvement of existing ones.

Development of technological assets ready to generate new business.
WE CAN DO SO MUCH TOGETHER

Our work is not understood without yours; we want to work together so your company can compete better. Because together, we can develop technologies that transform the present.

The future is technological, let’s share it!