Efectis

EXPERTS

IN FIRE SAFETY & EXPLOSION

OUR STRENGTHS

THE SEVEN FIRE LABORATORIES OF EFECTIS ARE EQUIPPED TO TEST CONSTRUCTION PRODUCTS AND SYSTEMS OF ALL SIZES IN ACCORDANCE WITH NATIONAL, EUROPEAN, AND INTERNATIONAL STANDARDS (EN, ISO, IMO, UL, RWS, FM, BS, ASTM, GOST, AND MORE). THESE FACILITIES REPRESENT THE STRONG TECHNICAL FOUNDATION OF EFECTIS.

BEYOND OUR STATE OF THE ART TESTING CAPABILITIES, EFECTIS IS BUILT ON THE EXPERTISE OF HIGHLY QUALIFIED PROFESSIONALS WITH EXTENSIVE SCIENTIFIC BACKGROUNDS AND EXPERIENCE.

EFECTIS BRINGS TOGETHER MORE THAN 200 FIRE EXPERTS COVERING BOTH PASSIVE AND ACTIVE FIRE PROTECTION, CERTIFICATION, FIRE AND EXPLOSION BEHAVIOUR, FIRE PREVENTION, AND REGULATORY COMPLIANCE—SUPPORTING EVERY STAGE OF CONSTRUCTION AND OPERATION.

Fire Testing • Fire & Explosion Safety Engineering • Training • Modelling • Expertise
Products & Services Certification • Inspection • Investigations • Fire & Rescue

Daniel Joyeux
President

The construction industry is undergoing major changes to address climate change. The increasing use of wood and bio-based materials in construction is leading to significant shifts in fire safety regulations. The need for energy storage in buildings is driving the integration of battery energy storage systems (BESS) creating additional risks that are still poorly understood or even unknown. The presence of batteries in all types of infrastructure (transport, industry, etc.) necessitates strengthening regulatory and normative frameworks at both the European and national levels.

Based on extensive participation in research relevant risk analyses grounded in technical, scientific, experimental, and numerical knowledge, Efectis is committed to supporting construction professionals and building operators through these changes. Our on-site presence is expanding to ensure consistency between laboratory evaluation and on-site installation, the only guarantee of fire protection system performance.

Efectis continues its growth based on over 50 years of expertise, regular investments, and a highly qualified team of motivated women and men. We support our clients, ranging from small businesses to large corporations, across various sectors (building, industry, residential, nuclear, and transport), always with the same level of rigor.

INVESTMENT OF €8,890M DURING LAST 5 YEARS

MORE THAN 20 000 TESTS CARRIED OUT IN 2025

A CERTIFICATION BODY RECOGNISED IN 35 COUNTRIES

A GROWTH OF 62% IN 5 YEARS

MORE THAN 850 ACCREDITED STANDARDS

A CONSOLIDATED TURNOVER OF €48M IN 2025

FIRE & EXPLOSION

ENGINEERING

Fire safety engineering has evolved significantly over recent decades, driven by scientific progress and international standards. Since the 1990s, Efectis has been delivering performance-based fire and explosion safety solutions by combining analytical methods, experimental testing, and advanced numerical modelling.

With a strong foundation in fire safety engineering and expanding expertise in explosion safety, Efectis supports public buildings, infrastructure, industrial facilities, nuclear plants, and other high-risk environments throughout all project phases.

FIRE SAFETY STRATEGY

- Fire strategy development
- Fire risk assessment
- Structural fire engineering
- External fire spread analysis
- Regulatory interpretation
- Independent third-party review
- On-site technical audits
- Incident investigation & feedback integration

FIRE MODELLING & SIMULATION

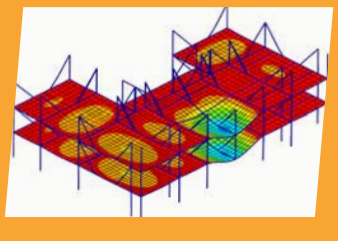
- CFD modelling (Fire, Smoke & Explosion)
- Thermomechanical structural simulations
- Evacuation analysis (CFD)
- Explosion risk assessment
- Explosive gas dispersion modelling
- Dust explosion modelling
- ATEX approval & compliance

TESTING & VALIDATION

- Fire testing (small- to full-scale)
- Model validation & design verification
- Performance assessment

RESEARCH & INNOVATION

- Fire safety research
- Scientific publications
- Development of tools & advanced engineering methods



SAFETY IN NUCLEAR PLANTS

Efectis provides specialised fire and explosion safety services for nuclear facilities across all lifecycle phases: pre-design, design, construction, operation, and decommissioning.

DEVELOPMENT OF TECHNICAL SPECIFICATIONS

- AFCEN, CEN, EDF, ISO

PRODUCT & SYSTEM QUALIFICATION

- Fire and other testing, audits and inspections, modelling, certification

ENGINEERING CALCULATIONS

- Risk assessments, structural response, effluents propagation, fire and explosion modelling

EXPERTISE & ASSESSMENT

- On-site evaluations, official assessments, ageing studies, ad hoc evaluation

FIRE & EXPLOSION SYSTEMS

- Fire resistance, reaction-to-fire, fixed firefighting, firefighter equipment
- Smoke and ventilation
- ATEX compliance

TRAINING & KNOWLEDGE TRANSFER

- Technical specifications, fire engineering, fire products, firefighting, regulations

FIRE & RESCUE

Efectis ensures infrastructure security and safety, protecting civilians, responders, and assets. We deliver risk analysis, operational planning, technical support, crisis management, fire-testing and certification, as well as training and optimization of fire-fighting strategies.

FIRE & EXPLOSION INVESTIGATIONS

Support for faster post-fire recovery, including investigation of the fire or explosion origin and development. We assess product and system performance after fire and provide testing and numerical analysis to support expert evaluations of fire and explosion behaviour and dynamics.

SUSTAINABILITY

LIFE CYCLE ASSESSMENT

European regulations increasingly require manufacturers to demonstrate the environmental performance of their products. Life Cycle Assessment (LCA), based on ISO 14040 and ISO 14044, is the recognized method to measure environmental impacts across a product's entire life cycle — from production and transport to use and end-of-life.

LCA results are presented through environmental product declarations such as FDES, EPD or PEP. As new regulations come into force, these declarations are becoming essential.

In the near future, they will be mandatory for placing construction products on the European market, as part of the CE marking process.

ENVIRONMENTAL SUSTAINABILITY

In response to the revised Construction Products Regulation, Efectis is developing new services to support environmental sustainability requirements, including the validation of environmental declarations.

BATTERIES

Lithium-ion batteries have become a key energy storage solution thanks to their high energy density and efficiency, but they also introduce new fire and explosion risks.

Efectis supports manufacturers and operators in managing these risks through comprehensive fire safety expertise. This includes standardized and customized fire testing, thermal runaway assessments, and large-scale experimental campaigns, complemented by advanced numerical simulations.

Together, these services enable a robust evaluation of fire development, explosion effects, smoke toxicity, and structural resistance, ensuring high safety levels for battery systems across industrial, residential, energy storage, and electromobility applications.

FIRE TESTS

Efectis provides comprehensive fire testing capabilities, covering standardised and tailor-made tests. Our annual investment in advanced testing equipment enables us to assess all your products and systems using the latest technology.

Reaction to Fire

Fire Resistance

Large Scale Testing

Mobile Furnace

Firefighting Systems

In-situ Testing

Test Combinations

Battery & Explosion

ON-SITE EXPERTISE, APPROVALS & CERTIFICATIONS

Efectis supports construction and building projects with certifications, approvals, and on-site assessments.

As a Notified Body and Approved Body, we provide CE, UKCA, and UK(NI) marking for construction products with fire performance characteristics. You can find our full and regularly updated scope on our website.

We certify products and systems to EN, national, and international standards and advise on compliance with fire safety regulations, covering fire resistance, façade performance, smoke control, structural stability, and installation conditions.

Through the Efectis Certified voluntary mark, we ensure a high level of fire safety for both products and installations, recognising that correct installation is essential to overall performance.

ACCREDITATIONS & RECOGNITIONS

Efectis is internationally recognised for independence, technical excellence and reliability. Our services are accredited/certified under among others ISO/IEC 17025, 17020, 17065, ISO 9001, ISO 19443, and QUALIOPI.

As a Notified Body for CE marking and approved Body for UKCA marking, we support compliant access to European and UK markets, with further recognition from major authorities and industry leaders worldwide.

For a full overview and the latest updates to our accreditations & recognitions, please visit our website.

OUR MARKETS

Building Materials

Buildings

High-Rise Buildings

Energy Transition

Storage & Warehouse

Nuclear & Power Plants

Infrastructure

Transport, Rail & Marine Safety

EFECTIS ACADEMY

Having operated in the fire safety market for over 50 years as an official laboratory, Efectis has decided to share its knowledge and experience by developing a professional training program aiming at the various stakeholders involved in the construction process.

Efectis Academy aims to contribute to their skills development by offering training programs tailored to the real needs of construction sites and manufacturers, with the ability to learn at their own pace and incorporating the fire-related aspects necessary for a comprehensive understanding of the topics.

At a time when various disasters are reminding everyone of the fire risk and its consequences, our training programs strive to enhance the skills of companies and enable safer and more controlled constructions.

OUR POLICY

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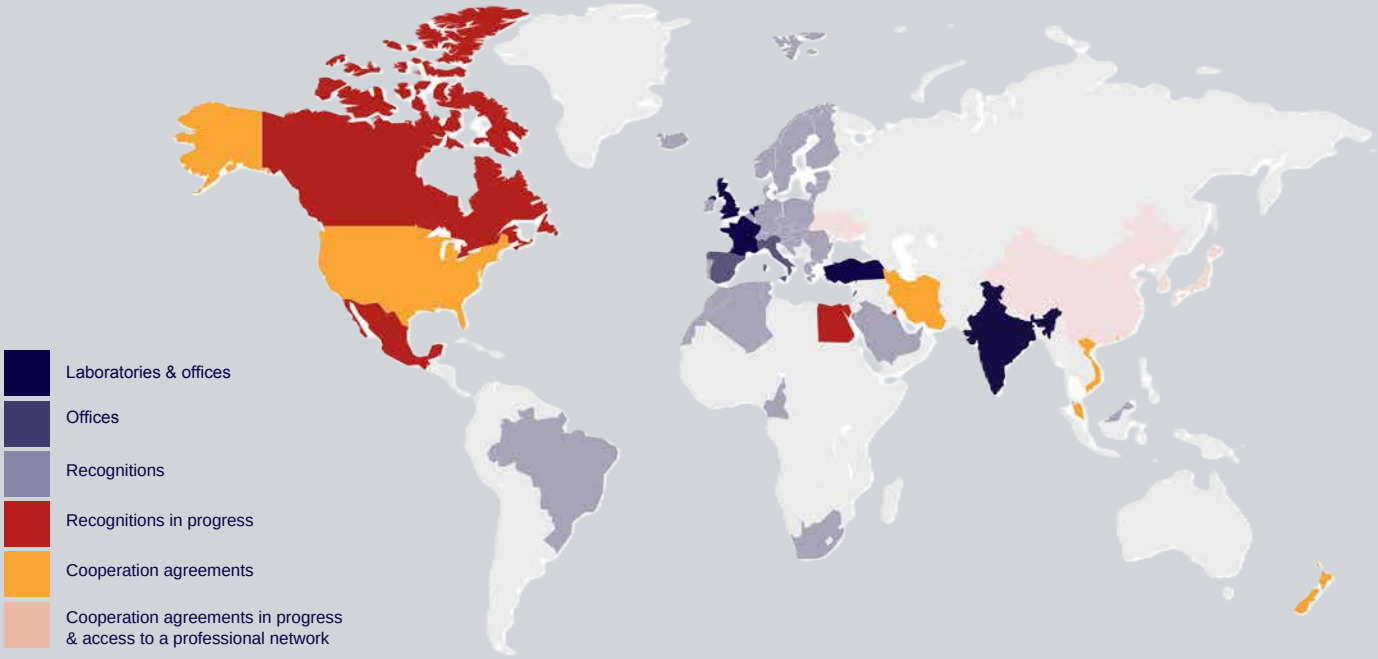

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LABORATORY

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EXPERTISE & CERTIFICATION

Chennai - India

EFECTIS ALL OVER THE WORLD

Efectis has 24 offices and laboratories around the world recognised in 36 countries.
Our staff is highly qualified speaking various languages